Fall 1993

The Efficiency of the College Football Betting Market for Southeastern Conference Teams

Ravija Badarinathi
University of North Carolina - Wilmington

Ladd Kochman
Kennesaw State University, lkochman@kennesaw.edu

Recommended Citation
Badarinathi, Ravija, and Ladd Kochman. "The Efficiency of the College Football Betting Market for Southeastern Conference Teams." Arkansas Business and Economic Review 26.3 (1993): 11-6. Print.

The efficiency of the college football betting market for Southeastern Conference teams

Badarinathi, Ravija; Kochman, Ladd . Arkansas Business and Economic Review ; Fayetteville 26.3 (Fall 1993): 11.

ABSTRACT

To illustrate economic testing and at the same time to conduct an inquiry into the efficiency of the college football betting market, an analysis applies all the betting rules reported by Stark (1992) to the 10 teams comprising the Southeastern Conference before the recent addition of the universities of Arkansas and South Carolina. The combination of 10 teams and 7 conditions produces a total of 70 betting strategies. Since each rule to bet for a team is shadowed by the alternative of betting against that team, the actual number of rules tested is 140. Among those 140 rules, only 7 met the qualifications necessary to be considered superior - that is, a wins-to-bets ratio greater than 52.4% and a probability of random duplication less than 5%. The best rule to emerge from the set is to bet on the University of Florida when it is the favorite. Other good rules to follow are to bet against Kentucky when it is the favorite and to bet against Tennessee in October.

FULL TEXT

Betting on football games has more in common with investing in securities than is generally realized. Both forms of speculation are motivated by the perception that errors exist in the respective markets. In the market for football bets, errors appear as favorites who give too many points or as underdogs who receive too many. In securities markets, errors appear as discrepancies between price and value. In both cases, the market participant can profit from knowing that an error exists.

The parallel becomes more obvious when we focus on the roles of the bookmaker and handicapper. The former performs a service not unlike that of a specialist on a securities exchange. The role of the handicapper who estimates the opening point spread is strongly reminiscent of a Wall Street analyst who estimates the initial offering "price." However, the price changes right up to game time in an effort by bookmakers to equalize the money wagered on each team. If, for example, the opening line is Alabama -6 versus Florida and 80 percent of early bets are giving the points, the spread will increase until Florida attracts roughly half of the total wagers. The skill of the early handicappers in judging the expectations of their market generally precludes any line change greater than 3 to 4 points.

The similarity between betting and investing serves a useful purpose for investment researchers. Inasmuch as bets on the outcome of football games are decided every Saturday or Sunday during the football season, the fallibility of market opinion can be observed weekly. Pankoff(1968) argued that such collective thinking can be equated with the consensus of investors since bettors are no less numerous, competitive, knowledgeable or profit motivated.

After drawing the then novel analogy, Pankoff tested the efficiency of the market for football wagers by comparing the Las Vegas point spreads for National Football League (NFL) games for the 1956-65 years with the actual point margins. He concluded that the market was efficient when the intercept and slope coefficients from his regression equation did not differ significantly from the values dictated by the efficient market hypothesis--namely, 0 and 1,

respectively. This means that the actual point margin (APM) varied from the predicted point margin (PPM) only by a random error (e) that has a mean value of zero.

Equation (1) APM - a + bPPM + e

Later investigators such as Gandar et al. (1988), Sauer et al. (1988) and Zuber et al. (1985) who attempted to beat the football gambling market with mechanical betting rules categorized their tests as economic and designated Pankoff, Golec and Tamarkin (1991) and other studies that looked for consistent differences between betting lines and final outcomes as statistical. A betting rule is simply a systematic behavior in the context of betting that can be as unimaginative as Bet the home team or as inventive as Bet the underdog against a favorite who as the favored team in the previous week covered the spread by at least 10 points.

Methodology was not the only important difference between statistical and economic tests. Their conclusions were also at odds. While statistical inquiries uniformly concluded that point spreads contain no exploitable biases, economic investigations were less certain. Gandar et al. found three betting rules that beat the 52.4-percent break-even rate(1) with probabilities less than five percent(2) that random betting could achieve the same results. However, Sauer et al. cautioned against concluding that betting strategies with high wins-to-bets (W/B) ratios and low probabilities of random duplication are more than sample-specific. When Sauer et al. applied the betting rules which Zuber et al. claimed were evidence of an inefficient market for NFL wagers, they earned only average returns on games that postdated the earlier study's sample years.

METHODOLOGY

To illustrate economic testing and at the same time conduct an inquiry into the efficiency of the overlooked college football betting market, we applied all the betting rules reported by Stark (1992) to the ten teams comprising the Southeastern Conference prior to the recent addition of the University of Arkansas and the University of South Carolina. Stark's publication contained the point spread results (i.e., wins and losses versus the spread) for all the NCAA colleges which are regularly handicapped by Las gas point setters for the seven consecutive years beginning with 1985.

That Stark partitioned his data by role (favorite or underdog), site (home or away) and month (September, October or November) allows us to devise betting strategies that are more elaborate than simply Bet on Alabama or Bet against Mississippi. Gandar et al. suggested that more complex, or behavioral, strategies have a greater chance to make abnormal profits. Even without that insight, it is logical to think that a team's performance as anticipated by bettors will be influenced by externalities such as the team's self-esteem (role), the familiarity of the game's surroundings (site) or the skill of the coach in blending talent and minimizing the effects of injury and fatigue (month).

Deciding whether a betting rule performs in a superior manner is a two-dimensional task. Not only must the wins-to-bets ratio exceed the break-even rate, but the total number of bets for a particular rule has to be sufficiently high to ensure that random betting cannot. reasonably be expected to duplicate that ratio. To the extent that winning and losing bets constitute a series of binomial trials, we can define nonrandomness as a probability less than five percent from the equation below:

Equation (2) omitted)

Results

The combination of ten SEC teams and seven conditions (when favorite, when underdog, when home, etc.) produced a total of 70 betting strategies. (All are exhibited in the Appendix.) (Appendix omitted) Since each rule to bet on a certain club under some role, site or month constraint is shadowed by the alternative to bet against that team, the actual number of rules tested totalled 140.

Among those 140 rules, only seven met the qualifications necessary to be considered superior--that is, a wins-to-bets ratio eater than 52.4 percent and a probability of random duplication less than five percent. Table 1 orders those seven strategies from lowest-to-highest probabilities.(Table 1 omitted)

The best rule to emerge from our data set was Bet on Florida when favorite. In the 41 games during the 1985-91 seasons when Florida was fared to win, the school beat the Las Vegas line 27 times. The probability of matching

that 27-14 record (W/B = 65.9 percent) is a scant 1.6 percent. The only other rule with a probability below three percent was Bet against Kentucky when favorite. That strategy beat the betting line in 19 of the 28 contests in which Kentucky was the favorite.

The betting rule with the highest W/B ratio was Bet against Tennessee in October. It rewarded bettors in 68.2 percent of the October 1985-91 games in which Tennessee played. The relatively low number of such contests (22) caused the probability of chance supplication (4.1 percent) to almost fail our probability test. Why Tennessee tends to under perform in October or why Florida and Kentucky behave predictably as favorites is beyond the scope of this study.

Of course, the ultimate test of superior status is whether the rule can produce future profits. Our seven strategies in Table 1 boasted a W/B ratio of 65.4 percent (or 125 of 191) during the 1985-91 years. When applied to the 1992 season, the W/B ratio was an unimpressive 53.3 percent (or 16 of 30 with one tie). However, two rules (Bet against Kentucky when favorite and Bet against Kentucky in November) did manage to win the three games in which each was applicable.

CONCLUSIONS

It is tempting to speculate that if roughly 12 percent (or 10185) of the schools for which point spreads are routinely established produced seven superior betting rules, perhaps more than 50 such strategies (or 7/.12) were available from the full complement of 1985-91 college football games. To the extent that such speculation is justified, one may infer that the market for college football bets was vulnerable to well-researched, mechanical rules and, more broadly, that market consensus was flawed.

Results of those same seven rules from the 1992 season seem to suggest that regular profit opportunities, for the most part, are short-lived. Since the only two rules to defy efficient market behavior call for betting against one team (Kentucky), it is more reasonable to conclude that we have found "pocket of inefficiency" not unlike those reported by prior researchers of both betting- and securities-market opinion and that the end of Kentucky's systematic behavior awaits a longer observation period. Actual betting to test this or any hypothesis contained in this study is not recommended.

ENDNOTES

(1) Illustratively, if each of 10,000 bets were $1.10 to win $1.00, only a total of 5,238 wins (or 52.4 percent) could produce profits ($5,238) equal to losses ($5,238--that is, 4,762 losses "times" $1.10). The difference between the wager and the win ($.10 here) represents the bookmaker's standard 10-percent "commission".

(2) A five-percent cutoff has been customary for studies of this type to decide nonrandom performance of rules.

REFERENCES

Gandar, John, Richard Zuber, Thomas O'Brien, and Ben Russo. "Testing Rationality in the Point Spread Betting Market." Journal of Finance 43: 995-1008 (September 1988).

Golec, Joseph, and Maurry Tamarkin. "The Degree of Inefficiency in the Football Betting Market." Journal of Financial Economics 30: 311-323 (December 1991).

Pankoff, Lyn. "Market Efficiency and Football Betting." Journal of Business 41: 203-214 (April 1968).

Sauer, Raymond, Vic Brajer, Stephen Ferris, and Wayne Marr. "Hold Your Bets: Another Look at the Efficiency of the Gambling Market for NFL Games." Journal of Political Economy 96: 206-213 (February 1988).

Stark, Don. Point Spread Powerbook. (Las Vegas: Matchup Sports, Inc.): 15-100 (1992).

Zuber, Richard, John Gandar, and B.D. Bowers. "Beating the Spread: Testing the Efficiency of the Gambling Market for NFL Games." Journal of Political Economy 93: 800-806 (August 1985).

Ravija Badarinathi Associate Professor of Statistics University of North Carolina at Wilmington

Ladd Kochman Co-Director of Kennesaw State EKonometrics Kennesaw State College

DETAILS

Subject:	Statistical analysis; Sports; Gambling; Colleges &universities
Location:	US
Classification:	9190: United States; 9130: Experimental/theoretical treatment; 8306: Schools &educational services
Publication title:	Arkansas Business and Economic Review; Fayetteville
Volume:	26
Issue:	3
Pages:	11
Number of pages:	0
Publication year:	1993
Publication date:	Fall 1993
Publisher:	University of Arkansas, College of Business Administration, Bureau of Business and Economic Research
Place of publication:	Fayetteville
Country of publication:	United States
Publication subject:	Business And Economics
ISSN:	00041742
CODEN:	ABRVBM
Source type:	Scholarly Journals
Language of publication:	English
Document type:	PERIODICAL
Accession number:	00805475
ProQuest document ID:	198373965
Document URL:	https://login.proxy.kennesaw.edu/login?url=https://search.proquest.com/docview/198373965?accountid=11824
Copyright:	Copyright Arkansas Business Fall 1993
Last updated:	2014-05-18