The Sports-Betting Market: A Road to Sports Betting as Viable Investing

ABSTRACT

Since its legalization, sports betting has experienced rapid growth, both in terms of economic output and expansion into more states. The current system of sports betting in the United States requires individuals to place bets using a sportsbook. The sportsbook sets the lines on every bet. If an individual wins their bet, the sportsbook pays them money according to the listed odds. If an individual loses their bet, the sportsbook keeps the amount staked. Sportsbooks set lines in a way to ensure that on average, they make money on every bet. This system has been widely accepted, often based on the common understanding that "the house always wins." When the house wins, the individual loses. Sports betting in its current state is riddled with pricing inefficiencies that can be best remedied by treating sports betting as a market in which individuals can buy and sell bets. By reimagining the way sports betting is regulated, a system can be created where individuals can place bets at fair prices and be rewarded with gains based on superior ability. By thinking of sports betting like a capital market, it becomes clear how flawed the current system is, and we can draw inspiration from other capital markets to create a vision of an efficient sports-betting marketplace that protects investors instead of exploiting them.

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"Betting is fun... [o]f course, being right is especially fun[.]"1

I. A SPORTS-BETTING PRIMER

Two thousand twenty-three was a banner year for sports betting; the industry brought in a record \$10.92 billion, a 44.5 percent increase from 2022.2 Across the country, bettors wagered \$119.84 billion. Those who watch sports have likely seen ads for sports betting, which reached over 1.5 million televisions in 2023.4 In fact, a 2024 survey found that 75 percent of Americans had seen online sportsbook advertising during the year prior. At the core of the sports-betting boom, sports betting is a fun way for fans to support teams and players, show off their knowledge, engage in a social activity, and make some money in the process.⁶ The increasing popularity of sports betting brings about greater concern for gambling addiction, especially considering that those who bet via mobile phone tend to have greater incidences of problem gambling.7 In addition to problem gambling disorders, gambling can also lead to debt, bankruptcy, and mental health issues.8 These problems are especially important to consider in the context of sports betting, as people tend to rationalize their losses as bad luck instead of realizing the math is set up for individuals to

^{1.} Rebecca Haw Allensworth, *Prediction-Markets and Law: A Skeptical Account*, 122 HARV. L. REV. 1217, 1236 (2009).

^{2.} Doug Greenberg, Sports Betting Industry Posts Record \$11B in 2023 Revenue, ESPN, (Feb. 20, 2024, 1:53 PM), https://www.espn.com/espn/betting/story/_/id/39563784/sports-betting-industry-posts-record-11b-2023-revenue [https://perma.cc/CWL5-6QPH].

^{3.} *Id*.

 $^{4. \}qquad Sports \quad Betting \quad Advertising \quad Trends, \quad AM. \quad GAMING \quad ASS'N \quad (May \quad 2, \quad 2024), \\ https://www.americangaming.org/resources/2023-sports-betting-advertising-trends/ \ [https://perma.cc/4QPS-Q6JJ].$

^{5.} Don Levy & Aaron Chimbel, Siena/St. $Bonaventure\ Annual\ Sports\ Fanship\ Survey$: $Part\ 2-Online\ Sports\ Betting$, SIENA COLL. RSCH. INST. 1 (Feb. 5, 2024), https://scri.siena.edu/wpcontent/uploads/2024/02/ASFS_Release-2_-Online-Sports-Betting.pdf [https://perma.cc/RHA3-X35G].

 $^{6. \}qquad \text{William N. Thompson \& J.E. Luebering, } \textit{Sports Betting}, \ \text{BRITTANICA (July 15, 2024)}, \\ \text{https://www.britannica.com/topic/sports-betting [https://perma.cc/Q5CD-TFPN]}.$

^{7.} See Ken C. Winters & Jeffrey L. Derevensky, A Review of Sports Wagering: Prevalence, Characteristics of Sports Bettors, and Association with Problem Gambling, 43 J. GAMBLING ISSUES 102, 109 (2019).

^{8.} Luke Petach & J. Patrick Raines, *The House Always Wins: Gambling as a Veblenian Social Practice*, AM. ECON. ASS'N 1, 14, https://www.aeaweb.org/conference/2024/program/paper/9ZbYtZFA [https://perma.cc/2WFK-QQL7] (last visited Feb. 15, 2025) (edited version published in 58 TAYLOR & FRANCIS J. ECON. ISSUES 619 (2024)).

lose. This Note aims to discuss how sportsbooks use math to ensure they profit in the long run—creating an inefficient market skewed against the public—and propose that sports betting should instead adopt a market structure where bettors can both buy and sell bets in order to make sports betting a more worthwhile investment and trading activity.

Sports betting is a process in which individuals predict the outcome of sporting events by wagering money. ¹⁰ If that prediction is incorrect, the individual loses that money to the sportsbook. ¹¹ If that prediction is correct, the sportsbook pays the individual an amount according to the odds at which the bet was placed. ¹² The odds function as a price for the bet and can be represented as a fraction (3/1), a decimal (3.0), or what is commonly referred to as "American" odds (+300). ¹³ Favorites have American odds beginning with a minus sign, underdogs have American odds beginning with a plus sign. Because this Note deals with sports betting in the United States, this Note uses American odds, but all three representations are interchangeable. ¹⁴ Odds function as the price of a bet and are therefore the foundation of how a sportsbook profits.

^{9.} *Id.* at 3.

^{10.} William N. Thompson & J.E. Luebering, Sports Betting, BRITANNICA (Feb. 6, 2025), https://www.britannica.com/topic/sports-betting [https://perma.cc/Q5CD-TFPN]. While the prediction can be on the outcome of the game itself, one can also bet to predict a wide range of possibilities. See, e.g., NBA Finals First Basket Props: Bet Gabe Vincent & More in Game 3, ACTION NETWORK (June 7, 2023, 12:58 PM), https://www.actionnetwork.com/nba/nba-first-basket-proppick-gabe-vincent-nuggets-vs-heat-june-7 [https://perma.cc/UXS7-Q9QR] (recommending which players to bet on to make the first three point shot in Game 3 of the 2023 NBA Finals); Keff Ciardello, The Weirdest and Silliest Super Bowl 2024 Prop Bets: Proposals, Drake Curse, Power Outages and More, ATHLETIC (Feb. 11, 2024), https://theathletic.com/5253091/2024/02/11/weird-fun-super-bowl-prop-bets-proposals-2024/ [https://perma.cc/W4SE-CMK9] (showing lines offered by BetMGM on a variety of Super Bowl LVIII prop bets).

^{11.} Steven D. Levitt, Why Are Gambling Markets Organized So Differently from Financial Markets?, 114 ECON. J. 223, 227 (2004).

^{12.} See Steven Petrella, How Do Sports Betting Odds Work? American Odds, Explained, ACTION NETWORK (Feb. 12, 2025, 9:24 AM) [hereinafter Petrella, Sports Betting Odds], https://www.actionnetwork.com/education/american-odds [https://perma.cc/ZPW2-XSD6] ("[Iff you're betting on the Yankees at -130, you need to risk \$130 and will win \$100 if New York wins the game . . . if you're betting the Red Sox at +120, you'll risk \$100 and will win \$120 if Boston wins the game").

^{13.} *Id.* (explaining that United States sportsbooks offer American odds by default).

^{14.} See Steve Petrella, Decimal Odds in Sports Betting, Explained, ACTION NETWORK (Feb. 17, 2022, 10:28 AM), https://www.actionnetwork.com/education/decimal-odds [https://perma.cc/UB5K-H4WD] (offering a method of converting between American and decimal odds).

Sportsbooks design odds in a way that ensures they make money in the long run by inserting a premium called the "vig." 15 The inclusion of the vig, and the math behind it, illustrates how sportsbooks ensure that no matter which side of a bet wins, they can profit off the sports bettor in the long run. Sportsbooks use their expected probability of an outcome and then add in a premium to set odds. 16 Including a premium often makes these bets have a negative expected value (EV) for the public, ensuring the sportsbook can collect profit in the long run. The math behind odds calculations shows how the inclusion of the vig can turn a fair bet into one with a negative EV. The underlying probability for a favorite, P_f , given the absolute value of the odds, O, can be expressed as $P_f = O \div (O + 100)$. For an underdog, the formula is $P_u =$ $100 \div (O + 100)$. Utilizing this formula, a bet offered at +100 ("even money") should win 50 percent of the time because the reward is equal to the risk. 19 Sportsbooks create profit by requiring bettors to risk a premium in the form of the vig.²⁰ For example, many sportsbooks offer both sides of the same line at -110 odds.²¹ In this case, the expected win probability of each bet would be about 52.4 percent.²² The sum of the expected win probability of both sides of the bet would be about 104.8 percent.²³ The additional amount over 100 percent represents the vig.²⁴ In order to remove the vig and get the fair value of the bet, P, given the implied probability of the bet itself, A, and of the other side of the bet, B, the formula is $P_A = A \div (A + B)^{25}$ In a standard bet where both sides are -110, this would come out to 50 percent, as is the case any time both

^{15.} Steve Petrella, *How to Remove Juice/Vig from Sports Betting Odds*, ACTION NETWORK (Aug. 17, 2022, 1:47 PM) [hereinafter Petrella, *How to Remove Juice/Vig*], https://www.actionnetwork.com/education/remove-juice-vig [https://perma.cc/UGX5-AL7V]; DraftKings Inc., Annual Report 33 (Form 10-K) (Feb. 16, 2024) ("Odds are determined with the objective of providing an average return to the bookmaker over a large number of events and therefore, over the long term, our gross win percentage has remained fairly constant.").

^{16.} Petrella, *How to Remove Juice/Vig, supra* note 15; FLUTTER, CAPITAL MARKETS DAY 63 (2022) ("TRUE PROBABILITY + VIG (OVERGROUND) = ODDS YOU SEE").

^{17.} See Petrella, Sports Betting Odds, supra note 12.

^{18.} *Id*.

^{19.} *Id.* (calculating an underdog formula as follows: $100 \div (100 + 100) = 50\%$).

^{20.} FLUTTER, supra note 16, at 63; Christopher T. Pickens, Of Bookies and Brokers: Are Sports Futures Gambling or Investing, and Does it Even Matter?, 14 GEO. MASON L. REV. 227, 240 (2006).

^{21.} See Levitt, *supra* note 11, at 227 ("Regardless of which team is chosen, the bettor typically pays the casino 110 units if they lose the bet and collects 100 units when victorious.").

^{22.} *Id.* Because -110 is a favorite, the math is as follows, $110 \div (110+100) = 52.38\%$. This percentage shows that, in order to break even, this bet must win 52.38% of the time.

^{23.} *Id.* 52.38% + 52.38% = 104.76%.

^{24.} *Id*.

^{25.} *Id*.

sides of a bet have the same odds.²⁶ Sportsbooks are thus selling a bet with the prediction that it will win 50 percent of the time at a price that breaks even when the bet wins at about a 52.4 percent rate. Therefore, this bet has an EV of about -2.4 percent for the bettor (and 2.4 percent for the sportsbook). If there is equal money on both sides of a bet, the sportsbook will collect the vig.²⁷ The larger the sample size of bets with a negative EV, the more confident the sportsbook can be that they will collect profit, because larger sample sizes decrease variance.²⁸ Sportsbooks use math to profit by selling bets at prices which create negative expected value for the bettor, creating an inefficient market because the price does not accurately reflect the value of the bet.

The strategies sportsbooks use directly impact prices for consumers, thus shaping the overall market. As discussed above, sportsbooks set prices in ways that do not accurately reflect the value of the underlying bet. Sportsbooks can also set prices to move money to different sides of a given bet. Intentionally setting prices to have 50 percent of the money on either side of a bet is one strategy by which a sportsbook can profit.29 Sportsbooks use this strategy to create a negative-sum game: by structuring the losing bets to pay winning bets, sportsbooks keep the vig, thereby preserving their profit.³⁰ Another more aggressive strategy a sportsbook can use is to attract most of the money to the side of the bet it thinks will lose. 31 This strategy may subject the sportsbook to significant risk—as pushing too much money to one side would create great losses if the more heavily exposed side of the bet wins, placing the sportsbook in a position similar to the bettors off whom it aims to make profit. Additionally, the sportsbook cannot stray too far from a 50/50 split, as bettors who are not subject to the biases the sportsbook aims to exploit (such as an observed systematic bias towards favorites and visiting teams) would take advantage of the distorted price.³² Sportsbooks' ability to set prices to intentionally move the market from one side of a bet to another illustrates the inefficiency in the market, as the price of a bet does not accurately reflect its value.

^{26.} *Id.* If A = B, the formula then becomes $A \div (A + A)$, which will always be 50%. *Id.*

^{27.} Levitt, *supra* note 11, at 224 n.4.

^{28.} John Beggy, Daniel Kim, Kejdi Mucaj & James Nordell, An Investigation of Sports Betting Selection and Sizing, Wharton Sports Analytics Student Rsch. J. 1, 4 (2023) (finding that increased variance can lead to negative results even in the case of positive value bets); See Michael C. Macchiarola, Securities Linked to the Performance of Tiger Woods? Not Such a Long Shot, 42 Creighton L. Rev. 29, 43 (2008) (observing that modern portfolio theory argues for diversification because of reduced variance in returns).

^{29.} Levitt, supra note 11, at 224.

^{30.} Id. at 224 n.4.

^{31.} *Id.* at 232.

^{32.} *Id.* at 226, 234–35.

FanDuel, a prominent sportsbook, likely observes the more aggressive strategy.³³ In a 2022 presentation to investors, Flutter, FanDuel's parent company, pointed out that an improved ability to set odds brings greater confidence to set a lower vig and take on larger liabilities, while also bringing in better win margins.³⁴ The strategy illustrated in FanDuel's investor presentation suggests that by setting odds more precisely, FanDuel can feel more confident about the risk exposure from using pricing to move public money to the side of the bet the sportsbook believes will lose. This is a practical example of a large sportsbook explaining to investors that it will realize more profit by moving prices to influence bettor activity rather than based on the value of the bets themselves.

In addition to bet pricing, the ways sportsbooks choose to structure bet offerings influences the public's ability to properly discern value. Bet structure can make it easier or more difficult to find the fair value of a bet by removing the vig.³⁵ Bets are commonly structured as either two-way or one-way lines, though there are other structures beyond the scope of this Note. In standard two-way bet structures, if side A wins, side B must lose.³⁶ For example, if a point total in a basketball game is set at 239.5, the teams' combined scores will either be over or under that total; a half point cannot be scored.³⁷ If a point total is exactly 239 and 239 points are scored, the bet would "push" and be returned in full.³⁸ Many bets are structured as one-way lines. For example, futures bets, which deal with outcomes over long periods of time like a season or tournament,³⁹ are commonly offered for a certain

^{33.} See FLUTTER, supra note 16, at 62 (stating that predicting probabilities more accurately provides more confidence to take larger liabilities on bets).

^{34.} Id.

^{35.} See Petrella, How to Remove Juice/Vig, supra note 15.

^{36.} There is a possibility that a push could occur in which neither side wins nor loses. For example, if the point total is listed at 239.0 and 239 points are scored, the wager is returned to the bettor. See Steven Petrella, How Do Over/Unders Work in Sports Betting?, ACTION NETWORK (Feb. 13, 2024, 10:47 PM), https://www.actionnetwork.com/education/over-under-total [https://perma.cc/6RDA-RN4H] ("If the over/under lands on exactly the posted number . . . it's a push and your bet is refunded.").

^{37.} See Trevor Knapp, Learn to Win NBA Over/Under Bets in 2023–24, COVERS (Oct. 18, 2023, 10:51 PM), https://www.covers.com/nba/over-under-betting-tips [https://perma.cc/GJ7C-ZQ9Z] ("The sportsbooks assign a .5 to the odds so that it's impossible for the team to hit the exact total. Teams can't win half a game, nor can they score half of a point in single-game totals." (internal quotations omitted)).

^{38.} See Danny Donahue, What is a Push in Sports Betting?, ACTION NETWORK (Aug. 9, 2024, 5:19 PM), https://www.actionnetwork.com/education/push [https://perma.cc/ET5T-88L5].

^{39.} What Is a Futures Bet? (US), DRAFTKINGS, https://help.draftkings.com/hc/en-us/articles/4405230608531-What-is-a-futures-bet-US#overview-0-0 [https://perma.cc/DMP6-HH3H] (last visited Feb. 16, 2025).

team to win a championship; but the converse, a certain team to *not* win a championship, may not be offered.⁴⁰ In these cases, removing the vig to find the true value expressed by the sportsbook is more difficult because the sportsbook does not offer a price for the converse result, which is necessary in that calculation.⁴¹ By offering one-way lines, sportsbooks make it more difficult to determine the vig, thereby making it more difficult for the betting public to realize bets are priced to their detriment.

The remainder of this Note explores the way sports betting is currently organized, its flaws, and how to fix them. Part II examines the inefficiencies in the current sports-betting structure and presents examples of how a market-based structure has been used in sports betting thus far. Part III discusses the legal barriers to proper sports-betting regulation and the failure of sports betting to apply neatly to the regulatory agencies tasked with regulating markets. Part IV offers as a solution the implementation of an underlying state law violation requirement in the Wire Act, a shift to a market-based structure where bettors can both buy and sell bets, and the implementation of certain regulations analogous to those used by other agencies for investor protection.

II. THE SPORTS-BETTING MARKETPLACE

To illustrate the current shape of the sports-betting marketplace, this Part will examine ways the previously discussed mathematical principals can be applied, such as positive EV betting and arbitrage, to show that the market is inefficient. Next, this Note will discuss current instances of a different approach: the market-based structure, in which bettors can both buy and sell bets.

A. An Inefficient Market

Sports bets function as contracts sold by the sportsbook and bought by the betting public. Sports bettors in different states may not have access to the best prices because different sportsbooks offer the

^{40.} See Doug Kezirian, How to Bet the 2023 NBA Playoffs, ESPN (Apr. 13, 2023, 9:00 AM), https://www.espn.com/sports-betting/story/_id/36168405/nba-playoffs-how-bet-2022-23 [https://perma.cc/8FLA-EZJ7] (providing an example of a one-way market for NBA championship odds).

^{41.} Recall that the formula for removing the vig from odds, $P = A \div (A + B)$, requires the underlying win probability from both the bet in question and its converse. See Petrella, How to Remove Juice/Vig, supra note 15.

same contracts at different prices.⁴² Nearly forty sportsbooks currently operate in the United States, with different states presenting different combinations of which books the public can bet with, and some states with no option at all.⁴³ Sportsbooks set their lines independently.⁴⁴ This Section will discuss three examples of market inefficiency created by the ways sportsbooks set and offer their lines: the positive-EV betting strategy, arbitrage, and the inability of bettors to exit their positions.

The positive-EV betting strategy arises because sports bettors benefit by shopping across different sportsbooks to find the best price for the bet they want to make. Because bettors can capitalize on differences in prices for the same bet to realize profit over time, the market as it currently stands is inefficient. Some bettors capitalize on the difference in prices across sportsbooks by betting odds significantly better than the odds offered by other sportsbooks, giving them a better return on the same prediction. Sportsbooks benefit from having time, resources, and analysts to develop incredibly accurate and complex prediction models which are difficult to outperform. Accordingly, the odds offered by different sportsbooks can be used to compare value across lines and find mispriced lines which bettors can exploit for profit.

^{42.} See, e.g., Alex Monahan (@AlexMonahan100), TWITTER (Jan. 29, 2024, 2:30 AM), https://twitter.com/alexmonahan100/status/1751885576561885465 [https://perma.cc/Z98S-G2BY] (showing different prices across sportsbooks for the same bet).

^{43.} Steven Petrella, A Full List of United States Sportsbooks by State: Where Every Site Operates, ACTION NETWORK (Oct. 24, 2024, 10:38 AM) [hereinafter Petrella, A Full List], https://www.actionnetwork.com/legal-online-sports-betting/sportsbooks-by-state [https://perma.cc/5R47-7KDP].

^{44.} Andrew Cunningham, What Is Line Shopping in Sports Betting? How to Shop Lines Betting on Sports, ODDSJAM (June 1, 2022, 11:59 AM), https://oddsjam.com/betting-education/line-shopping [https://perma.cc/Y6F2-SP68].

^{45.} *Id*.

^{46.} Lisandro Kaunitz, Shenjun Zhong & Javier Kreiner, Beating the Bookies with Their Own Numbers - and How the Online Sports Betting Market Is Rigged, 3 (Nov. 11, 2017) (unpublished article) (on file with Cornell University, arXiv).

^{47.} Bettors sometimes advertise certain picks based on price discrepancies across sportsbooks and in some cases use those discrepancies to calculate expected value and recommend a bet size using the Kelly Criterion. See, e.g., Monahan, supra note 42; @Breaktheboox, TWITTER (Jan. 12, 2024, 11:31 AM), https://twitter.com/breaktheboox/status/1745861134991716406 [https://perma.cc/5ZFJ-FVTG]; @PlunderTheUnder, TWITTER (Dec. 21, 2023, 9:28 AM), https://twitter.com/plundertheunder/status/1737857583984038142 [https://perma.cc/XF9H-A7VIII.

^{48.} Kaunitz et al., *supra* note 46, at 2; *see*, *e.g.*, FLUTTER, *supra* note 16, at 60 (showcasing that Flutter employs over one-thousand specialists to "generate odds and build risk [management] tools," drawing on over twenty years of experience making odds).

Kaunitz et al., supra note 46.

Researchers Lisandro Kaunitz, Shenjun Zhong, and Javier Kreiner employed the positive-EV strategy by taking bets when sportsbooks offered lines above their fair value, as expressed as a composite of other available lines. 50 These mispriced lines could simply be mistakes, or the sportsbook could be offering better prices to encourage bets on a certain side to reduce overall risk.⁵¹ By finding the underlying win probability and the fair value without the vig ("devigged fair value") offered by each sportsbook, bettors can compare across books to find a composite fair value. 52 This strategy benefits not only from the advanced models available to each sportsbook individually, but also from the wisdom of crowds: the idea that the aggregate predictions of groups are more accurate than the predictions of an individual.⁵³ A bet's expected value can be found by subtracting its composite fair value from the underlying probability of the best odds offered.⁵⁴ A bet with a positive expected value should be taken to make consistent profit in the long run.

The inefficiency shown by the existence of the positive-EV strategy can be further exploited by sizing bets optimally. Bettors can optimize bet size using the Kelly Criterion. The Kelly Criterion is a calculation which uses the expected value, odds, and underlying win probability to determine the optimal bet size; this calculation exploits market inefficiency by maximizing profit in the long run.⁵⁵ The Kelly Criterion formula outputs the optimal percentage of one's bankroll to place on a bet to grow capital in the long term.⁵⁶ The Kelly Criterion

- 50. Id. at 6.
- 51. *Id.*; see Levitt, supra note 11, at 234–35 (discussing how sportsbooks mitigate risk by ensuring the bet spread does not stray too far from 50/50).
 - 52. See Kaunitz et al., supra note 46, at 4.
 - 53. See id. at 17.

- 55. See Beggy et al., supra note 28, at 4-6.
- 56. The Kelly Criterion formula in the sports-betting context is F = (BP Q) / B, where F is the bet size expressed as a percentage of bankroll, B is the bet's decimal odds (which one can

^{54.} For sportsbooks offering a two-way line, this analysis may look as follows where sides of the bet are separated by a slash and sportsbook offerings are separated by a semicolon. If sportsbooks are offering bets at -135/110; -133/115; and -110/-110, the underlying win percentages would be 57.45%/47.62%; 57.08%/46.51%; 52.38%/52.38%. If the vig is split evenly across both sides, the fair value expressed by each individual sportsbook would be 54.915%/45.085%; 55.285%/44.715%; 50%/50%. The composite fair value of side one would be the average of 54.915%, 55.285%, and 50%, which is 53.4%. Taking this bet at -110 means that average sportsbook sentiment is that the bet will win 53.4% of the time, but the bettor only needs to win 52.38% of the time to be profitable, giving the bettor an expected value (or edge) of 1.02%. Importantly, there are other methods for this process, known as devigging, but this example illustrates one way of finding positive expected value on a bet. See Luis Lafer-Sousa, How to Devig Odds – Comparing Four Methods, OUTLIER, https://help.outlier.bet/en/articles/8208129-how-to-devig-odds-comparing-four-methods [https://perma.cc/R5GM-WQNB] (last visited Jan. 25, 2025).

itself, though, is incredibly risky because it fails to consider variance and, if adhered to strictly, can wipe out a large percentage of a bettor's bankroll in one fell swoop.⁵⁷ Additionally, the Kelly Criterion assumes that the underlying win probability is certain, which is not the case in sports betting.⁵⁸ While using the composite odds of sportsbooks can be very accurate, there is still uncertainty as sportsbook models are only predictions.⁵⁹ One can adjust for these weaknesses by betting a fraction of the recommended Kelly Criterion bet size, a strategy referred to as Partial Kelly.⁶⁰ By implementing a Partial Kelly strategy to bet on lines with positive EV, a bettor can expect to make profit in the long run; in fact, one study found about 80 percent annual returns over eleven years.⁶¹ Not only is this rate of return substantial, but the long-run profits of sports betting also benefit from rapid compounding because of how quickly and often bets execute. 62 The Kelly Criterion shows the inefficiency evidenced by the positive-EV strategy by showing a mathematical tool for optimizing profit over the long run.

Arbitrage is another example of inefficiency in the market on which bettors can capitalize.⁶³ In this context, arbitrage occurs when a bettor can place opposite sides of the same line on different books at price points which would guarantee a profit regardless of result.⁶⁴ This guaranteed profit opportunity presents itself when each of two mutually exclusive bets pay out an amount greater than the amount

convert to from American odds) minus one, P is the probability of winning the bet, and Q is the probability of losing the bet. See Jeremy Olson, Kelly Criterion Gambling Explained – What Is Kelly Criterion Betting?, TECHOPEDIA (Oct. 13, 2023), https://www.techopedia.com/gambling-guides/kelly-criterion-gambling [https://perma.cc/TZN3-6ACR] (discussing the Kelly criterion formula and presenting examples); Will Kenton, Kelly Criterion: Definition, How Formula Works, History, and Goals, INVESTOPEDIA (Aug. 8, 2024), https://www.investopedia.com/terms/k/kellycriterion.asp [https://perma.cc/NGB5-M7RF].

- 57. Beggy et al., supra note 28, at 4-6.
- 58. *Id.* at 5.
- 59. DraftKings Inc., *supra* note 15, at 33 ("Odds compilers and risk managers are capable of human error."); *see* Beggy et al., *supra* note 28, at 5.
 - 60. Beggy et al., supra note 28, at 6–7.
 - 61. See id. at 10.
- 62. See Matt Modi, Sports Betting Secrets: The Power of Compounding, ODDSJAM (Dec. 19, 2022, 2:47 PM), https://oddsjam.com/betting-education/sports-betting-secrets-the-power-of-compounding [https://perma.cc/NZ4J-QPPN].
- 63. See Lynn A. Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation, 81 VA. L. REV. 611, 635–36 n.65 (1995).
- 64. Matt Modi, What Is Arbitrage Betting? How Does Arbitrage Betting Work?, ODDSJAM (June 1, 2022, 11:52 AM), https://oddsjam.com/betting-education/arbitrage [https://perma.cc/GW2C-ANGP].

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wagered on the other.⁶⁵ Because sportsbooks differ in their prices, sometimes greatly, arbitrage allows a bettor to take ideal prices on opposite sides of a bet and profit off of either.⁶⁶ This may not be arbitrage in the truest sense of the word because it takes time to navigate from one sportsbook to another to place a bet, but that time is nominal enough to allow bettors to take advantage before lines change.⁶⁷

Positive EV betting and arbitrage show market inefficiency by providing mathematical ways to make profit in the long run. Another example of inefficient market structure in sports betting is an inability to exit positions. Where the first two examples show market inefficiency by illustrating how a sports bettor can make long-run profit, the inability of bettors to exit their positions shows that the market is currently a negative-sum gain in which sports bettors bear high transaction costs.

An analogy to futures contracts can illustrate the market effects of an inability to exit a position. Sports bets are inherently risky—they can either be written down to zero or achieve substantial returns. ⁶⁸ In this sense, a sports bet exhibits similarities with a futures contract. ⁶⁹ Bettors can lock in a price for a future result. ⁷⁰ It is easier to view a sports bet as a contract by changing the way we view the price. Typically, the price of a sports bet is expressed through the odds. ⁷¹ As discussed, the odds merely express the underlying win probability. ⁷² The price of an individual contract for a sports bet could be viewed as

^{65.} See, e.g., @TheArbFather, TWITTER (Jan. 31, 2024, 2:33 PM), https://twitter.com/TheArbFather/status/1752792283957588375 [https://perma.cc/6B8C-8C2Y] (showing an example where placing an over would win \$551, offsetting a \$525 wager on the under, and the under would win \$500, offsetting a \$475 wager on the over; the bettor nets either \$25 or \$26, profiting from either result).

^{66.} See, e.g., @TheArbFather, TWITTER (Feb. 23, 2024, 5:51 PM), https://twitter.com/thearbfather/status/1761177105725837386 [https://perma.cc/C7CP-CK6R] (showing that in a game where Purdue Fort Wayne is playing Green Bay betting on Purdue Fort Wayne to win at +124 odds on DraftKings and Green Bay to win at -110 odds on FanDuel guarantees a win of either \$32.80 if Purdue Fort Wayne wins or \$30 if Green Bay wins).

^{67.} See Arbitrage, BLACK'S LAW DICTIONARY (12th ed. 2024).

^{68.} See Levitt, supra note 11, at 227 ("[T]he bettor typically pays the casino 110 units if they lose the bet and collects 100 units when victorious.").

^{69.} Grant Ellfeldt, Be Honest with Me: How Federal Regulation of Sports Gambling Must Protect the Integrity of the Game, 40 LOY. ENT. L. REV. 89, 107 (2020).

^{70.} Id. at 107 ("Most futures contracts, are functionally the same as a wager." (quoting Thomas L. Hazen, Disparate Regulatory Schemes for Parallel Activities: Securities Regulation, Derivatives Regulation, Gambling, and Insurance, 24 ANN. REV. BANKING & FIN. L. 375, 406–07 (2005))).

^{71.} See discussion supra Part I.

^{72.} See Petrella, How to Remove Juice/Vig, supra note 15; FLUTTER, supra note 16, at 63 ("TRUE PROBABILITY + VIG (OVERGROUND) = ODDS YOU SEE").

that percentage on a scale of zero to one dollar. For example, a +150 bet has an implied win percentage of 40 percent and so could be represented as a contract worth forty cents.⁷³ If that bet wins, the payout is forty cents multiplied by 1.5 because of the +150 odds, and the original forty cent wager is returned, bringing the total value of the contract to one dollar (sixty-cent payout plus forty-cent wager). If the bet loses, the value of the contract falls to zero.

Typically, one can exit a position in a futures contract by purchasing an offsetting futures contract.⁷⁴ This option is not always available in sports betting, as illustrated through an examination of converse prices. Converse bet prices, which represent the sportsbook's position when an individual places a bet, illustrate that the public cannot sell a bet. To find the converse price given the odds of a bet, merely change the sign in front of the number.⁷⁵ By selling a contract at -110, the sportsbook is staked in the converse position at +110.76 A bettor's ability to buy a contract on the other side of the spread will likely be offered at -110.77 In this case, a sports bettor has a win percentage about 4.76% worse than the sportsbook.⁷⁸ It is easier to see that a sportsbook is the sole seller of contracts in the case of one-way lines. For example, a bet for the Miami Dolphins to win the Super Bowl will often be offered as a one-way line, with no way for a bettor to bet the converse except by placing an individual bet on every other team to win the Super Bowl.⁷⁹ Where there is a one-way line, there is no bet offered that is directly converse, so the position cannot truly be exited.⁸⁰ Even positions in a standard two-way line cannot be exited without incurring additional cost because of the vig. Taking both sides of the same line at a fair value price would offset and be an efficient exit, but the vig ensures that any bettor who bets both sides of the same line at

^{73.} $100 \div (150 + 100) = 40\%$. See Petrella, How to Remove Juice/Vig, supra note 15.

^{74.} Pickens, supra note 20, at 231.

^{75.} The converse price is the odds value for the percent chance that the bet does not win (1-P). A bet and its converse must equal one, so if a bet is a favorite (over 50% win chance), its converse must be an underdog, and vice versa. By putting the same odds in the formula for an underdog, the result will be one minus the win percentage of the favorite, and vice versa. See Petrella, How to Remove Juice/Vig, supra note 15.

^{76.} $P_{\rm f} = 110 \div (110 + 100) = 52.38\%, \ 100\% - 52.38\% = 47.62\% = 100 \div (110 + 100) = P_{\rm u}. \ \textit{See id.}$

^{77.} See Levitt, supra note 11, at 227; Pickens, supra note 20, at 240.

^{78.} $P_{\text{sportsbook}} = 100 \div (110+100) = 47.62\%$, $P_{\text{bettor}} = 110 \div (110+100) = 52.38\%$, 52.38% - 47.62% = 4.76%, meaning the sports bettor must win 4.76% more in order to be profitable on the same prediction. See Petrella, How to Remove Juice/Vig, supra note 15.

^{79.} See Kezirian, supra note 40 (providing an example of a one-way market for NBA championship odds).

^{80.} See *id*.

the same sportsbook will do so at a loss.⁸¹ Some sportsbooks offer an ability to cash out of a bet by accepting some return to void the bet.⁸² In theory this allows a bettor to exit a position, but the cash-out price is not always at fair value and often results in paying the vig again.⁸³ Sometimes a cash-out price is offered above the fair value, but the fact remains that bettors are not always able to exit a position easily, and when they are they often have to pay a price for it.⁸⁴

The sports-betting market contains opportunities for long-run profit as evidenced by the positive EV strategy and arbitrage, while limiting opportunities for bettors to exit their positions. These characteristics are evidence that the current sports-betting structure is inefficient.

B. Already Existing Sports Markets

Betting exchanges, platforms which allow bettors to buy or sell bets, are a popular method of sports betting internationally. 85 The use of betting exchanges domestically, though still in its early stages, shows that the exchange structure is viable. Betting exchanges differ from traditional sportsbooks by allowing individual sellers to offer bets and set prices. 86 Assuming the average seller will not be as sophisticated as sportsbooks, initial prices may be less indicative of actual probability. 87 Over time, however, the price will benefit from the presence of both buyers and sellers and move closer to a sufficiently accurate equilibrium price around the public perception of the bet's value, as is often seen in prediction markets. 88 This equilibrium price should be

^{81.} See Levitt, supra note 11, at 224.

^{82.} Luke Petty, Cash Out Betting: What Should Bettors Know About Cash Out?, PINNACLE (Jan. 7, 2019), https://www.pinnacle.com/betting-resources/en/educational/cash-out-betting-what-should-bettors-know-about-cash-out/u3p2hwkyrtyw2ncw [https://perma.cc/E89D-85X7].

^{83.} Id.; James Holzhauer, James Holzhauer on Hedging Bets and Cashouts: Are They Ever Worth It?, ATHLETIC (Jan. 10, 2022), https://theathletic.com/3029666/2022/01/10/james-holzhauer-on-hedging-bets-and-cashouts-are-they-ever-worth-it/ [https://perma.cc/S2BJ-GNET]; see Cash Out Betting Explained – How Do Bookies Calculate It? (Guide For Beginner Bookies), BOSSACTION, https://www.bossaction.com/2023/05/02/cash-out-betting-explained (last visited Jan. 22, 2025) [https://perma.cc/C6L4-CWK5] (discussing that multiple factors are considered in setting cash out price, but the bookmaker's profit margin is deducted out).

^{84.} See Petty, supra note 82.

^{85.} Andrew Francis, *Popular Betting Exchange Sites*, SQUAWKA (Feb. 29, 2024), https://www.squawka.com/en/bet/betting-sites/betting-exchange/ [https://perma.cc/NNM3-5YM8].

^{86.} *Id*

^{87.} See Kaunitz et al., supra note 46, at 5–6; e.g., FLUTTER, supra note 16, at 39 (showcasing that Flutter employs over one-thousand specialists to generate odds and build risk [management] tools, drawing on over twenty years of experience making odds).

^{88.} See Allensworth, supra note 1, at 1220, 1236.

more accurate than the final sportsbook odds because there is no one charging the vig.⁸⁹ Where a sportsbook may charge -110 on both sides of a spread when there is a 50/50 chance for either side to win, a betting exchange would be able to get much closer to -101 or +100.⁹⁰ Prices may be closer to -101 because the exchange might charge a transaction fee.⁹¹ While betting exchanges are not yet idealized, current examples of betting exchanges show that the structure is viable.⁹²

While still relatively nascent as compared to international markets, betting exchanges have begun operation in the United States and bettors have begun to experience the benefit. 93 Sporttrade, a betting exchange launched in New Jersey in 2022, proclaims that its capital market—style approach allows them to "provide tight, liquid, and dynamic markets so that customers can trade frictionlessly both before and during games." Inspired by financial markets, Sporttrade even allows users to place limit orders. 95 A limit order allows an investor to set a limit price, and if the trade executes, the price the investor pays

^{89.} See Beggy et al., *supra* note 28, at 10 ("We found convincing evidence that vig not only makes the offered lines mathematically unfair to the bettor but also makes it impossible to profit in practice." (internal quotations omitted)).

^{90.} Steven Petrella, What Is a Betting Exchange?, ACTION NETWORK, (Oct. 20, 2022, 2:29 PM) [hereinafter Petrella, Betting Exchange], https://www.actionnetwork.com/education/betting-exchange [https://perma.cc/M88T-92YY]; see, e.g., Prophet Exchange Launches as First U.S. Sports Betting Exchange—Giants Legend Victor Cruz Places Inaugural Bet, BUS. WIRE (Aug. 29, 2022, 8:45 AM), https://www.businesswire.com/news/home/20220829005434/en/Prophet-Exchange-Launches-as-First-U.S.-Sports-Betting-Exchange%E2%80%94Giants-Legend-Victor-Cruz-Places-Inaugural-Bet [https://perma.cc/3ZFP-B5CH] (noting that Prophet Exchange allows for tighter prices); Levitt, supra note 11, at 237 n.25 ("One website, http://www.tradesports.com, acts as a traditional financial market-maker, matching buyers and sellers but taking no positions on game outcomes. The commission charged for this match-making service is less than 1% of the bet – far smaller than the traditional vig.").

^{91.} See, e.g., Levitt, supra note 11, at 237 n.25.

^{92.} See, e.g., Petrella, Betting Exchange, supra note 90 ("Mark Miscavage, an executive at London-based betting exchange Smarkets, told Casino.org that the Wire Act is the biggest hurdle to creating an exchange in the U.S. because it limits the size and liquidity of the betting pools.").

^{93.} See, e.g., Sporttrade Launches First and Only Regulated "Sports Trading" Platform in New Jersey, Sporttrade (Sept. 15, 2022) [hereinafter Sporttrade New Jersey], https://getsporttrade.com/resources/sporttrade-launches-first-and-only-regulated-sports-trading-platform-in-new/ [https://perma.cc/6V9J-VWV2]; Prophet Exchange Secures Over \$10 Million in Funding to Continue to Advance its Peer-to-Peer, High-Frequency Betting Exchange, BUS. WIRE (Apr. 11, 2023, 12:54 PM), https://www.businesswire.com/news/home/202304110 05842/en/Prophet-Exchange-Secures-Over-10-Million-in-Funding-To-Continue-To-Advance-its-Peer-to-Peer-High-Frequency-Betting-Exchange [https://perma.cc/SG6B-LMAH].

^{94.} Sporttrade New Jersey, supra note 93.

^{95.} *Id*.

will either be at or lower than the limit price.⁹⁶ Limit orders are a departure from the typical sportsbook trading structure in which bettors may only take the price offered by the sportsbook without options accounting for price movement.⁹⁷ Sporttrade has since opened in Colorado and Iowa.⁹⁸ From 2020 to 2023, Sporttrade handled over \$12 billion in bets.⁹⁹ Though US sports betting saw greater handle in 2020 alone, the volume received by a new platform like Sporttrade indicates that some bettors may realize the incentives of a market-based structure.¹⁰⁰

Prophet Exchange is another sports-betting exchange which opened in New Jersey, providing bettors the opportunity to "sa[y] goodbye to betting on -110." Prophet Exchange has achieved some viability, as it recently received over \$10 million in funding to advance its capabilities. The early success of betting exchanges indicates the viability of a market-based structure in which bettors can both buy and sell bets to push prices toward their fair value. 103

III. THE LEGAL AND REGULATORY BARS

The legal and regulatory landscape around sports betting is not currently equipped to address the inefficiencies in the sports-betting marketplace. Additionally, there are legal and regulatory issues preventing a move to the more ideal market-based structure. This Part

^{96. 3} Order Types: Market, Limit and Stop Orders, CHARLES SCHWAB (June 11, 2024), https://www.schwab.com/learn/story/3-order-types-market-limit-and-stop-orders#:~:text=A %20limit%20order%20is%20an,is%20no%20assurance%20of%20execution [https://perma.cc/G BF2-GGGP] ("If the order is filled, it will only be at the specified limit price or better.").

^{97.} See discussion supra Part I.

^{98.} Sporttrade Expands into Iowa, PR NEWSWIRE (May 2, 2024, 8:43 AM), https://www.prnewswire.com/news-releases/sporttrade-expands-into-iowa-302133907.html [https://perma.cc/W6W7-WS8C]; Sporttrade Launches in Colorado, Available Immediately to Bettors, SPORTTRADE (Aug. 28, 2023) [hereinafter Sporttrade Colorado], https://getsporttrade.com/resources/sporttrade-launches-in-colorado-available-immediately-to-bettors/ [https://perma.cc/FFV9-W9VH].

^{99.} Sporttrade Colorado, supra note 98.

^{100.} See id.; Eric Ramsey, US Sports Betting Revenue & Handle, LEGAL SPORTS REP. (Feb. 14, 2025), https://www.legalsportsreport.com/sports-betting/revenue/ [https://perma.cc/974V-PF7W] (listing U.S. sports betting handle by month).

^{101.} BUS. WIRE, supra note 90.

^{102.} Id

^{103.} See Petrella, Betting Exchange, supra note 90 (noting that the success or failure of Prophet Exchange and Sporttrade will be informative in whether betting exchanges are viable); Anthony Cervino, Prophet Exchange The Game Day Review, GAME DAY (Nov. 9, 2023), https://thegameday.com/prophet-exchange/ [https://perma.cc/PQ8W-MLNN] (presenting a positive review of Prophet Exchange); Sporttrade Colorado, supra note 98 (advertising that Sporttrade has experienced over \$12 billion in handle since 2020).

will discuss the Wire Act, which prohibits interstate sports betting, and the lack of clarity as to whether sports betting falls under the jurisdiction of a federal agency. 104 The Wire Act lacks an underlying state-law-violation requirement, limiting liquidity by needlessly segmenting the market by state. 105 Additionally, sports betting does not fit neatly into the federal regulations currently used to regulate other markets and would benefit from a piecemeal approach.

A. The Wire Act

The Wire Act is a federal statute enacted in 1961 to curb gambling because it was, at that time, organized crime's most lucrative activity. ¹⁰⁶ Specifically, the Wire Act aimed to remove peoples' ability to wager over telephone or telegram. ¹⁰⁷ The Act's language makes clear that sports betting cannot take place across state lines through wire communications. ¹⁰⁸ "Wire communications" has since been interpreted broadly to include internet transactions. ¹⁰⁹ As a result, the Act stands as an explicit barrier to a more efficient sports-betting marketplace by preventing online betting from operating across state lines. ¹¹⁰ Sports betting is no longer heavily associated with organized crime, but rather by legal sportsbooks. ¹¹¹ While the Act was meant to prevent organized crime, it was not aimed at preventing ordinary citizens from gambling. ¹¹² Today, sports betting is legal in multiple states and

^{104. 18} U.S.C. § 1084.

^{105.} See Kevin W. Morrisey, Jr., Untangling the Confusing Web of Sports Gambling Regulation in the Wake of Murphy v. NCAA, 29 REV. BANKING & FIN. L. 1171, 1177–78 (2019).

^{106.} Elsa Larsen, Bet on It: Amending the Wire Act Moves the Line Forward on Interstate Sports Betting, 47 Vt. L. Rev. 604, 615–616 (2023).

^{107.} Morrisey, *supra* note 105, at 1177–78.

^{108. 18} U.S.C. §1084(a) ("Transmission in interstate or foreign commerce of bets or wagers . . . or for the transmission of a wire communication which entitles the recipient to receive money or credit as a result of bets or wagers.").

^{109.} Larsen, supra note 106, at 618 n.98.

^{110.} *Id.* at 633–34; *see, e.g.*, Petrella, *Betting Exchange, supra* note 90 ("Mark Miscavage, an executive at London-based betting exchange Smarkets, told Casino.org that the Wire Act is the biggest hurdle to creating an exchange in the U.S. because it limits the size and liquidity of the betting pools.").

^{111.} See Joe Hernandez, Sports Betting Ads Are Everywhere. Some Worry Gamblers Will Pay a Steep Price, NPR (June 18, 2022, 5:00 AM), https://www.npr.org/2022/06/18/1104952 410/sports-betting-ads-sports-gambling [https://perma.cc/X6MV-EF8W] (showing that thirty-five of fifty states have legal sports betting and in 2021 the sports-betting industry brought in \$4.29 billion); Petach & Raines, supra note 8, at 13 ("With the expansion of legal sports betting, traditional Super Bowl wagers were expected to pass casual wagers for the first time ever . . .").

^{112.} Larsen, *supra* note 106, at 620 ("[S]ocial wagers between friends was not the problem hoodlums and racketeers profiting from the country's cash cow of organized gambling were."

prevalent among the general public. 113 There is thus a large disparity between the Act's original purpose and its modern unintended consequences. 114

One can violate the Wire Act without violating any state law.¹¹⁵ If a bettor in a state in which betting is legal wants to place an online bet in another state where betting is also legal, the Wire Act would bar the bettor from doing so even though placing the bet would be legal in both states.¹¹⁶ The Act contains a relevant exception, allowing "for the transmission of information assisting in the placing of bets or wagers on a sporting event or contest from a State or foreign country where betting on that sporting event or contest is legal into a State or foreign country in which such betting is legal."¹¹⁷ While this exception may seem to allow for interstate betting where it is legal in both states, courts have found that the exception applies only to "information assisting in the placing of bets," not the actual placing of bets across state lines.¹¹⁸ In making this distinction, the US Court of Appeals for the Fifth Circuit emphasized the House of Representatives Report No. 87-967, which states "[n]othing in the exemption, however, will permit

(internal quotations omitted)); Letter from Dana Nessel, Mich. Att'y Gen. & Dave Yost, Ohio Att'y Gen., to Hon. Merrick B. Garland, Att'y Gen., U.S. Dep't of Just. & Lisa O. Monaco, Deputy Att'y Gen., U.S. Dep't of Just. (June 18, 2021), https://portal.ct.gov/-/media/AG/Press Releases/2021/Wire-Act-Final-Letter-6-18-21.pdf [https://perma.cc/2W4E-5DJA] (signed by 24 additional state attorneys general); id.("The Wire Act was part of a broad antiorganized-crime initiative in the 1960s. Specifically, the Wire Act targeted bookmaking, which was a significant source of revenue for organized crime syndicates "); Anthony Cabot & Glen Cloward, Federal Wire Act Should Adjust to State-Regulated Sports Wagering, Not the Other Way Around: A Proposal For Change, 25 GAMING L. REV. 109, 109 (2021) ("According to then-U.S. Attorney General Robert Kennedy, the target was organized crime.").

- 113. See Hernandez, supra note 111 (noting that thirty-five of fifty states have legal sports betting, and that in 2021 the sports-betting industry brought in \$4.29 billion); see Cabot & Cloward, supra note 112, at 118 (discussing that Americans now have positive perceptions of gambling and believe it can improve local economies, which is a stark departure from the landscape that existed when the Wire Act was passed).
 - 114. See Larsen, supra note 106, at 621; see Petrella, Betting Exchange, supra note 90.
- 115. Morrisey, *supra* note 105, at 1200 ([A] sports book located in a state where sports gambling is legal... may [not] accept an online wager from a gambler physically located in a state where gambling is also legal under the Wire Act....").
- 116. *Id*; see, e.g., Petrella, *Betting Exchange*, supra note 90 ("Even if an exchange operates in New Jersey and Pennsylvania, those customers could not bet against each other.").
 - 117. 18 U.S.C. § 1084(b).
- 118. See id.; United States v. Lyons, 740 F.3d 702, 713 (1st Cir. 2014) ("The safe harbor provision does not exempt from liability the interstate transmission of bets themselves."); United States v. Bala, 489 F.3d 334, 342 (8th Cir. 2007) ("Thus, the plain language suggests that Congress intended to prohibit all interstate wagering by wire, whether or not legal in the States between which the bets are transmitted.").

the transmission of bets and wagers ... from or to any State whether betting is legal in that State or not." 119

Prohibiting interstate betting even when betting is legal in both states harms the marketplace. Restricting access to markets makes them less liquid, harming both the sportsbook, who wants more money on either side of a line, and the bettor, as certain bets may have lower availability due to fewer participants.¹²⁰ A lower volume harms sportsbooks because fewer bettors means less money to be made and because if the market is illiquid the sportsbook will not be able to adjust quickly to risk exposure.¹²¹ For sports bettors, a smaller volume means that sportsbooks are less likely to offer less popular bets, such as first quarter, first half, or certain player prop lines because these markets are typically less liquid and will subject the sportsbooks to more risk exposure.¹²²

B. Current Regulatory Framework Does Not Fit

The current regulatory structure is not properly equipped to handle sports betting because it is unclear which, or if any, federal agency has jurisdiction. Regulatory clarity is needed to move sports betting to a market-based approach. A market structure where bettors can both buy and sell bets would fix many of the issues currently present in sports betting. While sports betting is currently regulated according to state schemes, lad liquid interstate market could require a shift to federal agency enforcement, similar to how other markets are regulated. It is unlikely that sports gambling will fall directly under

^{119.} United States v. McDonough, 835 F.2d 1103, 1105 (5th Cir. 1988) (quoting H.R. Rep. No. 967, 87th Cong., 1st Sess., *reprinted* in 1961 U.S.C.C.A.N. 2633).

^{120.} See, e.g., Petrella, Betting Exchange, supra note 90 (quoting a London-based sports exchange executive's worry that the Wire Act harms liquidity by preventing bettors from interacting across state lines).

^{121.} Flutter, *supra* note 16 (showing that gross revenue is a function of handle and gross win margin, handle being the amount of money bettors wager); Conor Durkin, *Liquidity in Sports Betting Markets*, CONORDURKIN.COM (July 14, 2020), https://conordurkin.com/liquidity-in-sports-betting-markets/ [https://perma.cc/4KPX-34KM].

^{122.} Durkin, *supra* note 121 (noting that less popular and illiquid bets, like derivative and prop bets, maintain inefficient prices longer and are more likely to experience one-sided traffic).

^{123.} See discussion infra Part IV.

^{124.} See Ward Williams, Sports Betting Laws by State, INVESTOPEDIA (Jan. 11, 2025), https://www.investopedia.com/sports-betting-laws-by-state-5219064 [https://perma.cc/M9JV-YGRV] (providing a chart of different sports-betting rules across different states).

^{125.} See About the SEC, SEC (Nov. 22, 2016), https://www.sec.gov/about [https://perma.cc/Z2K7-RLTP] (indicating that one of the SEC's missions is to ensure efficient markets); About the Commission, U.S. COMMODITY FUTURES TRADING COMM'N,

the purview of the Securities and Exchange Commission (SEC), Commodity Futures Trading Commission (CFTC), or Consumer Finance Protection Bureau (CFPB); instead, it is more likely that sports-betting regulation would benefit from a piecemeal approach in which certain strengths of each of these regulatory bodies are considered. 126

1. The Securities and Exchange Commission

For sports betting to be regulated by the SEC, a sports bet must be a security. ¹²⁷ Section 2(a)(1) of the Securities Act lists what qualifies as a security, which includes an investment contract. ¹²⁸ If sports betting were to fall under SEC regulation, it would be by viewing a sports bet as an investment contract. To be considered an investment contract under the *Howey* test, there must be "(1) an investment of money, (2) in a common enterprise, and (3) with the expectation of profits to be derived solely from the efforts of the promoter or third party." ¹²⁹

The investment of money prong of the *Howey* test depends on "whether the investor chose to give up a specific consideration in return for a separable financial interest with the characteristics of a security." 130 In $SEC\ v.\ SG\ Ltd.$, the US Court of Appeals for the First Circuit noted that the motivation behind the investment is important, contrasting a perceived investment opportunity with the entertainment of playing a game. 131 Bettors give up specific consideration by wagering money. The motivation component begs the question of whether bettors bet because they believe they can win money or because they find betting entertaining. In $SG\ Ltd.$, the contested investment contract was a virtual stock exchange run by $SG\ Ltd.$. 132 Because the court was undecided on whether the virtual stock market was an entertainment commodity, the fact that a sports bet promises the opportunity to make money is not enough to consider it an investment of money for the

https://www.cftc.gov/About/AboutTheCommission [https://perma.cc/47L8-KDQJ] (last visited Jan. 17, 2025) (stating that the CFTC's mission is "to promote the integrity, resilience, and vibrancy of the U.S. derivatives markets"); *The CFPB*, CONSUMER FIN. PROT. BUREAU, https://www.consumerfinance.gov/about-us/the-bureau/ [https://perma.cc/669U-DSQL] (last visited Jan. 17, 2025) (stating that the CFTC serves to protect consumers in financial markets).

- 126. See discussion infra Sections III.B.1-2.
- 127. STEPHEN M. BAINBRIDGE, BUSINESS ASSOCIATIONS 367 (11th ed. 2021).
- 128. 15 U.S.C. § 77b(a)(1).
- 129. SEC v. W.J. Howey Co., 328 U.S. 293, 298–99 (1946).
- 130. SEC v. SG Ltd., 265 F.3d 42, 48 (1st Cir. 2001) (internal quotations omitted).
- 131. Id. at 48-49.
- 132. Id. at 44.

purposes of the *Howey* test.¹³³ Promotional materials can show that bettors were led to believe that sports betting was an investment opportunity.¹³⁴ Advertising practices of sportsbooks intend to persuade sports bettors that they can conceivably make money by sports betting.¹³⁵ There is an argument that sports bets are primarily for entertainment, as economists note the utility gained from the entertainment value of negative-sum gambling.¹³⁶ Just as the US Supreme Court in *International Brotherhood of Teamsters v. Daniel* declined to find an investment of money where an employee participated in a compulsory pension plan as part of exchanging his labor to make a living instead of an investment, a court may find that sports bettors are betting, not because they perceive a legitimate investment opportunity, but because they find betting fun or entertaining.¹³⁷

The second prong of the *Howey* test looks for common enterprise, of which there are two judicially accepted forms: vertical and horizontal commonality.¹³⁸ Vertical commonality can be broad or narrow.¹³⁹ Broad vertical commonality exists when an investor relies on a promoter to earn a profit. 140 The success of a bettor relies on a sportsbook's ability to make lines available and set them at prices which make those bets at least somewhat appealing, therefore broad vertical commonality likely applies. 141 Narrow vertical commonality requires that "the investors' fortunes be interwoven with and dependent upon the efforts and success of those seeking the investment or of third parties." 142 The narrow vertical commonality standard likely applies in determining whether a sports bet is a security because the success of a sports bettor is entirely dependent on the efforts and success of both the bookmaker in making the bet available and the team or athlete the bet relates to in attaining the necessary result. 143 The final type of commonality, horizontal, requires pooling of investor assets and pro rata sharing of

^{133.} See id. at 48–49.

^{134.} See Warfield v. Alaniz, 569 F.3d 1015, 1019 (9th Cir. 2009) (considering promotional materials regarding returns of gift annuities to find the investment of money prong satisfied).

^{135.} Hernandez, supra note 111.

^{136.} Stout, *supra* note 63, at 704.

^{137. 439} U.S. 551, 560 (1979).

^{138.} Nicholas E. Gonzalez, Does Cryptocurrency Staking Fall Under SEC Jurisdiction?, 27 FORDHAM J. CORP. & FIN. L. 521, 542–43 (2022).

^{139.} Id. at 140.

^{140.} Id. at 544.

^{141.} See discussion supra Part I.

^{142.} SEC v. SG Ltd., 265 F.3d 42, 49 (1st Cir. 2001).

^{143.} See Ellfeldt, supra note 69, at 105; discussion supra Part I.

risks and returns.¹⁴⁴ The returns in sports betting are based on the odds, which may be different for each individual.¹⁴⁵ Because the payout is not always "directly proportional to the size of the investment," the pro rata requirement is not met and there is no horizontal commonality.¹⁴⁶ As the commonality tests are applied differently across circuits, the likelihood of sports betting satisfying commonality likely depends on the jurisdiction.¹⁴⁷

The final *Howey* prong considers whether there is an expectation of profit from the efforts of third parties. ¹⁴⁸ A sports bettor has no impact on the outcome of a sporting event because they typically do not participate in the event. ¹⁴⁹ Thus, profits derived from sports betting necessarily depend on the efforts of third parties. Sportsbooks set prices incorporating the vig to ensure that, on average, gamblers do not profit, but that does not mean that an individual gambler cannot profit or does not expect profit. ¹⁵⁰ Bettors' expectations can be wrong. ¹⁵¹ If a gambler did not believe they could make money, it is less likely they would place a bet. ¹⁵² The subjective expectation can influence whether there is an expectation of profit, but the question is more of "what the purchasers were led to expect." ¹⁵³ Promotional materials are frequently used in that inquiry. ¹⁵⁴ Sportsbooks spend a great deal on advertising and often promote "risk-free" or "bonus" bets. ¹⁵⁵ Because these types of

- 144. Gonzalez, supra note 136, at 543.
- 145. See, e.g., Monahan, supra note 42.
- 146. See SG Ltd., 265 F.3d at 51.
- 147. Gonzalez, *supra* note 136, at 542–46 (noting that the Second, Third, Fourth, Sixth, and Seventh Circuits use horizontal commonality, the Fifth and Eleventh Circuits use broad vertical commonality, and the Ninth Circuit uses narrow vertical commonality).
 - 148. SEC v. W.J. Howey Co., 328 U.S. 293, 298-99 (1946).
- Professional athletes have been investigated and suspended by their leagues for betting on sports. See, e.g., Mike Florio, NFL Is Investigating Kayshon Boutte Gambling Allegations, NBC SPORTS (Jan. 30, 2024, 2:07 PM), https://www.nbcsports.com/nfl/pro footballtalk/rumor-mill/news/nfl-is-investigating-kayshon-boutte-gambling-allegations [https://pe rma.cc/D6SP-ZGZA]; Calvin Ridley on Gambling That Led to NFL Suspension: In a Dark Moment, I Made a Stupid Mistake', ATHLETIC (Mar. 8, 2023), https://theathletic.com/42886 84/2023/03/08/calvin-ridley-gambling-suspension/ [https://perma.cc/PCT5-TXDV]; NHLInvestigation Regarding EvanderKane Completed, NHL 2021), https://www.nhl.com/news/sharks-kane-gambling-investigation-completed-326267762 [https://perma.cc/6VXR-GAX3].
 - 150. See discussion supra Section II.A.
- 151. See Stout, supra note 63, at 637–38 (discussing that speculative markets often contain many investors who believe their abilities are above average, only to be proven wrong).
 - 152. Ellfeldt, supra note 69, at 106.
- 153.~ SEC v. NAC Found., LLC, 512~F. Supp. 3d 988, 996 (N.D. Cal. 2021) (citing Warfield v. Alaniz, 569~F.3d~1015 (9th Cir. 2009) (internal quotations omitted).
 - 154. Id. at 996–97.
 - 155. Hernandez, supra note 111.

promotions attract customers by painting a picture of minimal risk for potential gains, it is likely that the expectation of profit requirement is satisfied.¹⁵⁶

To qualify as an investment contract, sports betting would have to meet all three prongs of the *Howey* test. While sports betting likely meets the expectation of profits from the efforts of third parties prong, it is unclear whether sports betting would meet the investment of money prong, and it would not meet the common enterprise prong in jurisdictions that recognize horizontal commonality. As a result, it is likely that a sports bet is not an investment contract and, therefore, is not subject to SEC regulation.

2. The Commodity Futures Trading Commission (CFTC)

The CFTC does not necessarily have the authority to regulate sportsbooks because sports bets are likely to be considered gaming. The CFTC regulates event contracts when they are commodities. 157 An event contract is a "contract whose payoff is based on a specified event[.]"158 Because a sports bet wins or loses based on the outcome of the game, it is an event contract. 159 CFTC Regulation Section 40.11 likely removes sports bets from CFTC purview by explicitly excluding from trading event contracts that involve or relate to gaming. 160 While the CFTC does not clearly define gaming in this context, political event contracts were found to constitute gaming, so it is likely that a sports bet would as well.¹⁶¹ In an attempt to allow the North American Derivatives Exchange (Nadex) to offer political event contracts, then Nadex Chief Regulatory Officer Timothy G. McDermott argued to the CFTC that gaming was reserved for sporting events. 162 McDermott also differentiated Nadex political contract offerings from a sportsbook by emphasizing that sports bets have prices set by the sportsbook where

^{156.} See id.

^{157.} John T. Holden & Ryan M. Rodenberg, *Modern Day Bucket Shops? Fantasy Sports and Illegal Exchanges*, 6 Tex. A&M L. Rev. 619, 642 (2019).

 $^{158. \}quad Contracts \quad \& \quad Products, \quad COMMODITIES \quad \& \quad FUTURES \quad TRADING \quad COMM'N, \\ https://www.cftc.gov/IndustryOversight/ContractsProducts/index.html \quad [https://perma.cc/9NN4-2K3U] (last visited Jan. 22, 2025).$

^{159.} See Levitt, supra note 11, at 227.

^{160.} See Review of Event Contracts Based Upon Certain Excluded Commodities, 17 C.F.R. § 40.11(a)(1) (2012).

^{161.} See Holden & Rodenberg, supra note 157, at 638–39.

^{162.} See Letter from Timothy McDermott, Gen. Couns., Nadex, to David Stawick, Sec'y of the Comm'n, Commodity Futures Trading Comm'n 6 (Feb. 16, 2012) [hereinafter Nadex Letter], https://www.cftc.gov/sites/default/files/stellent/groups/public/@rulesandproducts/documents/ifdoc s/nadexltr021612.pdf [https://perma.cc/V8S2-VTFB] (noting that sportsbooks serve as the only counterparty for sports bettors).

the sportsbook must be counterparty with no ability to exit a position, whereas the Nadex political event contract marketplace allowed for open matching of buyers and sellers to determine a fair and efficient price. ¹⁶³ McDermott's arguments indicate that sports betting is more likely to be included within the definition of gaming than political contracts, which the CFTC found were included within the definition of gaming. ¹⁶⁴ As a result, it is unlikely that sports betting would fall under the purview of the CFTC.

3. The Consumer Finance Protection Bureau (CFPB)

The CFPB has jurisdiction over banks and certain nonbank "covered persons." A nonbank covered person is under CFPB jurisdiction when it "engages in offering or providing a consumer financial product or byservice." He statutory list of consumer financial products and services relates mainly to activities like extending credit, accepting payments or collecting debt, or providing real estate or advisory services. He is unlikely that offering a sports bet would fall under the list of activities set out as consumer financial products or services. Still, the CFPB may also supervise nonbanks based on their conduct. Section 5514(a)(1)(C) of the Dodd-Frank Act states that the CFPB may cover nonbanks in cases where:

[T]he Bureau has reasonable cause to determine, by order, after notice to the covered person and a reasonable opportunity for such covered person to respond, based on complaints collected through the system under section 1013(b)(3) [12 USCS § 5493(b)(3)] or information from other sources, that such covered person is engaging, or has engaged, in conduct that poses risks to consumers with regard to the offering or provision of consumer financial products or services. 170

While this provision seems to allow the CFPB to regulate sports betting if sportsbook practices can be deemed harmful to consumers, the provision still requires that risk to consumers be related to consumer financial products or services, which is likely not the case for sports betting.¹⁷¹

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163. See id.
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^{164.} See Holden & Rodenberg, supra note 157, at 638–39.

^{165.} Dylan J. Castellino, A Spotlight on Shadow Banking: The CFPB Finalizes Procedures to Supervise Risky Nonbanks, 18 N.C. BANKING INST. 333, 337 (2014).

^{166. 12} U.S.C. § 5481(6).

^{167.} See id. § 5481(15)(A).

^{168.} See id.

^{169.} See 12 U.S.C. § 5514(a)(1)(C).

^{170.} Id.

^{171.} See id.; 12 U.S.C. § 5481(15)(A).

Sports betting likely does not fall under the purview of the SEC because it does not meet the *Howey* test, the CFTC because it qualifies as gaming, or the CFPB because it does not relate to consumer financial products or services. Because none of these agencies have clear jurisdiction over sports betting, the current regulatory landscape is ill-equipped to handle an interstate sports-betting market.

IV. THE SOLUTION

The sports-betting market is inefficient, poorly regulated, and predatory. Viewing sports betting like a capital market makes it easier to see and remedy these problems. There is a two-step solution. First, by amending the Wire Act to require an underlying state law violation, the sports-betting market can become fairer and more efficient. Amending the Wire Act makes possible the second step: sports betting should move to a market-based structure, where bettors can both buy and sell, and implement a regulatory scheme inspired by other markets.

A market-based structure in this context means introducing short sellers to the market. This idea is similar to the structure of betting exchanges, in which bettors can both buy and sell bets. ¹⁷⁶ By allowing for buy- and sell-side pressure, prices will move closer to their fair value. ¹⁷⁷ Instead of the vig ensuring that the seller, who until this point has exclusively been the sportsbook, always profits, premiums will be much smaller and more analogous to transaction fees. ¹⁷⁸

^{172.} See discussion supra Sections II.A., III.B.4.

^{173.} See COMM. ON CAP. MKTS. REGUL., SHORT SELLING'S POSITIVE IMPACT ON MARKETS AND THE CONSEQUENCES OF SHORT-SALE RESTRICTIONS 1, 3 (2018); Petrella, Betting Exchange, supra note 90 (stating that betting exchanges charge lower fees).

^{174.} See discussion supra Sections III.A, III.B.3.

^{175.} See Petrella, Betting Exchange, supra note 90 ("Mark Miscavage, an executive at London-based betting exchange Smarkets, told Casino.org that the Wire Act is the biggest hurdle to creating an exchange in the U.S. because it limits the size and liquidity of the betting pools.").

^{176.} See discussion supra Section II.B.

^{177.} See Allensworth, supra note 1, at 1220.

^{178.} See Nadex Letter, supra note 162 (noting that sportsbooks serve as the only counterparty for sports bettors); Prophet Exchange Launches as First U.S. Sports Betting Exchange—Giants Legend Victor Cruz Places Inaugural Bet, supra note 90 (discussing how one bettor "said goodbye to betting on -110" by taking a bet on a spread at +100); Prophet Exchange Secures Over \$10 Million in Funding to Continue to Advance its Peer-to-Peer, High-Frequency Betting Exchange, supra note 93 (advertising that Prophet Exchange, a U.S. sports-betting exchange, does not charge vig); Petrella, Betting Exchange, supra note 90 (stating that betting exchanges charge lower fees).

Introducing short sellers via a market-based structure will provide more efficient prices, reduce vig, and thereby increase liquidity.¹⁷⁹

A. Amending the Wire Act

The early success of betting exchanges in the United States is a welcome sight, but the benefits are still limited by the Wire Act. ¹⁸⁰ The Wire Act prevents betting exchanges from matching bettors from different states, hampering liquidity. ¹⁸¹ Less popular markets either will not be offered or will be poorly priced without proper liquidity, which would instead be maximized by allowing for matching bettors across states where betting is legal. ¹⁸² The Wire Act currently allows investors to be exploited by or to exploit poor prices for the sake of preventing interstate betting, despite the prohibition's initial intent to limit organized crime, which no longer characterizes the sports-betting industry. ¹⁸³ When two bettors make the same prediction that a team will win, one bettor will be rewarded with less simply because he or she lives in a different state and is limited to certain sportsbooks which have different prices. ¹⁸⁴

Amending the Wire Act to require an underlying state law violation would make the Act prevent interstate sports betting only when betting is illegal in one or both of those states. ¹⁸⁵ This change would consolidate the individual state sports-betting markets, allow for greater liquidity, and allow for a larger bet matching pool consisting of individuals in other states where betting is legal. ¹⁸⁶ Importantly, not all

- 179. See COMM. ON CAP. MKTS. REGUL., supra note 173, at 9.
- 180. See discussion supra Part II.B; Petrella, Betting Exchange, supra note 90.
- 181. See Petrella, Betting Exchange, supra note 90 ("Exchange operators are limited to running separate exchanges in each individual state, thanks to the Federal Wire Act of 1961, which does not allow the transmission of gambling info across state lines... and that's an issue because the pool of users and money would be too small.").
- 182. See Durkin, supra note 121 (noting that less popular and illiquid bets, like derivative and prop bets, maintain inefficient prices longer and are more likely to experience one-sided traffic); Petrella, Betting Exchange, supra note 90 ("Mark Miscavage, an executive at London-based betting exchange Smarkets, told Casino.org that the Wire Act is the biggest hurdle to creating an exchange in the U.S. because it limits the size and liquidity of the betting pools.").
- 183. See Larsen, supra note 106, at 620–21 ("[S]ocial wagers between friends was not the problem hoodlums and racketeers profiting from the country's cash cow of organized gambling were." (internal quotations omitted)); Hernandez, supra note 111 (showing that thirty-five of fifty states have legal sports betting, and that in 2021 the sports betting industry brought in \$4.29 billion).
- 184. See Petrella, A Full List, supra note 43 (showing a list of which sportsbooks are operational in which states); Monahan, supra note 42 (showing different prices across sportsbooks for the same bet).
 - 185. See Morrisey, supra note 105, at 1214.
 - 186. See id.; Petrella, Betting Exchange, supra note 90.

states have legalized sports betting, so this change is carefully calculated to facilitate sports betting in states where it is legal instead of creating a nationwide scheme.¹⁸⁷

Requiring an underlying state law violation also helps deal with differing state schemes. Here is a state schemes. Here is a state schemes in which a college from New Jersey is participating. Here is though sports betting is otherwise legal in New Jersey, placing a bet on a New Jersey college would constitute a state-law violation, meaning the amended Wire Act would exclude New Jersey bettors from those markets. Hequiring an underlying state law-violation for the Wire Act allows for a national sports-betting market while also accounting for flexibility when states choose to exclude bettors from certain markets.

Requiring an underlying state-law violation in the state where the bet is placed or received would be a simple way to allow for an interstate betting market to exist. Inportantly, limiting the underlying state law violation to where a bet is placed or received eliminates the importance of states where servers route or process data, which would facilitate analysis and ensure that data processing, which is merely a logistical aspect of the operation, does not bar the entire betting process from happening in states where it is legal. In addition to remedying the harms created by the isolation of multiple state-betting markets, requiring a state-law violation in the Wire Act would be consistent with other gambling statutes. Hequiring an underlying state-law violation in the Wire Act would allow for greater liquidity in the sports-betting market by consolidating pools of legal bettors to be matched.

^{187.} See Petrella, A Full List, supra note 43 (showing a list of which sportsbooks are operational in which states).

^{188.} See Morrisey, supra note 105, at 1198–99 (noting a potential interpretation of the Wire Act dependent on underlying state and local laws).

^{189.} See Press Release, N.J. Off. of the Att'y Gen., With Kickoff to Pro and College Football Seasons Here, New Jerseyans Urged to Avoid Illegal Online Sports Betting and Fantasy Sports Sites (Sept. 1, 2023), https://www.njoag.gov/with-kickoff-to-pro-and-college-football-seasons-here-new-jerseyans-urged-to-avoid-illegal-online-sports-betting-and-fantasy-sports-sites [https://perma.cc/4R2D-JY8Y].

^{190.} See id.

^{191.} See Petrella, Betting Exchange, supra note 90; Morrisey, supra note 105, at 1198–99 (noting a potential interpretation of the Wire Act dependent on underlying state and local laws).

^{192.} Morrisey, supra note 105, at 1214.

^{193.} See id.

^{194.} *Id.* at 1177 (including the Travel Act, the Paraphernalia Act, the Illegal Gambling Business Act, and the Unlawful Internet Gambling Enforcement Act as examples of statutes which require an underlying state law violation).

B. A Piecemeal Regulatory Approach

Though sports betting may not fall directly into the purview of an agency which regulates markets, regulation can still be inspired by the policies of other agencies. ¹⁹⁵ Examining whether the sports-betting market is structured in the ways required of other markets can show the problems in the sports betting market, and the regulations can model how to fix those problems.

One major issue in sports betting is that sportsbooks set the price artificially high by implementing the vig. ¹⁹⁶ To resolve this issue, a sports-betting regulator could take inspiration from Section 180.2 of the Code of Federal Regulations, which expressly prohibits price manipulation. ¹⁹⁷ The CFTC defines "manipulation" as any "practice that causes or maintains an artificial price." ¹⁹⁸ The relevant definitions are somewhat circular, as the CFTC glossary defines an "artificial price" as "[a] futures price that has been affected by a manipulation and is thus higher or lower than it would have been if it reflected the forces of supply and demand." ¹⁹⁹ The following four-part test governs the application of Section 180.2:

(1) That the accused had the ability to influence market prices; (2) that the accused specifically intended to create or effect a price or price trend that does not reflect legitimate forces of supply and demand; (3) that artificial prices existed; and (4) that the accused caused the artificial prices. 200

Section 180.2 on its own would not apply in the sports-betting context, but can help illustrate the manipulation currently present in the sports-betting market.²⁰¹ The wording explicitly requires the prices to relate to a commodity in interstate commerce.²⁰² The Wire Act currently prohibits any bet from having a presence in interstate commerce,

- 195. See discussion supra Sections III.B.1-3.
- 196. See Petrella, How to Remove Juice/Vig, supra note 15.
- 197. Prohibition on Price Manipulation, 17 C.F.R. § 180.2 (2024).
- 198. Futures Glossary: A Guide to the Language of the Futures Industry, COMMODITY FUTURES TRADING COMM'N, https://www.cftc.gov/LearnAndProtect/AdvisoriesAndArticles/C FTCGlossary/index.html [https://perma.cc/6PA9-KBWJ] (last visited Feb. 19, 2025).
 - 199. See id.
- 200. Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation, 76 Fed. Reg. 41398, 41407 (July 14, 2011) (to be codified at 17 C.F.R. pt. 180).
- 201. See Prohibition on Price Manipulation, 17 C.F.R. § 180.2 (2024) (limiting its application to swaps, commodities in interstate commerce, or a future delivery); United States v. McDonough, 835 F.2d 1103, 1105 (5th Cir. 1988) (finding that the Wire Act does not allow bets to be placed across state lines).
- 202. Prohibition on Price Manipulation, 17 C.F.R. \S 180.2 (2024) ("It shall be unlawful for any person, directly or indirectly, to manipulate or attempt to manipulate the price . . . of any commodity in interstate commerce.").

although if the Wire Act required an underlying state law violation, that would not be an issue.²⁰³ Though the rule does not apply, it can help in examining whether manipulation exists in the current sports-betting marketplace.

The four-part test outlined above would likely show that sportsbooks are actively manipulating the prices of the bets they offer. The first factor is met because sportsbooks directly set prices, meaning they have the ability to influence them. While the prices of an individual sportsbook may be influenced by the prices of other sportsbooks, that influence is limited because states have different combinations of sportsbooks, meaning that bettors do not always have the option to pick the sportsbook offering the best price. Thus, there are some states in which competition among sportsbooks is unlikely to affect prices, or that effect is relatively low. Sportsbooks can influence the prices they offer.

The second factor is likely met even though prices incorporate some forces of supply and demand: sportsbooks use the money coming in on one side of a line to adjust and encourage action on the other side. Supply and demand forces are limited because there is no seller but the sportsbook. While that means there is theoretically as much supply as the sportsbook allows, there is no sell-side pressure on a bet to move its price toward equilibrium. The information in the price is further limited by sportsbooks' propensities to limit winning bettors. Sportsbooks can sell bets at inflated prices, to be reduced only if the

^{203.} See Morrisey, supra note 105, at 1214 (noting that requiring an underlying state law violation would allow for interstate betting as long as betting is legal in the involved states).

^{204.} See Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation, 76 Fed. Reg. at 41407.

 $^{205. \}quad See\ How\ Are\ Sports\ Betting\ Lines\ Really\ Made?,\ ACTION\ NETWORK,\ (May\ 22,\ 2023,\ 11:10\ AM), \quad https://www.actionnetwork.com/education/how-do-betting-lines-work-vegas\ [https://perma.cc/ZK5V-NJ2T].$

^{206.} See id.

^{207.} See Petrella, A Full List, supra note 43 (showing a list of which sportsbooks are operational in which states).

^{208.} Florida, for example, only uses Hard Rock Sportsbook. See id.

^{209.} See ACTION NETWORK, supra note 205 (detailing how sportsbooks move lines based on bets made on either side).

^{210.} See Nadex Letter, supra note 162, at 6.

^{211.} See id. (noting that sportsbooks serve as the only counterparty for sports bettors); COMM. ON CAP. MKTS. REGUL., *supra* note 173, at 3 (discussing how in a market without short sellers, prices experience upward bias).

^{212.} See Danny Funt, Sportsbooks Say You Can Win Big. Then They Try to Limit Winners., WASH. POST (Nov. 17, 2022, 8:00 AM), https://www.washingtonpost.com/sports/2022/11/17/betting-limits-draft-kings-betmgm-caesars-circa/ [https://perma.cc/KB9X-NKPY].

sportsbook feels it is too exposed to risk on the other side of the bet.²¹³ The second factor requires intent, which can be inferred because sportsbooks are actively aware of their risk and move lines to limit exposure and capture the vig.²¹⁴ The prices offered by sportsbooks, while influenced to some extent by supply and demand, do not accurately reflect supply and demand forces for reasons sportsbooks are aware of and have advertised to investors.

The third factor is satisfied because sportsbooks set prices by taking the win percentage their models generate and adding in the vig.²¹⁵ The vig shows that the price is inflated, and the lack of sell-side pressure indicates that in a proper marketplace the price would move closer to a price with no vig.²¹⁶ Because these prices exist outside forces of supply and demand, they are artificial.²¹⁷ The vig, by definition, creates an artificial price by adding in a premium above fair value.

The fourth factor is met because sportsbooks set their own prices, and cause the inflated prices. ²¹⁸ This four-factor test shows that sportsbooks manipulate prices to make them artificially high at the cost of the betting public. ²¹⁹ The most beneficial fix here is to give the market more ability to set prices by allowing investors to exert pressure on both the buy- and sell-side of a bet. ²²⁰

Sports-betting regulation could also take inspiration from the SEC's ability to suspend trading in a stock when it believes it is necessary to protect investors.²²¹ Sportsbooks commonly limit the amount of money they will accept from bettors who win frequently, also

^{213.} See Levitt, supra note 11, at 234–37 (detailing that it would be risky for sportsbooks to let the distribution of money on either side of a bet stray too far from 50/50).

^{214.} See ACTION NETWORK, supra note 205; Levitt, supra note 11, at 224.

^{215.} FLUTTER, *supra* note 16, at 63 ("TRUE PROBABILITY + VIG (OVERGROUND) = ODDS YOU SEE"); *See* ACTION NETWORK, *supra* note 205.

^{216.} See Flutter, supra note 16, at 63; Action Network, supra note 205; Comm. on Cap. Mkts. Regul., supra note 173, at 4; Petrella, Betting Exchange, supra note 90 (noting that betting exchanges, which have sell side pressure, see lower fees than the vig incorporated by sportsbooks).

^{217.} See Futures Glossary: A Guide to the Language of the Futures Industry, supra note 197 (stating that prices are artificial when they are higher or lower than they would be if reflected by supply and demand); Petrella, Betting Exchange, supra note 90.

^{218.} See Flutter, supra note 16; Action Network, supra note 211.

^{219.} See Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation, 76 Fed. Reg. 41398, 41407 (July 14, 2011) (to be codified at 17 C.F.R. pt. 180).

^{220.} See discussion infra Part IV.

^{221.} Investor Bulletin: Trading Suspensions, SEC. & EXCH. COMM'N (Dec. 14, 2021), https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins/investor-5 [https://perma.cc/V3HM-PPKF].

limiting the amount of money those bettors can win.²²² When the SEC suspends trading, it does so for all investors so they are not harmed.²²³ Sportsbooks instead limit the amount an individual can place on a bet because the sportsbook wants to limit the individual's winnings.²²⁴ Limiting individual investors based on their success disincentivizes undertaking the necessary effort to become a good investor.²²⁵ With less incentive to become a good bettor, there will be more uninformed bettors to be exploited by sportsbooks.²²⁶ An ideal regulatory regime would encourage investors to inform themselves, rather than limit those who are successful.²²⁷ In this context, the regulatory structure should allow bet limiting or suspension in cases where necessary to protect the general public, rather than to protect only the sportsbook.

C. Market-Based Structure

As the sports-betting market currently stands, multiple sportsbooks offer different prices. ²²⁸ Bettors in certain states may not have access to the best prices, simply because there are few sportsbooks available. ²²⁹ Additionally, casual bettors may not take the effort to look for the best price. ²³⁰ The shift to a market-based structure in which bettors can buy and sell bets reduces the cost for investors to find the best price. ²³¹ Because a market-based structure has buy- and sell-side pressure, bettors will be able to wager at prices closest to fair value,

^{222.} See Funt, supra note 212; Jack Snape, Betting Inquiry Sees Wagering Companies Squirm over Blocking Winning Gamblers, AUSTL. BROAD. CORP. NEWS (Apr. 4, 2023, 1:46 AM), https://www.abc.net.au/news/2023-04-04/online-gambling-house-of-representatives-committee-sportsbet/102186232 [https://perma.cc/K5KB-KZ65].

^{223.} See SEC. & EXCH. COMM'N, supra note 221.

^{224.} Funt, supra note 212.

^{225.} *Id.* ("As a result, he encourages people to think twice about pursuing his profession. If you're smart enough to be successful in sports betting,' he said, 'you can make a lot more money in an industry where you're not penalized and ostracized and treated like a thief.").

^{226.} See id. ("DraftKings CEO Jason Robins caused a stir among serious bettors last year by declaring: "This is an entertainment activity. People who are doing this for profit are not the players we want.' The not-so-subtle implication: The company is only interested in losers.").

^{227.} See id. (discussing a sportsbook executive who said that too many individuals are limited and too harshly and another sportsbook executive who advocates for efforts to mend the relationship between sportsbooks and sharp bettors).

^{228.} See, e.g., Monahan, supra note 42 (showing different prices across sportsbooks for the same bet).

^{229.} See ACTION NETWORK, supra note 205.

^{230.} See Funt, supra note 212 (noting that line shopping is common among intelligent bettors).

^{231.} See COMM. ON CAP. MKTS. REGUL., supra note 173, at 5 (noting that introducing short sellers to a market increases price efficiency and the speed at which prices incorporate information).

eliminating the need to line-shop across multiple sportsbooks, which may not be available to a bettor depending on which state they are in.²³²

A market-based structure would be benefitted by implementing a regulatory provision similar to Section 180.2, the CFTC's ban on price manipulation.²³³ That provision prohibits one from artificially changing prices beyond the forces of supply and demand, as sportsbooks do with their imposition of the vig.²³⁴ An analogous provision would ensure that bettors properly realize the benefit of moving to the market-based system in the form of fair prices influenced solely by market forces.²³⁵

A market-based structure fulfills the Wire Act's goal of combatting organized crime.²³⁶ Illegal bookies set prices similar to the market.²³⁷ By creating a high-volume liquid market for trading bets, sell-side pressure would push market prices so low to a point where it would be difficult for organized crime to keep up. If illegal sportsbooks were to charge fair prices, they would make less money, and so moving to a market-based system takes sports betting out of criminals' best interest, while also giving the public the best prices possible.²³⁸ Additionally, removing limits on bettors would also harm illegal sportsbooks, as limits often push bettors to seek out illegal sportsbooks.²³⁹

Sportsbooks would play an important role in a market-based system because of their experience setting lines.²⁴⁰ Professional oddsmakers have unparalleled modeling capability and the resources to track the placement of bets at a large scale.²⁴¹ Sportsbooks fit nicely into the role of the exchange in a market-based system because they would be able to set strong initial lines.²⁴²

- 232. See id. (citations omitted).
- 233. See Prohibition on Price Manipulation, 17 C.F.R. § 180.2 (2024).
- 234. See id.
- 235. See id. (prohibiting actors from manipulating prices away from their fair value as determined by supply and demand).
 - 236. See Larsen, supra note 106, at 617 (citations omitted).
- 237. Koleman S. Strumpf, *Illegal Sports Bookmakers* 3 (U. Chi. Booth Sch. Bus., Working Paper No. 181, 2003).
- 238. See Petrella, Betting Exchange, supra note 90 (noting that betting exchanges, which have sell side pressure, have fees closer to one percent instead of the standard ten percent charged by normal sportsbooks).
- 239. See Funt, supra note 212 ("By imposing stringent limits, regulated operators are pushing business to illegal bookies and offshore operations.").
 - 240. See Kaunitz et al., supra note 46, at 2; Flutter, supra note 16, at 63.
 - 241. See Kaunitz et al., supra note 46, at 2; Flutter, supra note, 16 at 62.
- 242. See ACTION NETWORK, supra note 205 (mentioning that sportsbooks are "some of the best in the world" at setting opening lines).

A market-based system would decrease or even eliminate the vig.²⁴³ Standard bets would fall from -110 to -101 or even +100.²⁴⁴ The decreased vig means sportsbooks would lose money on each individual transaction;²⁴⁵ however, the lower costs present in a market-based structure could establish betting as a more of a legitimate investment opportunity instead of a losing game for fools or addicts.²⁴⁶ Additionally, FanDuel has found increasing account-activation rates as new states legalize betting.²⁴⁷ It is possible that account-activation rates would continue to increase with the lowering of prices and increased liquidity from moving to a market-based system.²⁴⁸ As a result, a market-based system would likely see a drastic increase in volume.²⁴⁹ By placing odds at -101, analogous to a 1% transaction fee, the increase in volume could potentially offset the decrease in the vig.²⁵⁰

By reducing prices closer to their efficient value, sports betting would no longer be unfair to the bettor.²⁵¹ This change is perhaps the greatest implication of a market-based system in that it allows the stigma behind sports betting to disappear, and sports betting to be viewed as a legitimate investing opportunity.²⁵² As mentioned, this change could bring an influx in volume to the point where the revenue brought in from transaction costs could make it a worthwhile deal for sportsbooks to decrease prices.²⁵³ As Professor Michael Abramowicz once predicted, "readers of the sports pages will do what readers of the

^{243.} See Petrella, Betting Exchange, supra note 90; see, e.g., Prophet Exchange, supra note 90 (advertising that Prophet Exchange, a U.S. sports betting-exchange, does not charge vig).

^{244.} See Petrella, Betting Exchange, supra note 90; see, e.g., Prophet Exchange, supra note 90.

^{245.} See Levitt, supra note 11, at 224 n.4 (discussing that sportsbooks make money by collecting the vig).

^{246.} See Allensworth, supra note 1, at 1237 (presenting a belief that people could one day view price graphs for sports the same way they seek out price graphs in business).

^{247.} FLUTTER, supra note 16, at 39.

^{248.} See Stout, supra note 63, at 632–33 n.51 (showing graphically that decreasing trading costs increases trading).

^{249.} See id.

^{250.} See Lloyd Danzig, The Case for Exchange Wagering, MEDIUM (Feb. 6, 2020), https://medium.com/@lloyddanzig/the-case-for-exchange-wagering-4e726eaab0ed [https://perma.cc/KXJ4-RQ63] (noting that exchanges make money by taking a commission fee on transactions).

^{251.} See discussion supra Part I (providing math showing that standard -110 bets provide the bettor with negative expected value).

^{252.} See Allensworth, supra note 1, at 1237 (presenting a belief that people could one day view price graphs for sports the same way they seek out price graphs in business).

^{253.} See Stout, supra note 63, at 632–33 n.51 ("Increasing trading costs will decrease trading. Increasing trading costs from range A to range B will expand the nontrading area within which investors perceive that transaction costs outweigh potential gains from buying or selling a stock they perceive as mispriced.").

business pages often do: look at a price graph for a snapshot of the day's news."²⁵⁴ Sports betting as a legitimate business activity can also diversify an investment portfolio because sports are independent from factors which would normally affect the stock market.²⁵⁵

The move to a market-based system should also adopt consistency in limiting bettors. ²⁵⁶ DraftKings limits bettors "based on individual customer profiles and risk level to the enterprise," but recognizes that there is "no guarantee that jurisdictions will allow operators... to limit at the customer level." Just as the SEC does not limit trading unless it must do so for the entire market to protect investors, regulations in a sports-betting market should serve to allow bettors to bet freely absent extreme circumstances. ²⁵⁸ This regulation should be a swift departure from the imposition of limits by sportsbooks on winning bettors. ²⁵⁹

Because a market-based system would not impose limits on winners, institutional investors can play an increased role. By requiring an underlying state law violation for the Wire Act and moving to a system where bettors can both buy and sell bets without limits for winning, institutional investors may be able to return to sports betting. Institutional investors make up for a large proportion of short sales, meaning they are key in realizing the price and liquidity benefits of introducing short sellers to the market. By

Institutional money has a brief history in sports gambling. In 2015, Nevada legalized institutional betting via sports-betting investment funds, known as entity bettors.²⁶³ Investors would pay

^{254.} Allensworth, supra note 1, at 1237.

^{255.} See Tobias J. Moskowitz, Asset Pricing and Sports Betting, 76 J. FIN. 3153, 3184 (2009) (detailing that the covariance structure affecting financial markets is not present in sports betting); Macchiarola, supra note 28, at 43 (noting that modern portfolio theory argues for diversification because of reduced variance in returns).

 $^{256.~~}See\ Investor\ Bulletin, supra$ note 221 (discussing when the SEC suspends trading for all investors).

^{257.} DraftKings Inc., supra note 15, at 33.

^{258.} See Investor Bulletin, supra note 221; See Funt, supra note 212 (discussing a sportsbook executive who said that too many individuals are limited and too harshly).

^{259.} See Funt, supra note 212.

^{260.} See Theresa Guerra, Note, Entity Wagering and the Dream of Making Las Vegas the Wall Street of the West, 9 UNIV. NEV. LAS VEGAS GAMING L.J. 225, 226 (2019) (citations omitted) (noting that national growth of sports betting could lead to more attempts at entity wagering).

^{261.} See id.

^{262.} See Pavel G. Savor & Mario Gamboa-Cavazos, Holding on to Your Shorts: When Do Short Sellers Retreat? 2 (Mar. 28, 2011) (unpublished article) (on file with SSRN) (noting a study finding that institutional investors account for seventy-four percent of short sales and individuals only accounting for two percent).

^{263.} Guerra, *supra* note 260, at 226.

money into a pool which the fund would use to make bets on behalf of the investors. ²⁶⁴ Investors did not have to be within the state to put money in the pool. ²⁶⁵ Entity bettors attempted to justify the practice claiming that the Wire Act, while prohibiting interstate sports betting, does not prohibit investing in a business. ²⁶⁶ Another initial flaw was that betting in this manner subjected bettors to two vigs, the first being from the sportsbook, and a second from commissions or fees which would need to be paid to the fund. ²⁶⁷ The SEC charged multiple entity betting funds and quickly settled, presenting a pessimistic future for entity betting absent change. ²⁶⁸ The move to a market-based structure would provide a new avenue for institutional money in sports betting, helping the market by increasing volume, liquidity, and sell-side pressure, all of which would lead to more accurate pricing.

V. CONCLUSION

Sports betting as it currently stands is a one-sided market, with sportsbooks setting prices at premiums to ensure gains and provide the public with negative EV bets.²⁶⁹ The presence of multiple sportsbooks which each set prices individually presents opportunities to exploit price differences for positive EV or arbitrage opportunities.²⁷⁰ These opportunities, along with the inability to exit positions, show the inefficiency of the current sports-betting market.²⁷¹ The Wire Act still serves as a bar to fixing the marketplace, but the solution is to require an underlying state-law violation.²⁷² This change would allow interstate sports betting, which does not fall neatly under the purview of the regulatory agencies tasked with overseeing markets.²⁷³ Instead, regulatory policy should be based on applying successful regulations to

^{264.} Id. at 233.

^{265.} Id.

^{266.} See Albert Chen & Will Green, Mutual Attraction, SPORTS ILLUSTRATED VAULT (June 27, 2016), https://www.si.com/vault/2016/06/28/mutual-attraction# [https://perma.cc/H29R-TQE9].

^{267.} See Brandon James, Bet as an Entity!, WIZARD ODDS (Oct. 16, 2023), https://wizardofodds.com/games/sports-betting/bet-as-an-entity/ [https://perma.cc/7CPM-P2WH].

^{268.} Guerra, supra note 260, at 245–46; see Litigation Release, SEC, SEC Charges Nevada Entity and Its Managing Member with Fraudulent Sports Betting Scheme (July 29, 2019), https://www.sec.gov/litigation/litreleases/lr-24547 [https://perma.cc/U57V-ESZU]; Litigation Release, SEC, SEC Charges Internet Sports Betting Fund with Registration Violations (Sept. 10, 2018), https://www.sec.gov/litigation/litreleases/lr-24264 [https://perma.cc/F2J6-TUY8].

^{269.} See discussion supra Part I.

^{270.} See discussion supra Section II.A.

^{271.} See discussion supra Section II.A.

^{272.} See discussion supra Section III.A.

^{273.} See discussion supra Part III.

the context of the sports-betting market, like the prohibition on price manipulation and the practice of preventing trading only when necessary to protect the investing public.²⁷⁴ Sports betting should move to a market-based structure in which bettors can both buy and sell bets. The market-based structure has experienced some initial viability as betting exchanges have emerged in the United States; however, their success has been limited by the Wire Act.²⁷⁵ The move to a properly regulated market-based structure would increase liquidity, move prices to a fair value, and allow sports betting to be utilized as a legitimate method of portfolio diversification. ²⁷⁶

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 $^{274. \}hspace{0.5cm} \textit{See discussion } \textit{supra } \textbf{Section IV.B.4.}$

^{275.} See discussion supra Section II.B.

^{276.} See discussion supra Part IV.

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