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A Random Walk at the Track

WAYNE SNYDER

A recent New Yorker cartoon by Charles Saxon is set in a businessman's club where two surprised executives are looking askance at a third seated member who is reading the Daily Racing Form. The caption reads "Good Lord! I just named him executor of my estate!"

The horse race bettor is usually depicted as someone with whom no sound person would want to entrust their estate management. Society in general, and middle class respectability in particular, attach social stigma to horse racing that is virtually absent from the world of stocks and bonds. The horse race player is characterized as unsavory, unreliable, uncouth and definitely unrich. The high financier, however, evokes the image of being a pillar of the respected establishment. Nothing could be further from the truth. In reality, there are striking similarities between the world of racing and the world of high finance.

More often than not the patrons of a community's racing interests are also members of the financial establishment. At the other extreme, compulsive gambling is not limited to horse players alone, as the excesses which led to 1929's Great Crash proved so conclusively. Both activities have their daily "bibles." For the stock market it is The Wall Street Journal and for horse racing it is the Daily Racing Form. Readers learn from buying either publication that they are associating with noble and dignified activities which attract society's finest members. In point of fact, the atmosphere at the race track grandstand and at a stock broker's office exudes the same high tension that surrounds a casino crap table, although the reporting in both "bibles" would have us believe otherwise.

Both have automated devices to inform potential players about changing prices. Stock prices are displayed on a lighted ticker-tape, which has its counterpart in the race track's tote-board, which flashes the changing odds on horses at ninety-second intervals. These visual barometers are crucial to both games. When a trend appears on the ticker-tape, the level of conversation heightens and is typically translated into a buying (bullish) or selling (bearish) fury. At the race track the hum and titter from the crowd's responding to the shifting odds on the tote-board is normally translated into a rush to the betting windows. While the jargon peculiar to each activity is different, the mood and intent are similar. This can be seen by watching spectators at either kind of event, where they speak with the same kind of wired-up urgency.
But horse racing does differ in one major respect from the stock market: bettors can actually see what they are selecting when the horses are brought from the paddock onto the race track to parade before entering the starting gate. The feelings created by seeing the brightly clothed jockeys astride the parading horses adds a luster unknown to stock market players. This causes a final flurry of betting, until the starting bell stops the wagering, always leaving some disappointed customers at the closed betting windows. Stock traders undoubtedly feel much the same when their daily activities are stopped by the closing bell each afternoon.

Horse race betting does not compare with the billions of dollars that change hands every day in stock trading, but it still remains the sport of kings — attracting more spectators than any other sport and the amount bet exceeds all other forms of gambling combined. In 1976, a Presidential Commission charged to review and make recommendations about the national policy toward gambling, estimated that the total dollars bet, legally and illegally, had reached twenty-five billion annually and was growing rapidly. States have increasingly authorized new legal forms of gambling including bingo, lotteries, off-track betting and most recently casinos for Atlantic City. But horse racing continues as king, attracting about one-half of all legal betting.

Horse racing is irresistible to most gamblers. Gamblers Anonymous, a self help organization patterned after Alcoholics Anonymous, estimates that nine out of ten of its members are compulsive race horse players. At a recent Chicago meeting, one member commented: “The dice were loaded, the cards were marked, but horse racing had to be honest. You could see them run and we were betting against each other.”

It is exactly because players do bet against each other that makes playing the horses so similar to playing the stock market. Prices of securities on the stock market are determined by the expectations that stock market players (“investors”) have about the expected future prices and earnings of individual stocks. Horse race players also attempt to estimate future prices and earnings and this determines the odds of each horse. But unlike the stock market where future earnings always remain uncertain, a new race is over and won (or more often lost) every thirty minutes.

But the greatest common bond between playing the horses and playing the stock market is that they both have the same basic objective — getting rich quickly and effortlessly. Few stock market players ever find the golden road to riches. On the contrary, there is an increasing amount of evidence which suggests that no system is ever likely to be found which will consistently “beat the market.” Similarly, evidence about horse players shows that there is no system which will permit a person to win consistently. No system is ever likely to be found which will equal a coin.

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“Random as a coin, with the possible exception of the streets of Las Vegas, there is no more reliable system than the coin. You cannot predict future outcomes better than the flip of a coin.”

If naive gamblers bet, say, a dollar on a coin, with the possible exception of the streets of Las Vegas, there is no more reliable system than the coin. You cannot predict future outcomes better than the flip of a coin.

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Neither stock prices nor horse races are any more predictable than the flip of a coin.

No reasonable person would pretend to be able to predict successfully the toss of a coin more than half the time. Yet every day thousands of stock market investors persist in trying to predict stock prices although numerous studies have demonstrated that these prices behave just like the flip of a coin. Moreover, New York’s finest financial experts are unable to give investment advice that is any more profitable than the decisions made by less well informed investors. In brief, stock prices behave like a tossed coin following a “random walk.”

“Random walk” was once an esoteric topic of interest only to mathematicians and statisticians before economists studying the stock market made the term famous — infamous along Wall Street. Numerous studies have demonstrated conclusively that there is nothing in the past movement of stock prices that has any value in helping predict future stock prices. Hence, stock prices are said to move unpredictably like the flip of a coin or a random walk.

If naive forecasts based on past price information can do no better than by flipping a coin, what about those Wall Street financial experts? Surely their scrutiny of every minute corporate detail should enable them to outpredict the uninformed man in the street. Yes, those experts do make a return which is slightly higher than what could be achieved by flipping a coin, but the cost of obtaining their services is higher than the extra return they achieve. The classic example has been the “expertly” managed mutual funds whose performance, after allowing for administrative costs, has not been able to match the average return from simply buying and holding a random selection of stocks. And, because everyone has access to the same public information about corporations, everyone has the same chance to make a fortune — or lose one! This explains why the financial experts are no more successful than the amateur who simply selects stocks by throwing a handful of darts at a tacked up Wall Street Journal.

There is now considerable evidence that horse racing follows a random walk too. There is no way that knowledge about the horse racing odds can be used systematically to earn a profit. Furthermore, similar to the stock market’s analysts, the expert handicappers do not perform as well as the general public in selecting winning horses. Does this mean that the average bettor will do just as well selecting a horse according to Uncle Ed’s birthday number or because the jockey’s colors are Aunt Alice’s favorite? Not quite, because horse players are strongly and predictably biased in their betting habits. Understanding this bias can substantially reduce potential losses, but it cannot entirely eliminate them.
Horse race odds are determined by the parimutuel betting system, an invention of a 19th-century Frenchman which was first legalized in Kentucky in 1906. The odds are inversely proportional to the amount bet on each horse. The favorite always pays the lowest odds if it wins because the most money has been bet on it. Similarly, the horse with the least amount wagered on it receives the highest or longest odds. This system distinguishes horse race betting (along with dog racing and Jai Alai) from most other forms of gambling.

In casino gambling the odds are set by the management which knows that the long-run "real" chances of winning are identical for every number on a roulette wheel. That's why the house will pay thirty-five to one for every winner, whether one or one thousand persons bet number twenty-two. But the parimutuel betting system used in horse racing causes the winning odds to decrease as the amount bet on a horse increases. Before the parimutuel system was invented, race track bookmakers offered bettors odds which reflected their best guess about each horse's true chances of winning. But cheating and scandals were legend until the parimutuel system was universally adopted. Since in horse racing the true chances of winning are never exactly known, the parimutuel system was designed to let bettors wager against each other and thus collectively determine the payout odds for the winning horse. In each race, after subtracting an authorized "take" from the "handle" or pool of money bet on all horses to win, the remainder is divided among the holders of winning tickets. Today, the track-take averages eighteen percent and is divided by law between the state and the track which uses its share to provide purses, administrative costs and profits.

Since each horse is a potential winner, payout odds are calculated for every entry and these "charts" are syndicated by the Daily Racing Form and published in the following day's newspapers.

Because the players themselves determine the odds a horse will pay if it wins, estimating or "handicapping" a horse's true chances of winning becomes all important. Players estimate these chances by studying the past performances of each horse in the Daily Racing Form and comparing them to the current competition.

The University of Michigan's Survey Research Center found that horse racing is the most exciting form of gambling, but most of this excitement is internalized. About half of all horse players arrive alone at the track and they have little time to socialize although they often know each other on sight. Nor is there time to display emotions because they need to devote all their attention to making the final integration of their analyses before placing a bet. There are about thirty minutes between races and for nearly twenty-eight, the excitement is internal. Then the race begins and for two minutes
Horse bettors tend to eschew the favored horses for the long shots

The excitement becomes both visual and highly verbal, reaching a climax as the winner crosses the finish line.

Horse players have a strong and entirely predictable bias that has remained remarkably stable ever since it was first recognized by psychologist Richard Griffin, in 1949. Horse bettors tend to eschew the favored horses for the long shots. Although the latter have much smaller chances of winning, players generally prefer taking a chance at the larger prize. A typical response to why a bettor didn’t select a winning favorite is “So what’s fun in getting back a few dimes on a two-dollar bet.”

While the average bettor can expect to lose eighteen percent of the total amount wagered due to the track-take, there are betting strategies which will raise or lower this average loss. Favorites win one-third of all races, but bettors place less than one-third of their wagers on the favorite horse. Said differently, bettors wager less on the most favored horse in each race than in proportion to its true chances of winning. This situation is called an “overlay” in race track parlance. It also means that if a player were to bet only favorites, the average expected loss of eighteen percent would be reduced to about nine percent. What an exciting day at the races — going with the anticipation of losing only half what the typical bettor will lose. Big deal!

Most favorites go off at three to one or less. At odds of five to one the bettor bias is neutralized and the expected loss averages eighteen percent. But at higher odds bettors pay an increasing premium for playing the longer shots. At odds of ten to one, the expected loss is twenty-four percent, at twenty to one it reaches thirty-five percent, and at fifty to one, players can expect an average loss of at least fifty percent. These percentages show how bettors are willing to pay an increasing cost for selecting the larger-prize but lower-probability horses over the smaller-prize but higher-probability favorites.

In 1956 another psychologist, William McGlothlin, discovered that the bettor bias was not constant throughout the day. There are no significant differences from race to race until the last one when the bias becomes substantially accentuated. Bettors, undoubtedly hoping to erase earlier losses, seek out longer odds horses with even greater determination in the last race than earlier. As a consequence, the bettor bias is increased for both favorites and long shots. The shift away from the lower-odds horses is so dramatic that occasionally the overlay on the favorite is large enough to exceed the track take. Leaving the track a winner is possible, but when transportation costs, beer, hot dogs, and entrance fees are subtracted, any profit usually disappears. Furthermore, the limited potential from betting favorites in the last race cannot be increased by betting big. Large wagers only further reduce the already low odds, eventually eliminating the excitement.
the small profit margin resulting from the original bettor bias.

Do "expert" handicappers do better than the public? Owners, trainers, jockeys, grooms, walkers and clockers all aspire to "beat the system," but virtually nothing systematic is known about their betting behavior. Handicappers who do publish their prognostics have consistently demonstrated that they are unable to match the public's ability to pick winners. No expert handicapper has even consistently picked as many as the thirty-three percent of public's favorites that win. Some experts attempt to predict what odds the public will create through its parimutuel betting. The official track handicapper, the Daily Racing Form, and newspaper sportswriters all attempt to forecast the public's odds. And each of these prognosticators exhibits a bias which is even more pronounced than the public's. They tend toward being quite conservative at both ends of the odds scale. That is, they greatly underestimate the extent to which the public will favor the lowest-odds horses and they overestimate the public's wagers on the longer-odds horses. When asked why they eschew both favorites and long-shots, the expert handicappers are likely to reply "We don't want to point a finger at either the winner or losers."

What then can we conclude about horse racing as compared with the stock market? Does the random walk apply or not? The answer is not simple. No system exists which will provide a profit consistently. The average cost of horse race betting is eighteen percent, but not every player need pay that price. The cautious bettor can select only favorites and reduce the loss by half. The player who enjoys risks can choose the longer-odds horses and eventually lose upward of fifty percent. But the systematic bias of bettors in horse racing is not large enough to enable a player to beat the eighteen percent track take. The analogy with the stock market is direct because none of the studies which have reported "above normal" stock earnings has found the deviations large enough to off-set the transaction costs of buying and selling stocks. In this sense, both horse racing and the stock market follow a random walk.

The President's National Commission on Gambling urged states to lower the track take in order to increase betting and raise state racing revenues. The authors believed that a lower take would attract enough new betting to make up for whatever income was lost from the lower take. If the eighteen percent take were cut in half, bettors choosing the favorite would break even. If this happened, then playing the favorites in the last race would return a profit of ten percent or more. Indeed, if wishes were horses, beggars would ride!