Hedge Strategy

Markus Fiordaliso

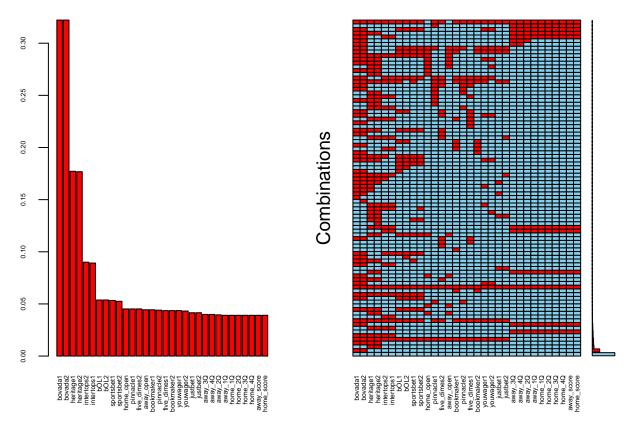
10/13/2020

Data

Missing Data

Bovada seems to be missing the most data. I will leverage Pinnacle due the legitimacy of the book, coupled with the relatively low levels of missing data.

Some scores are missing. After doing some research on a few of these instances, it looks like sportsbookreview is missing these scores even though the game took place. This can be expected to some degree since I didn't pay for the data. I will factor these out of the analysis



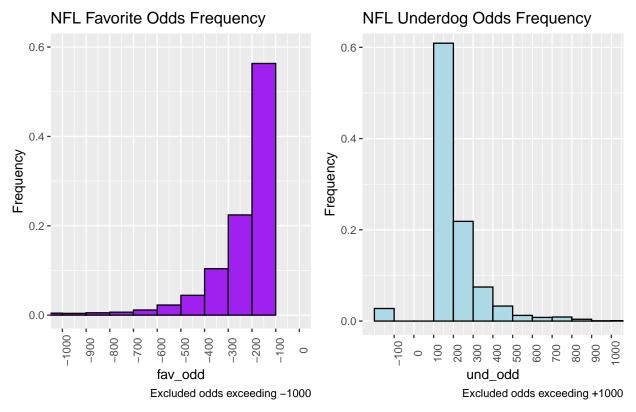
##
Variables sorted by number of missings:
Variable Count

```
##
        bovada1 0.32219959
##
        bovada2 0.32219959
##
      heritage1 0.17718941
##
      heritage2 0.17678208
##
     intertops2 0.09002037
     intertops1 0.08920570
##
##
           bOL1 0.05376782
##
           bOL2 0.05376782
##
     sportsbet1 0.05336049
##
     sportsbet2 0.05254582
      home_open 0.04521385
##
      pinnacle1 0.04521385
##
##
    five_dimes2 0.04521385
##
      away_open 0.04439919
##
     bookmaker1 0.04439919
##
      pinnacle2 0.04399185
    five_dimes1 0.04358452
##
##
     bookmaker2 0.04358452
##
      youwager1 0.04358452
##
      youwager2 0.04317719
##
       justbet1 0.04154786
##
       justbet2 0.04154786
##
        away_3Q 0.03991853
##
        away_4Q 0.03991853
##
        away_2Q 0.03951120
##
        away_1Q 0.03910387
##
        home_1Q 0.03910387
##
        home_2Q 0.03910387
##
        home_3Q 0.03910387
##
        home_4Q 0.03910387
##
     away_score 0.03910387
##
     home_score 0.03910387
```

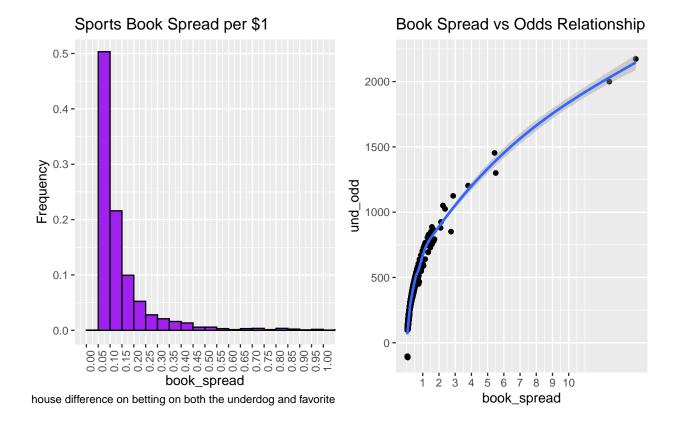
Tidy

Odds Overview

Exploring the frequency each odd occurs, as this will give me a better feel on how often I can execute strategies that might target specific odd thresholds. -200:200 is the most frequent odds, which is what I would expect.



Books do not offer true odds since they are the ones who bear the risk. The books take a 5-10% cut on most bets as seen below. However, as the odds gap between teams increases, so does the cut that the book takes. This is to make up for the lack of liquidity on both sides of the bet, and reduce the overall risk that the book takes on.



Bet the Underdog and Hedge

Picking outright winners can be a challenging feat to generate sustainable profits. The hypothesis is that if a money line position is taken before a game, at some point the odds will improve and an opportunity will present itself to lock in a profit. Specifically, I want to focus on underdogs as this will provide more upside to guarantee a profit as seen below.