

Using Odds Fluctuations in Australian Horse Racing to Predict a Winner



An Analysis by Billy Bingham

Summary



This analysis looks at the viability of looking at the odds fluctuations of winning horses to be able to predict future winners, and whether or not this is more or less likely at a specific location.

Of the three success metrics chosen for the hypothesis, one of these three was met – to have an overall average odds fluctuation of 10%+ across all races.

The logistic regression model that has been created, along with cross-validation against the dataset, could correctly identify with 82% (+/- 2%) accuracy, whether the horse was likely to be in the top 2 biggest fluctuations of its race.

Hypothesis

The more the odds reduce from opening price to starting price, the more likely it is for that specific horse to win the race.



Success Metrics

- 40%+ of winning horses will have the biggest or second biggest odds fluctuation in the race.
- The overall average odds fluctuation will be 10%+
- A total of 70% of winning horse's odds will reduce between opening price and starting price.

The Data



- 806 Races

tracked via sportsbet.com.au

- 20 Variables

Including Opening Price, Starting Price, Meet, Ground, % of odds change, whether horse had biggest or second biggest odds fluctuation

- 16,120 Values

Risks & Assumptions

1

Percentage of odds fluctuation can have some limitations that can skew the statistics.

2

Horses at much bigger opening prices tend to fluctuate more, whilst still being very unlikely to win the race.

3

The odds tend to reduce more on heavy ground.

4

Only the winners have been tracked

Analysis:

Percentage of Races that the winner was in the Top 2 Biggest Odds Fluctuations

36.5%

WERE in the Top 2
Biggest Fluctuations
in their race.
294/806

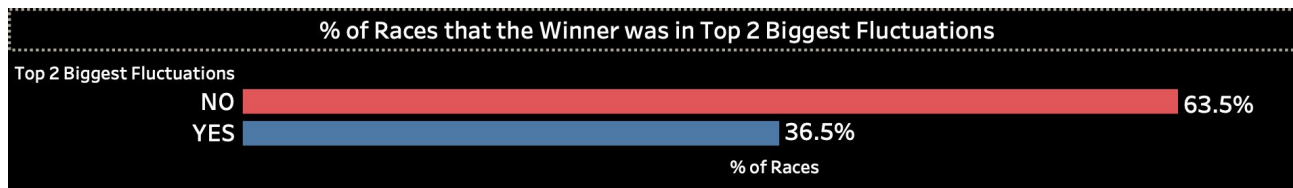
63.5%

WERE NOT in the
Top 2 Biggest
Fluctuations in their
race.
512/806

Hypothesis Success
Metric:

40%

Success metric
not met



Analysis:

Percentage of Races that the winner was in the Top 2 Biggest Fluctuations

- Whilst this success metric of 40% was not met across all races, drilling down into specific meets/locations shows us some interesting results:

51%

25 out of 49 meets
(locations) did reach
this success metric
of 40%

Below is a table showing the best 4 meets by this metric:

MEET LOCATION	STATE	% OF WINNERS IN TOP 2 BIGGEST FLUCTUATIONS	NUMBER OF RACES TRACKED
WAGGA	New South Wales	87.5%	8
DARWIN	Northern Territory	80%	6
NARROGIN	Western Australia	71.4%	7
IPSWICH	Queensland	64%	17

Analysis:

Overall Average Odds Fluctuation

The Overall Average
Odds Fluctuation was

10.85%

Across all races

Success metric of 10%+
met

53%

26 of 49 meets reached
this success metric of the
average fluctuation being
over 10%

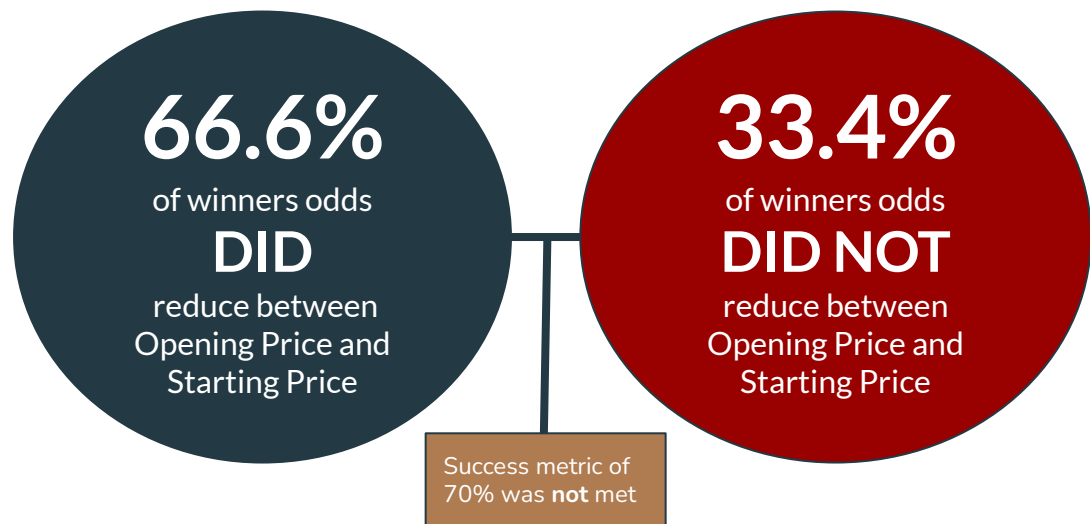
Even when we look at all
Ground Types individually - all
are above 10% on average

Average Ground Fluctuations

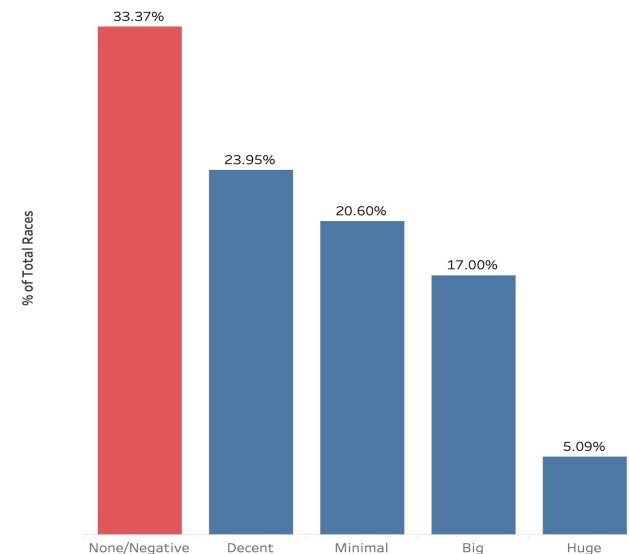
Ground Cat	
Heavy	17.9%
Soft	11.0%
Good	10.6%

Analysis

Percentage of winning horse's odds reducing between opening price and starting price.



% of Races in each Fluctuation Category
Fluctuation Category on percentage



Findings & Results

- Whilst the hypothesis did not come to fruition with only one of the three success metrics being met, there is still a reasonable relationship between odds fluctuations and the race winner.
- **25 of the 49** meets/locations tracked had over 40% of the winners being in the top 2 fluctuations in the race
- **66.6%** of the winners odds did reduce between the opening price and starting price.
- The cross-validated predictive model also had a good accuracy level of **82% (+/- 2%)**, meaning that the model correctly predicted whether or not the horse would be in the top 2 fluctuations in its race **82%** of the time.
- Should this analysis be repeated, it would be wise to include all horses in a race, as this model could then be used to try to predict future winners.
- 2200 word report has been produced with more in-depth analysis

Thank you for listening

Before I finish - I would like to share my interactive dashboard that has been built in Tableau. This dashboard could be utilised in the future, should more races be added to the dataset.