RESEARCH PERSPECTIVE

Two Tickets, One Risk

Measuring exposure across a game's contracts by scenario rather than by ticket

A hypothetical book holding a team-to-win contract and the same team's −5.5 spread loses on both legs in the same 37% of games, and its standard deviation is $90 where two independent tickets would give $69. Contracts on one game depend on a few shared quantities, so a book may be far less diversified than its ticket count suggests. We show how to measure that exposure by scenario.

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KEY TAKEAWAYS

01 When both settle on the same game result, a team-to-win contract and the same team's −5.5 spread are nested: covering −5.5 implies winning. In a simple model their payoffs have a correlation of about 0.7, so two tickets behave much like one larger position (Exhibit 1).

02 Measure exposure by game scenario. A hypothetical two-ticket book loses on both legs in the same 37% of outcomes, and its standard deviation is $90 rather than the $69 it would be if the tickets were independent (Exhibit 2).

03 News moves related contracts together. A three-point downgrade in one team's expected margin cuts both contracts' model probabilities by nearly ten percentage points at once (Exhibit 3), so hedges and limits belong at the level of the shared driver.

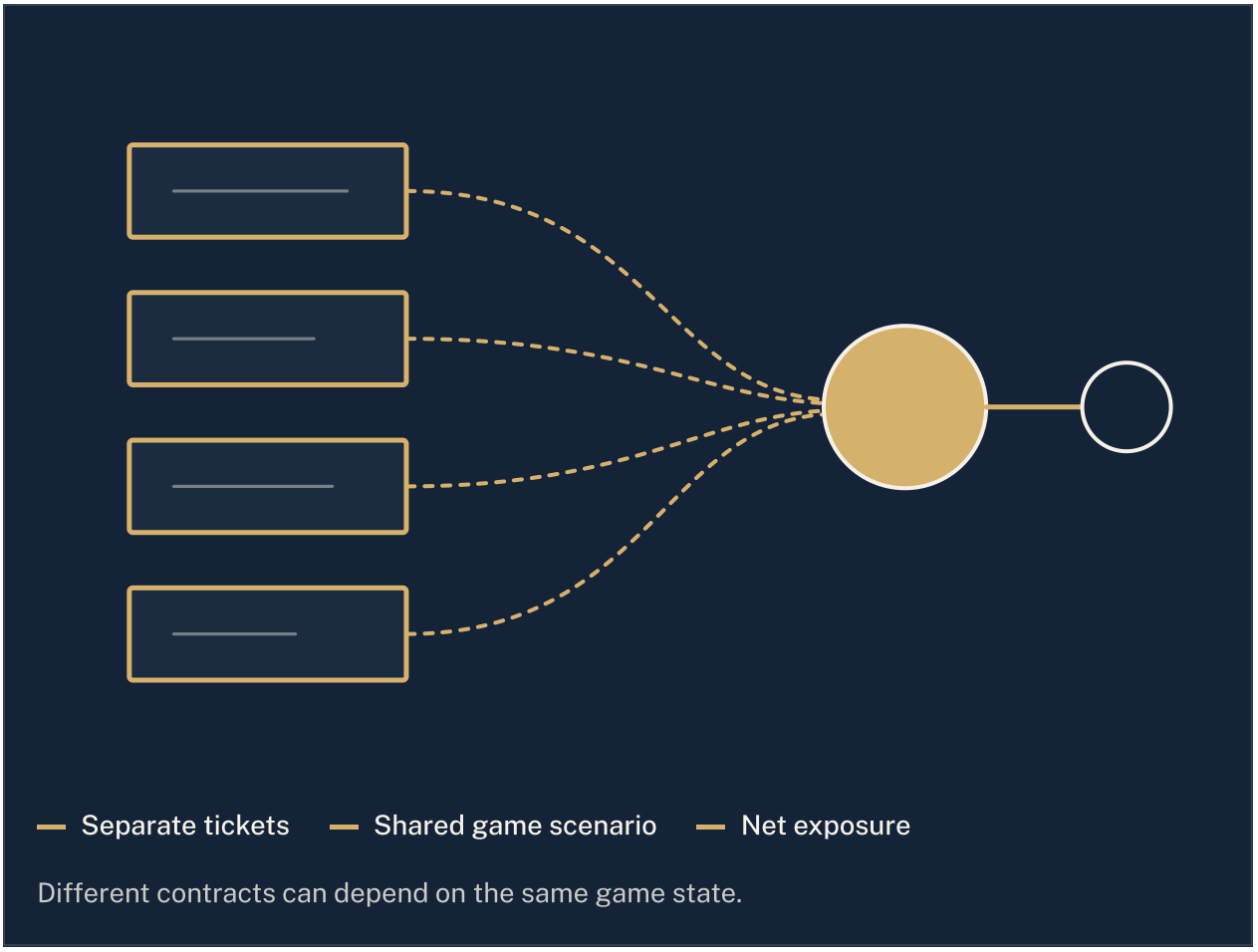
Portfolio research with hypothetical positions; not a description of Predict Here Capital holdings, limits or results.

▼ **Method, sources and limitations**

Study type	Portfolio analysis
Method	Analytical model of a single game's contracts with stated hypothetical parameters, plus official sports contract documentation. No trading data are used.
Data period	Not applicable; hypothetical model parameters.
Source categories	Original portfolio analysis; Official sports contract documentation
Limitations	Normal approximations and independence between margin and total are simplifying assumptions; real games have discrete scoring and state-dependent correlation. Hypothetical positions and prices are not Predict Here Capital holdings or results. Scenario analysis does not establish that any described risk limit is implemented.

Contracts on one game share a few underlying quantities

Most sports contracts on a game are functions of a few underlying quantities: the final margin, the total score and, for player props, individual statistics that depend on how the game unfolds. Two contracts that reference the same quantity are linked mechanically, whatever their labels say.



Different contracts can depend on the same game state.

Three relationships matter. **Nested payoffs:** when both contracts settle on the same game result, a team that covers −5.5 has necessarily won, so the spread contract pays in a subset of the states in which the moneyline pays. **Mutually exclusive payoffs:** in a market with home, draw and away outcomes, exactly one pays, so holding equal amounts of two of them amounts to a position against the third. **Common drivers:** a team total, a star player's points and the game total all tend to rise with the pace of the game, although none is defined in terms of the others.

Nested payoffs are highly correlated

A simple model makes the relationships measurable. Normal approximations to basketball score differences have a long record in sports statistics (Stern, 1994). Exhibit 1 assumes that Team A is a four-point favorite, that the final margin is normally distributed and that the game total is independent of the margin.

EXHIBIT 1

Probabilities and correlations in a one-game model

Contract (Yes side)	Model probability	Correlation with "Team A to win"
Team A to win	63.1%	1.00
Team A −5.5	45.0%	0.69
Over 220.5 total points	53.3%	0.00 (by assumption)

Source: Predict Here Capital calculation. Hypothetical model: Team A's final margin is normally distributed with mean +4 and standard deviation 12 points; the game total is normal with mean 222 and standard deviation 18 points, independent of the margin. Not a forecast.

The positive correlation comes from the nesting: whenever the spread contract pays, the moneyline pays too. Its size, 0.69, also depends on the model probabilities. For mutually exclusive outcomes the sign reverses. With home, draw and away probabilities of 45%, 27% and 28%, the payoffs of the home and away contracts have a correlation of about −0.56.

We assume that margin and total are independent to keep the illustration simple, and real basketball is messier: a faster pace raises both teams' scoring, and news about a star player can move the margin, the total and that player's props together.

Count scenarios, not tickets

Consider a hypothetical book holding 100 Yes contracts on Team A to win at $0.63 and 100 Yes contracts on Team A −5.5 at $0.45. The prices are close to the model probabilities, so the book has roughly zero expected value. Three scenarios describe every outcome.

EXHIBIT 2

A two-ticket book is one bet on Team A's margin

Scenario	Model probability	Book result before costs
Team A's margin above 5.5 points	45.0%	+$92
Margin above 0 and up to 5.5 points	18.0%	−$8
Margin at or below 0 (Team A does not win)	36.9%	−$108
Standard deviation of the result		**$90**

If the two contracts were independent, the standard deviation would be $69. The model treats the margin as continuous; real margins are whole numbers.

Source: Predict Here Capital calculation using the model in Exhibit 1. Hypothetical positions and prices; fees excluded. Not Predict Here Capital holdings or results.

The book loses on both legs in the same 37% of games. A risk report that treated the tickets as independent would put the standard deviation of the result at $69 instead of $90, understating it by almost a quarter. It would also miss that the worst outcome comes from a single, ordinary event: Team A losing.

News moves related contracts together

Suppose an injury report lowers Team A's expected margin from +4 points to +1 point.

EXHIBIT 3

One piece of news, two contracts: a three-point downgrade

Contract	Before	After	Change
Team A to win	63.1%	53.3%	−9.7 pts
Team A −5.5	45.0%	35.4%	−9.6 pts
Marked value of the book (100 of each)			**−$19.38**

Source: Predict Here Capital calculation; model as in Exhibit 1 with the mean margin lowered from +4 to +1. Hypothetical.

Both contracts lose nearly ten percentage points at once. A position in an unrelated game does not hedge this shock, but an appropriately sized position on the opposite side of either contract in this game would. Hedges work at the level of the shared driver, and the ticket is the wrong unit.

This illustration changes only the expected margin and leaves the total unchanged. In practice, player news can also move totals and props, and those moves may reinforce or offset the book's exposure, depending on the positions held.

Beyond one game: series, tournaments and seasons

Exposure also links across time. A team's championship contract, its price to win the series and tonight's moneyline all depend on tonight's result. Elimination can settle a season-long contract in a single game: Polymarket US documentation notes that a futures contract can settle at $0 once elimination is mathematically certain and officially recognized.

A portfolio view should therefore aggregate exposure to each team and event across every horizon. Positions in tonight's game and in the season then show up as one exposure whenever they depend on the same result.

From measurement to limits

Measuring by scenario points to limits by scenario: the maximum loss if a given team loses, if a game goes to overtime, if a key player does not play. Such limits can be estimated from simple models like the one above and then checked against realized outcomes.

Two cautions apply. Correlations estimated in ordinary conditions can change abruptly around news, and a hedge that looks liquid may not be executable when it is needed, for reasons Sports Markets and the Cost of Being Late discusses. We are after a risk number that does not fall simply because exposure has been split across more tickets, and precision matters less than that.

What would change this view

The settlement relationships above are mechanical, so for inventory held to resolution no evidence would overturn them, provided each pair's periods and exceptional-settlement rules match the terms assumed here. What could change is their practical weight. If most inventory were closed well before settlement and contract types repriced at very different speeds, interim mark-to-market risk could matter more than terminal scenarios, and marks could co-move less than payoffs. We would therefore measure interim price risk and terminal scenario risk separately on the complete trading record.

Sources and further reading

Sources reviewed October 27, 2026. Venue rules, fees and programs change; the specific contract and account terms govern. Views are the author's as of the edition date shown above.

1. Polymarket US Sports FAQs. Polymarket US documentation.
2. Polymarket US sports schema. Polymarket US documentation.
3. Stern, H. (1994). A Brownian motion model for the progress of sports scores. Journal of the American Statistical Association 89(427).