

# *Running to Runs: the Importance of Baserunning*

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Moneyball Academy  
Training Camp, 2022

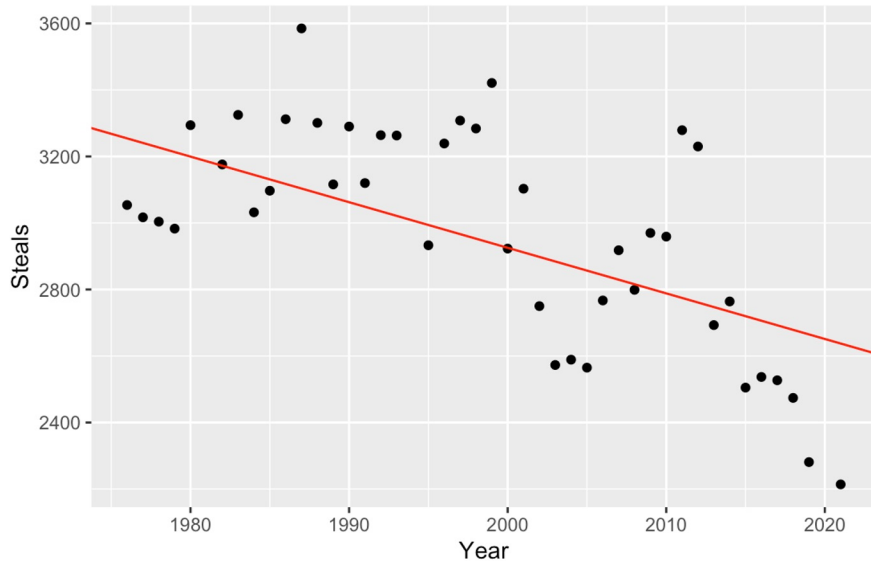
# Introduction

- Despite being overlooked, baserunning can be impactful
- Baserunning has evolved
- Teams are now taking more caution on the bases

Steals Across MLB, 1976 - 2021

Excluding Shortened Seasons 1981, 1994, 2020

$$y = 30347.31591 + -13.71092x$$



# Goal

Determine the impact of baserunning on an MLB team's ability to win baseball games.

## BsR

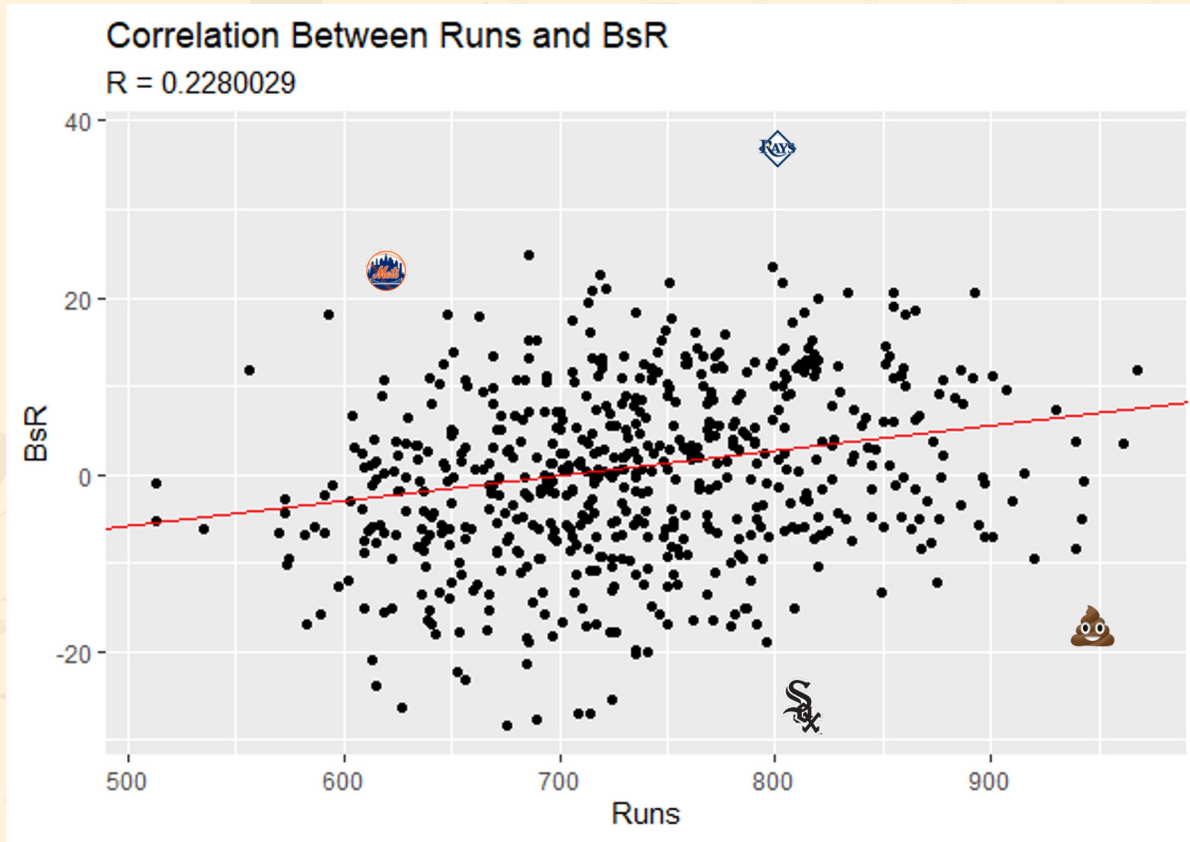
- Factors in all plays on the basepaths
- Standardized number
- BsR of 10 equates to about 1 win
- Calculated by adding:
  - wSB (Weighted Stolen Base runs) +
  - UBR (Ultimate Base Running) +
  - wGDP (Weighted Grounded into Double Play Runs)



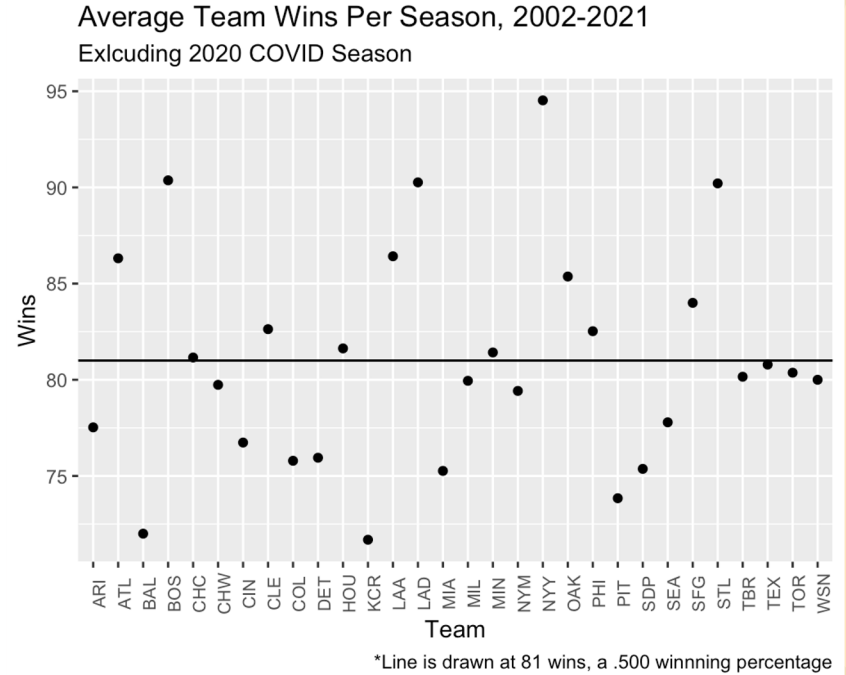
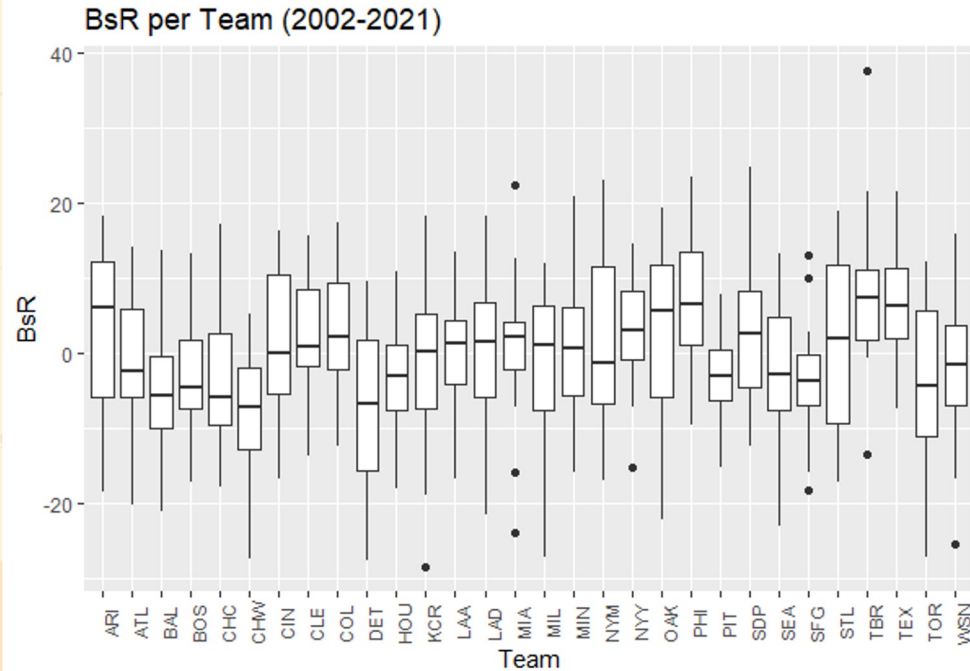
# Procedure

- Obtained BsR and run data from FanGraphs
- Data from 2002-2021
  - 2020 COVID Season adjusted for 162 games
  - Reliable data for BsR tracked starting in 2002
- Scatter plot of Runs and BsR
- Boxplot of team BsR
- Scatterplot of average team wins per season
- Analyze data to determine the importance of baserunning

# Results



# Results Pt. 2



# ★ *2010 Tampa Bay Rays*

- Single season BsR with **37.6** (since 2002)
- Finished 1st in AL East and 2nd in MLB
- Team WAR of 36.2 and OPS+ of 105
- Most stolen bases as a team in the AL
- Just under 4 wins added with BsR
  
- In 2011 they had a BsR of **10.4** (6th in MLB)
- Finished with **5 less wins** - Team WAR of 33.9 and OPS+ of 105



# *How To Expand*

- Putting the team's win percentage over in the same box plot as BsR and team
- Analyze every game in a season and see if the team:
  1. With the higher BsR through the season up to that point wins that game
  2. With the higher BsR that game wins
- Find how much teams over/under value high BsR players



# Conclusion

- Higher BsR → more runs
- More runs → more wins
- Better baserunning results in a slight advantage
- Over a full season, smart decisions can add up

