Three Card Brag (Martingale vs Anti-Martingale)

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History

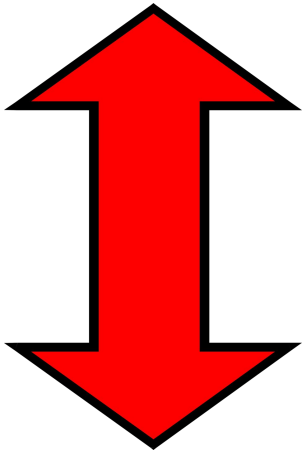
- The game of 3-card Brag has been around since the 18th century when it was considered to be one of the most popular British card games.
- The casino variant of Three Card Poker was first created by Derek Webb in 1994 and patented in 1997. Webb's goal was to create a version of poker that played with the speed of other table games.

Rules

- Before each deal, each player must place the initial stake in the pot. Then each player is dealt 3 cards face down.
- When the cards have been dealt, the betting begins with the player to the left of the dealer. This person can fold or can bet any amount from the agreed minimum to the agreed maximum.
- If any player bets, every player after that must either fold or bet at least as much as the previous player who bet. The betting continues around the table as many times as necessary.
- If all the players except one fold, the last remaining player takes all the money in the pot, and the next hand is dealt.

Hand Strength

Best



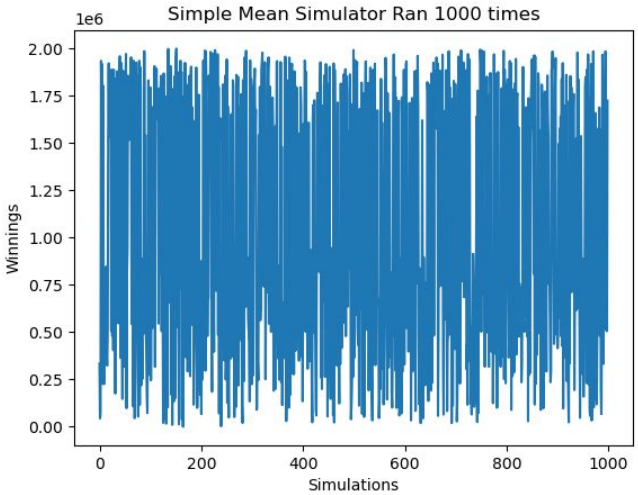
Worst

HAND	EXAMPLE
Prial (Three-of-a-Kind)	3× 3× 3×
Running Flush (Straight Flush)	4♠ 5♠ 6♠
Run (Straight)	4♥ 5♠ 6♣
Flush	×♥ ×♥ ×♥
Pair	5× 5× 10×
High	Q× 4× 6×

Martingale

- The martingale strategy is a betting strategy that originated from 18th-century France.
- In this strategy, the player doubles the bet after every loss, so that the first win would recover all previous losses plus win a profit equal to the original stake.

Martingale Simulation



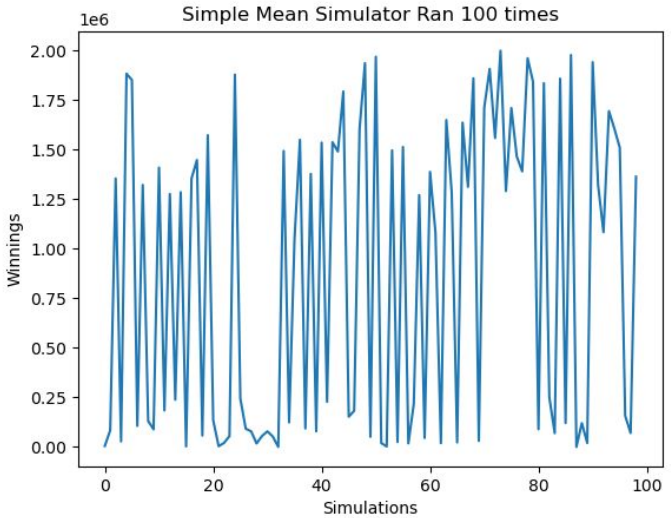
- 1000 Simulations
- Betting amount started at 1 dollar
- 2 Players
- Player’s wallet size is 1,000,000 dollars
- 1,000,000 rounds
- Player 0 won 411 games out of the 1000 !
- The probability of winning with the martingale strategy is 41.0999999999999994% ! On average, Player 0 ended up with 1006492.719 dollars after each game !

Anti-Martingale

- In the anti-martingale strategy, bets are increased after wins, and reduced after a loss. The deception is that the player will benefit from a winning streak, and reduce losses from a losing streak. Since the bets are independent from each other, the concept of winning streaks is an example of player’s misbelief. Thus, the anti-martingale strategy fails to make any money.

Anti-Martingale Simulation

- 100 Simulations
- Betting amount started at 1,000 dollars
- 2 Players
- Player’s wallet size is 1,000,000 dollars
- 1,000,000 rounds
- Player 0 won 43 games out of the 100 !
- The probability of winning with the anti-martingale strategy is 43.0% !
- On average, Player 0 ended up with 870846.3740623089 dollars after each game !



Sources

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