

## Betting on Market Efficiency: A Note

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### Abstract

Two mechanical betting rules were applied to games in the National Football League for the 2000-2008 seasons. Wagers of \$11 (to win \$10) on all NFL underdogs produced a net loss of \$717. When bets were limited to visiting underdogs, only \$395 (or \$44 per year) was lost. The results suggest that gambling on the outcome of football games can be a rewarding activity for bettors more interested in action than financial gain.

### Background

The clear consensus of academic writers who have investigated the efficiency of football point spreads is that no betting rule can win regularly. From Pankoff (1968) to Boulier et al. (2006), attempts to outguess the oddsmakers have generally proven futile. Where profits have surfaced [e.g., Vergin and Sosik (1999)], replications [e.g., Gandar et al. (2001)] exposed their short-lived nature. Even consistent losing is improbable since the responsible rule could be reversed for regular profits. However, that promise of downside protection offers an attractive opportunity to those willing to view betting as a recreational activity rather than as a money-making venture.

Informal interviews with sports bettors reveal that financial reward is only one of the motivations behind wagering on sports-related outcomes. Others include the challenge of sifting through data to uncover possibly overrated or underrated teams, the suspense when monitoring final scores, a lively topic of discussion with friends and the sheer thrill of winning a bet. Breaking even thus becomes less of a disappointment than a goal.

To achieve it, bettors must apply a strategy evenly and repeatedly for an extended period of time. While an efficient market would seem to make the selection of one mechanical rule over another an unimportant detail, human nature and history teach that some may be better than others. Behavioral finance suggests that the fear of regret explains why investors are slow to sell losing stocks and quick to buy popular ones. Kochman and Goodwin (2007) hypothesized that if bettors share that fear, they would overbet favorites in sports contests—specifically, National Football League games—and thereby increase the probability of underdogs beating the (inflated) point spread. Not surprisingly, Kochman and Goodwin found a significantly nonrandom wins-to-bets ratio of 51.9 percent for NFL underdogs between 1991 and

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2004. Other studies touting the success of underdogs against the spread include Kochman and Goodwin (2004), Golec and Tamarkin (1991) and Amoako-Adu et al. (1985).

### Methodology

Unfortunately for bettors hoping to make money, nonrandomness does not equate to profitability. The customary transaction cost of 10 percent to place a bet creates a breakeven rate of 52.4 percent. However, for recreational bettors, the failure to earn a profit would not be a deterrent and should make the rule of wagering on NFL underdogs a fitting one.

Because we are largely betting *on* (as opposed to *against*) market efficiency, we are first hypothesizing that the market for NFL wagers is efficient and second that for participants in that market who are more interested in action than financial gain, betting can be a virtually riskless and costless activity. To test that proposition, we placed imaginary bets on underdogs in the NFL during the 2000-2008 seasons. In keeping with the recreational bent of our bettors, we limited the amount of each wager to \$11 (to win \$10). Steele (2009) furnished the historical point spreads and final scores.

### Results

A total of 4341 games in the NFL between 2000 and 2008 were screened for wins and losses against the spread by teams that entered those contests as the underdog. Although wins (1113) outnumbered losses (1077), the 10-percent transaction fee preempted profit-taking. Risking \$11 to win \$10 on each of the 2190 bets resulted in gains of \$11,130 and losses of \$11,847 for a net loss of \$717—or \$79.67 per season. While losing less than 33 cents per wager seems a justifiable cost for the aforementioned benefits, the strategy of limiting bets of the same magnitude to *visiting* NFL underdogs over the same nine seasons reduced the cost per bet to less than \$0.27<sup>1</sup>. When visiting ‘dogs beat the spread on 758 of 1483 occasions, outflows (\$7975) exceeded inflows (\$7580) by \$395—or \$43.89 per season<sup>2</sup>.

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Table 1  
Outcomes of wagers on NFL underdogs (2000-2008)

<b>Strategy</b>	<b>Wins</b>	<b>Bets</b>	<b>W/B</b>
Bet on all NFL underdogs	1113	2190	50.8%
Bet on away NFL underdogs	758	1483	51.1%

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## Conclusions

In sum, we are advocating a kind of *If you can't beat 'em, join 'em* approach that, unlike mainstream studies, seeks to benefit from an efficient football betting market. It is not, however, the intention of the authors to encourage illegal betting but rather to extend the analogy between betting and investing. Investors have long accepted that capital markets are efficient and that passive investing can be both prudent and profitable. By applying the mechanical rule of betting on visiting underdogs in the NFL, bettors can also profit from a passive approach—albeit in the form of entertainment. Future researchers may want to expand that payoff to passive bettors by limiting wagers to those teams or situations with special or personal appeal.

## ENDNOTES

1. Limiting wagers to home underdogs would have produced a net loss of \$322—or \$0.455 per bet.
2. Increased competition among offshore gambling operators has made lower commissions available. A five-percent spread—vis-à-vis 10-percent—would reduce the net loss to \$32.50 and the cost per bet and per season to \$0.022 and \$3.61, respectively.

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