



The Question of Contracts in Baseball

Scenario

- ▶ A team in the MLB (Major League Baseball) has a player with a breakout year and plays an extreme roll in the teams success, does the team resign that player? If so, how long? How much?
- ▶ Based off previous players, are long, rewarding contracts worth the true cost?
- ▶ Do long-term, lucrative contracts negatively effect a player's performance?

Data

- ▶ Name of Player
- ▶ Length of new contract
- ▶ Dollar amount (in millions/year)
- ▶ WAR (pre-contract)
- ▶ WAR (during contract)
- ▶ Difference of WAR
- ▶ Sorted by position
- ▶ Total Observations: 200

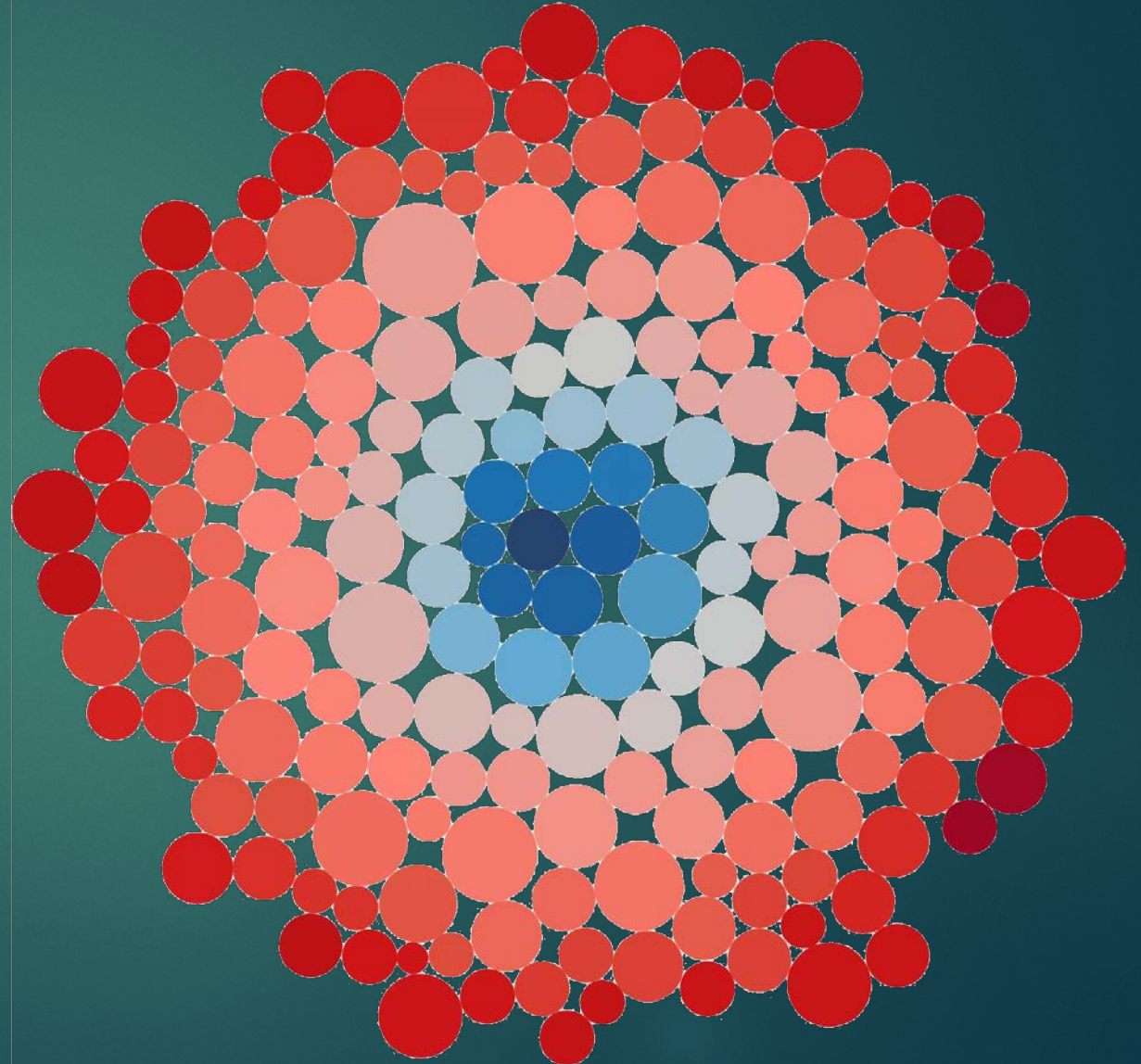
What is WAR in Baseball?

- ▶ Acronym – Wins Above Replacement
- ▶ Statistic used in baseball to “sum up” a player’s total contribution to a team.
 - ▶ Used for all positions
 - ▶ Takes into account all contributions in the game
 - ▶ Runs
 - ▶ Batting Average
 - ▶ Earned Runs Against Average
 - ▶ WHIP ((Walks + Hits)/Innings Pitched)
 - ▶ Etc.

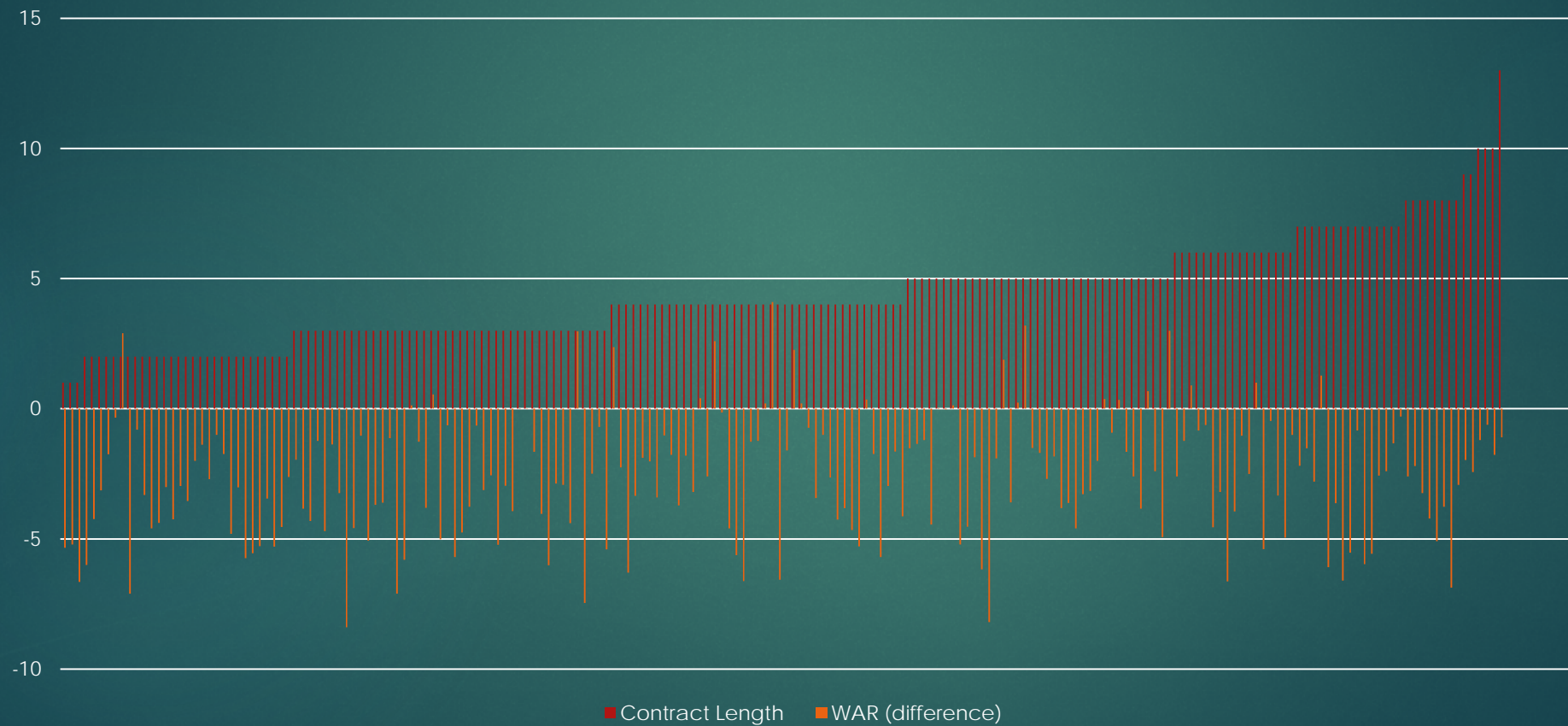
Quick Look at the Data

Key Observations

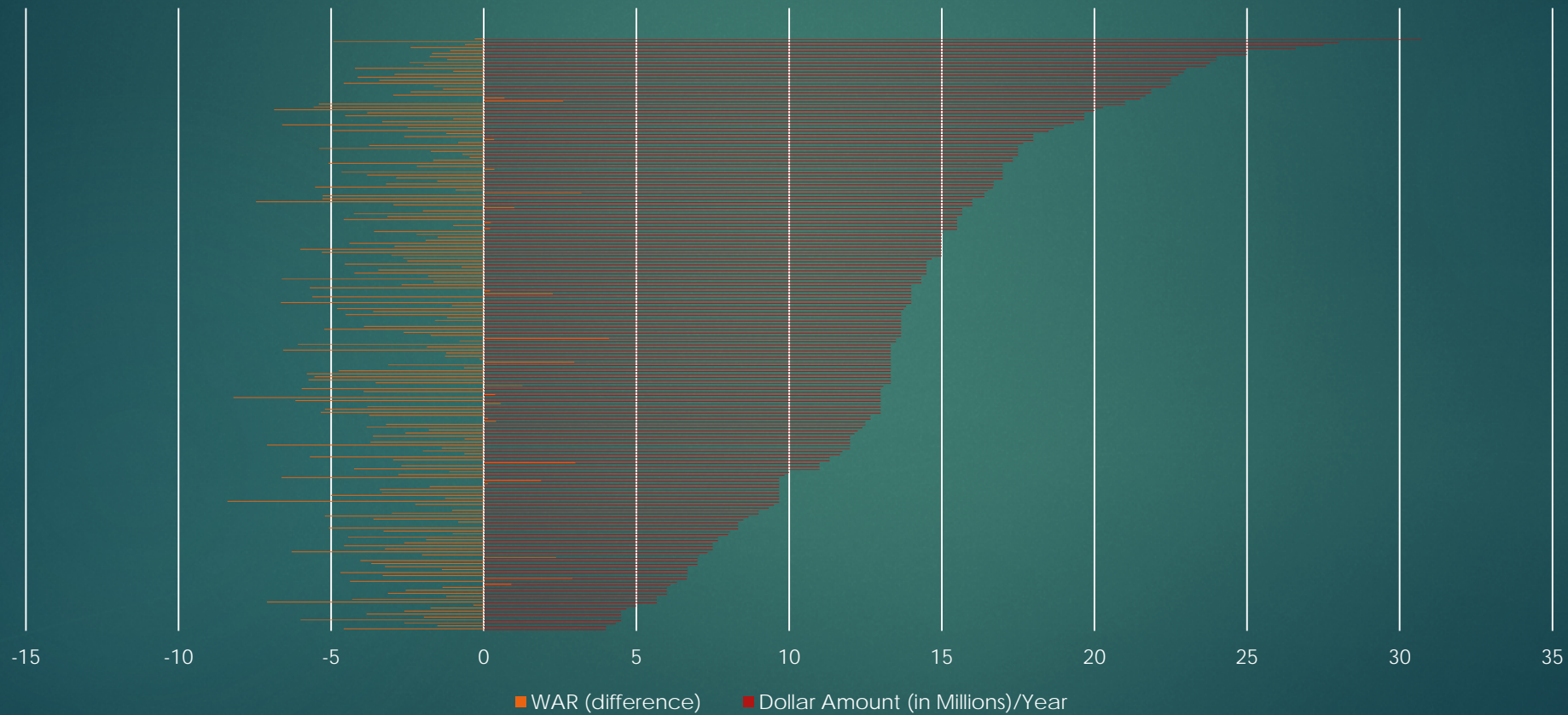
- ▶ Bigger Circle = Longer Contract Length
- ▶ Red is negative (decrease in WAR); blue is positive (increase in WAR)



Data – How Much Does Contract Length Actually Matter?



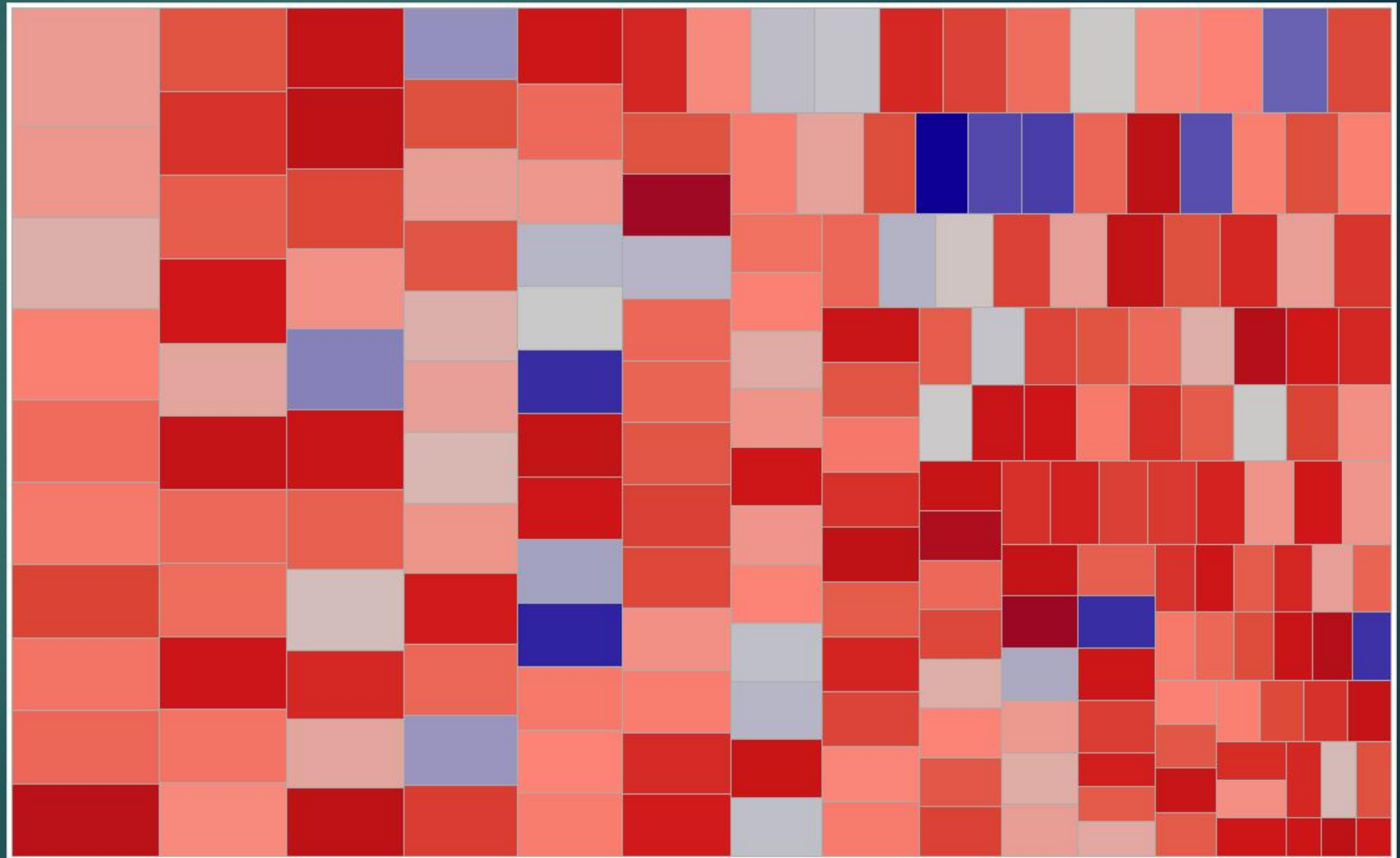
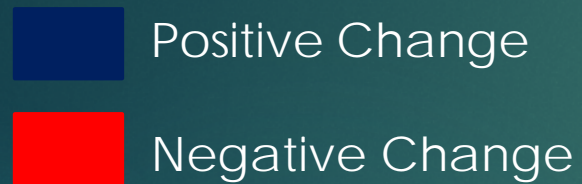
What About Value of Contract?



Notice...

- ▶ Majority of players significantly dropped in overall performance after signing a long, lucrative contract.
- ▶ As contract length increases, WAR neither increases or decreases.
- ▶ As contract value increases, WAR neither increases or decreases.
- ▶ WAR is independent from contract value and length.

Another Way to Look at the Data

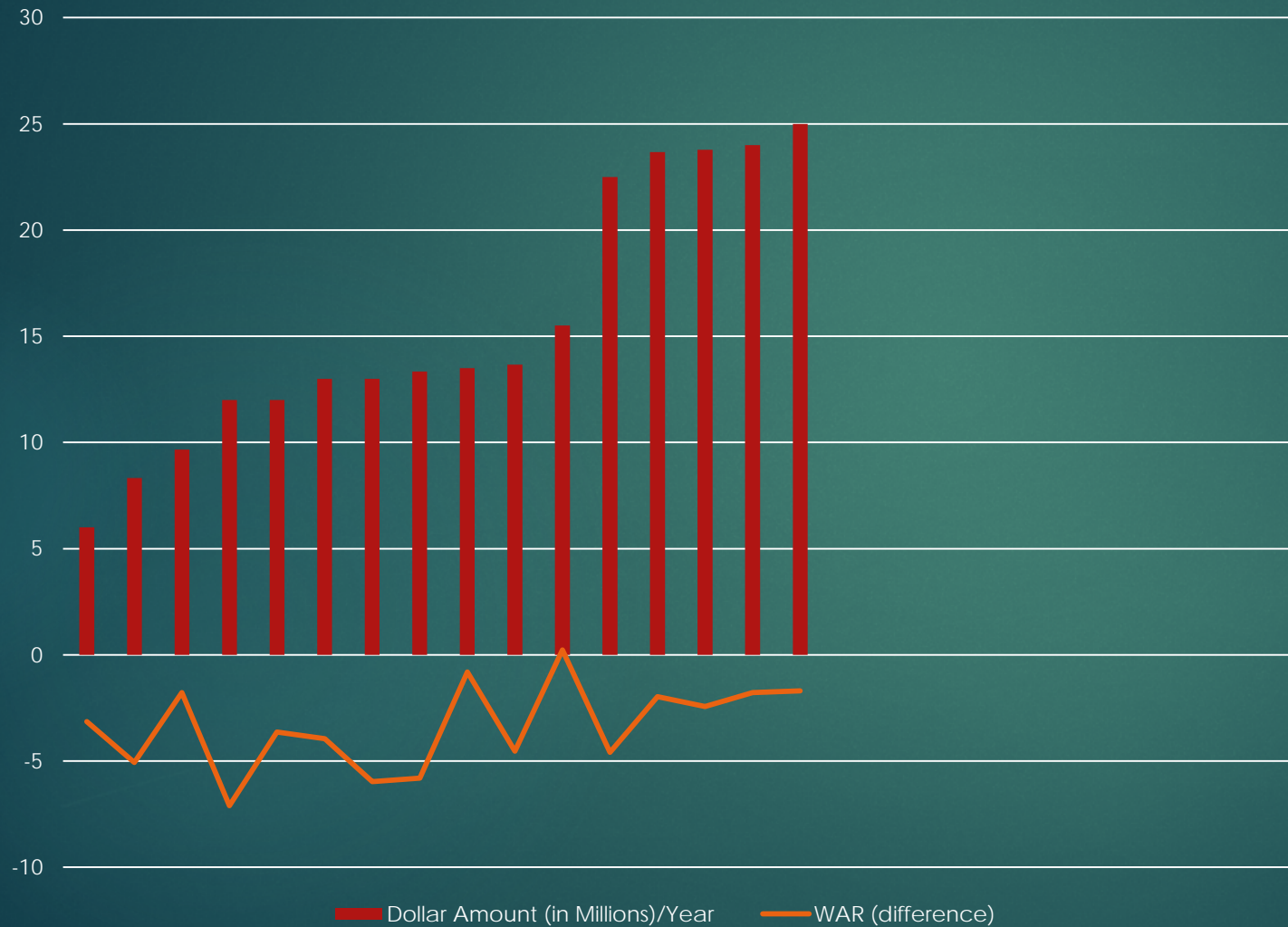


**Larger sections = Longer Contract Length

Conclusions Thus Far

- ▶ After a contract was given, player performance significantly drops.
- ▶ Length of contract – Extremely minimal effect
- ▶ Value of contract – Extremely minimal effect

Contract Value – First Basemen



► Observations: Contract Value has no correlation to change in WAR

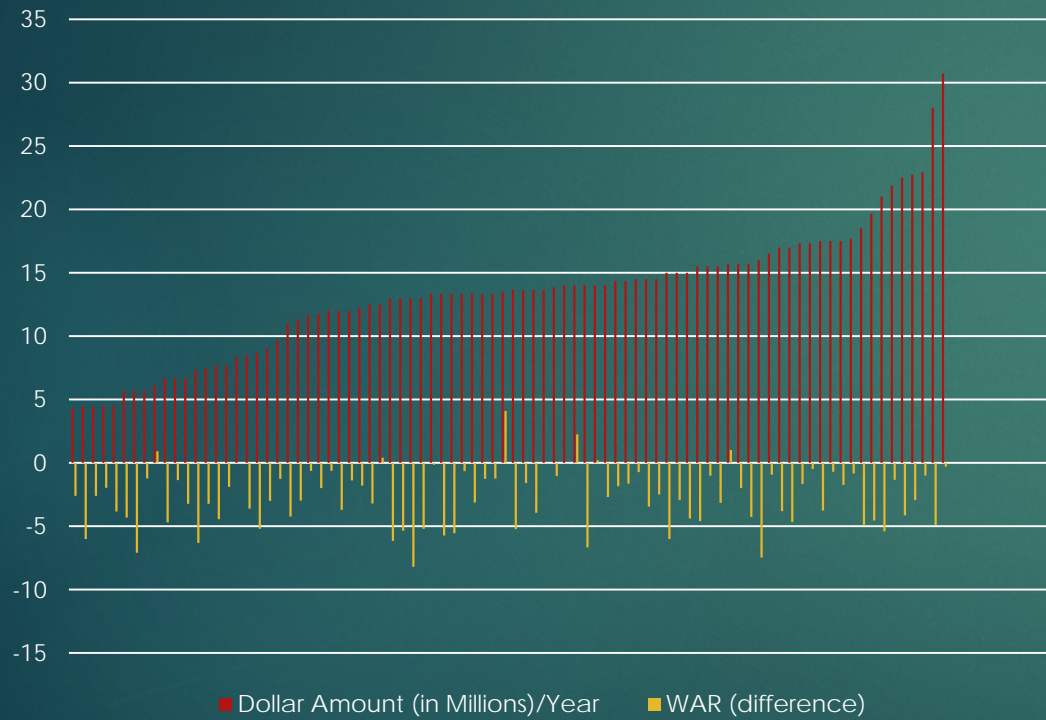
Contract Length – First Basemen



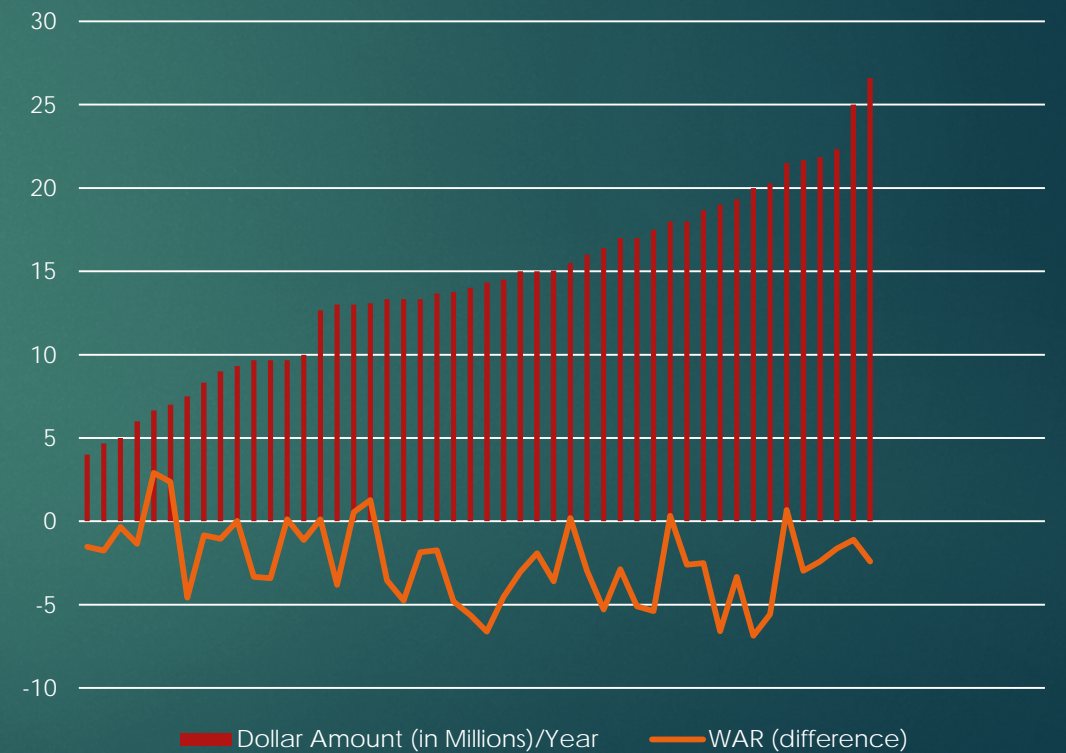
- ▶ Observations: Contract Length has no correlation to change in WAR

Contract Value

Pitchers



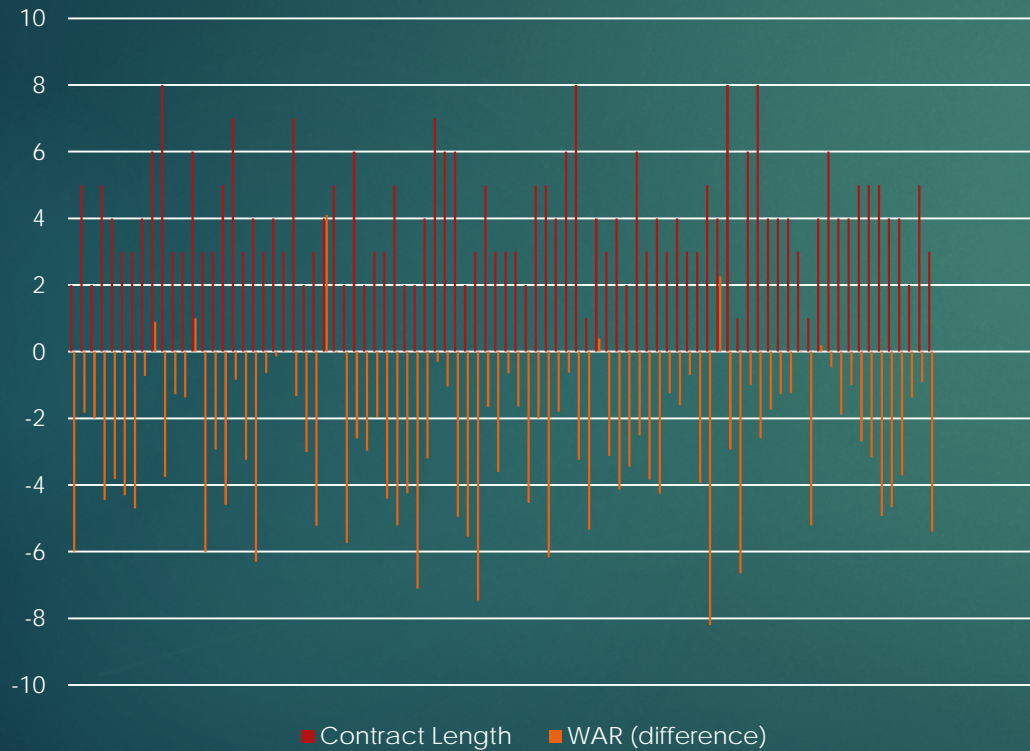
Outfielders



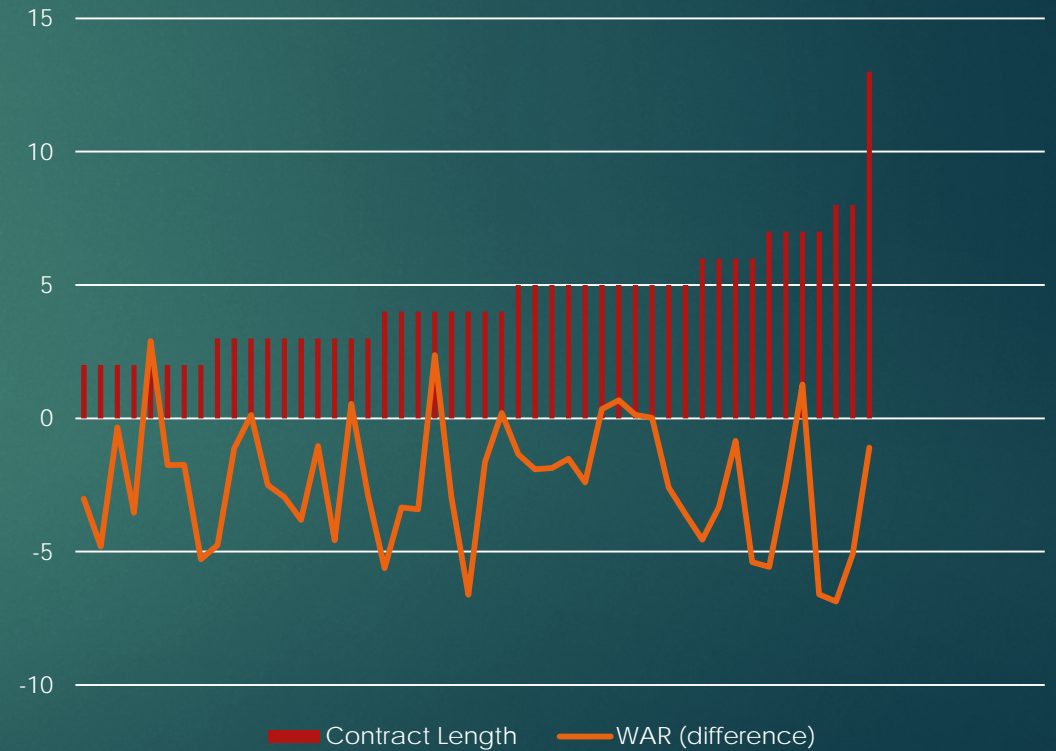
Contract Length



Pitchers



Outfielders



Final Conclusions

- ▶ Long-term, lucrative contracts tend to be less valuable than expected.
- ▶ Baseball players = Overpaid
 - ▶ Vast majority of players significantly dropped in performance after a contract signing.
 - ▶ Guaranteed money leads to subpar production levels.



Alex Rodriguez banned 211 games for using illegal Performance Enhancing Drugs. Signed for 10 years, \$27.5 million/year with 3 years left and guaranteed.

Final Conclusions

- ▶ Message to baseball owners and managers?
 - ▶ Think twice before paying and signing your players!
- ▶ Long-term contracts = invaluable
 - ▶ Immediate drop in performance, regardless of contract specifics (length and value).



Albert Pujols, after signing a 10 year, \$24 million/year contract, slumps and drops in performance immediately after signing his contract for the start of the 2012 season. He played less than 100 games in 2013, and slumped further the following year.

<http://www.bleacherreport.com/>

References

- ▶ <http://www.baseball-reference.com/>
- ▶ <http://espn.go.com/mlb/>
- ▶ <http://www.si.com/mlb>