Valuing goals, saves and duels in soccer

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Table of contents

- Background and data
- Methods
- Results
  - Goals
  - Saves
  - Duels
- Conclusions

How much are certain actions worth in soccer?

- Inform value of players
- Transition into data-driven performance-based contracts
- Bet on certain actions
- Invest in publicly traded club stocks

Data

- 2011-2012 Premier League player data for each game
  - Constructed by OptaPRO
  - Made public by Manchester City
  - Over 70 statistics for each player in each game
- Market Value data
  - TransferMarkt.com
 - June 2012, end of evaluated season

Methods

- Identify the action or statistic that is most important to a certain position
- Use player market value as a valuation
- Calculate player talent level with respect to that statistic using regression to the mean if needed
- Generate the distribution of the value (£) of that statistic across the league, by the diving the statistic of each player by their market value at the end of the season
- Estimate the mean value (£) of the statistic, as well as its variance

Strikers and the value of goals
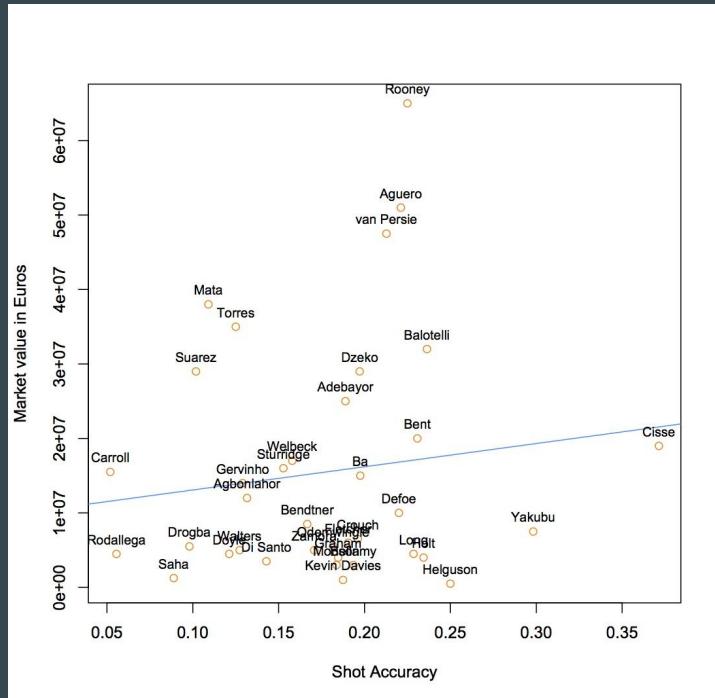
0.128

0.677

Strikers and the value of goals (2)

**Euros in market value per goals scored**
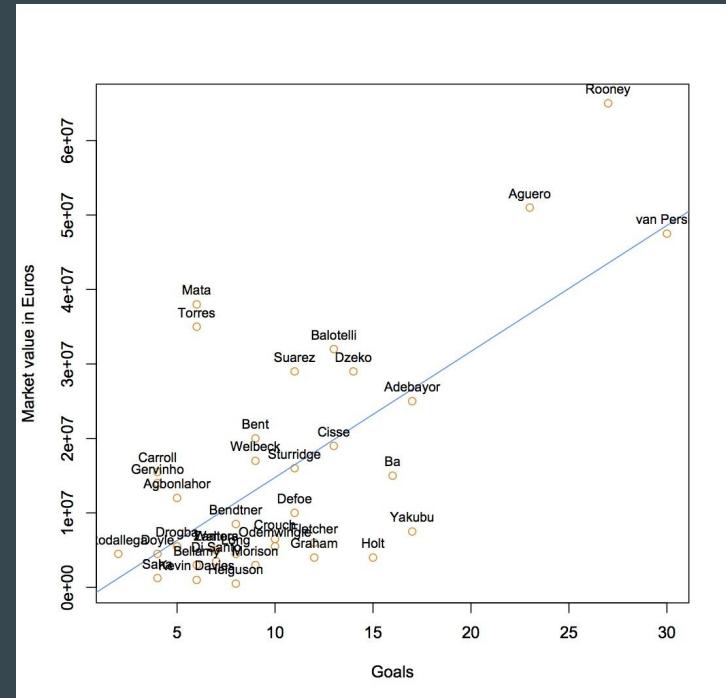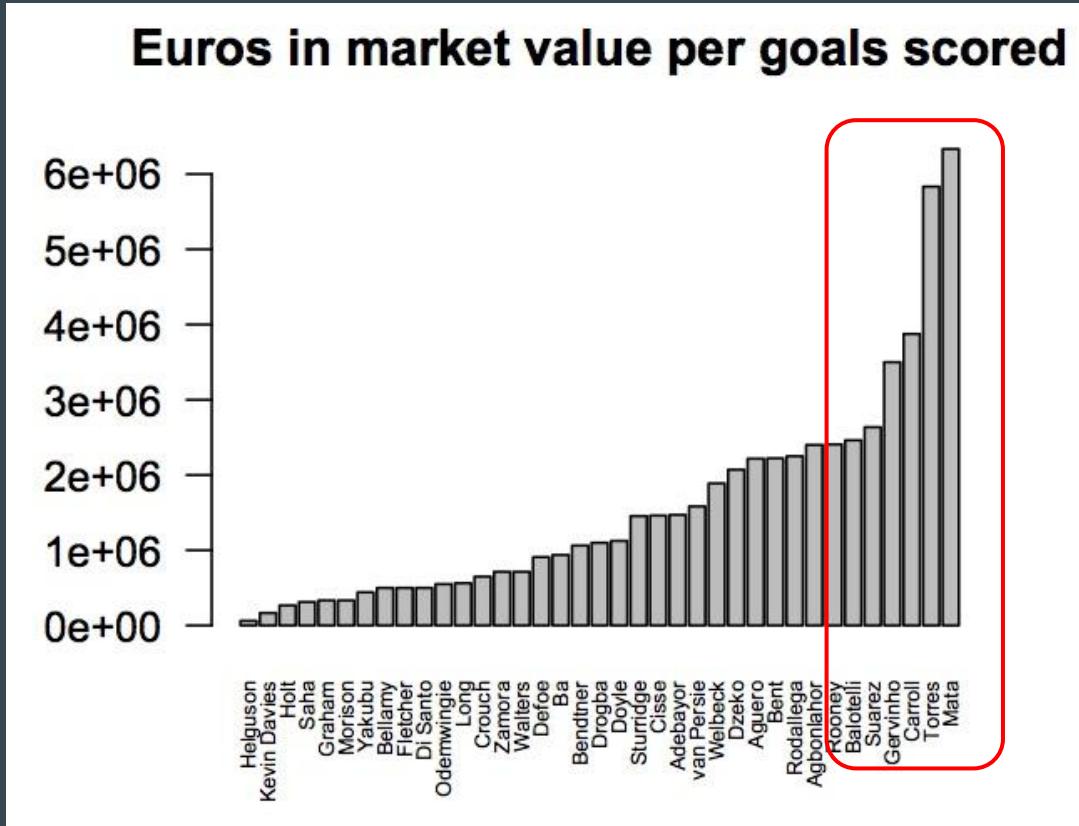
1.562m euro

1.182m euro

The other side of the goal: The value of saves

Performance indicator	Correlation to market value
Saves per season	0.301
Save percentage	0.183
Save Talent	0.257

The other side of the goal: The value of saves (2)

Pounds in market value per goals saved
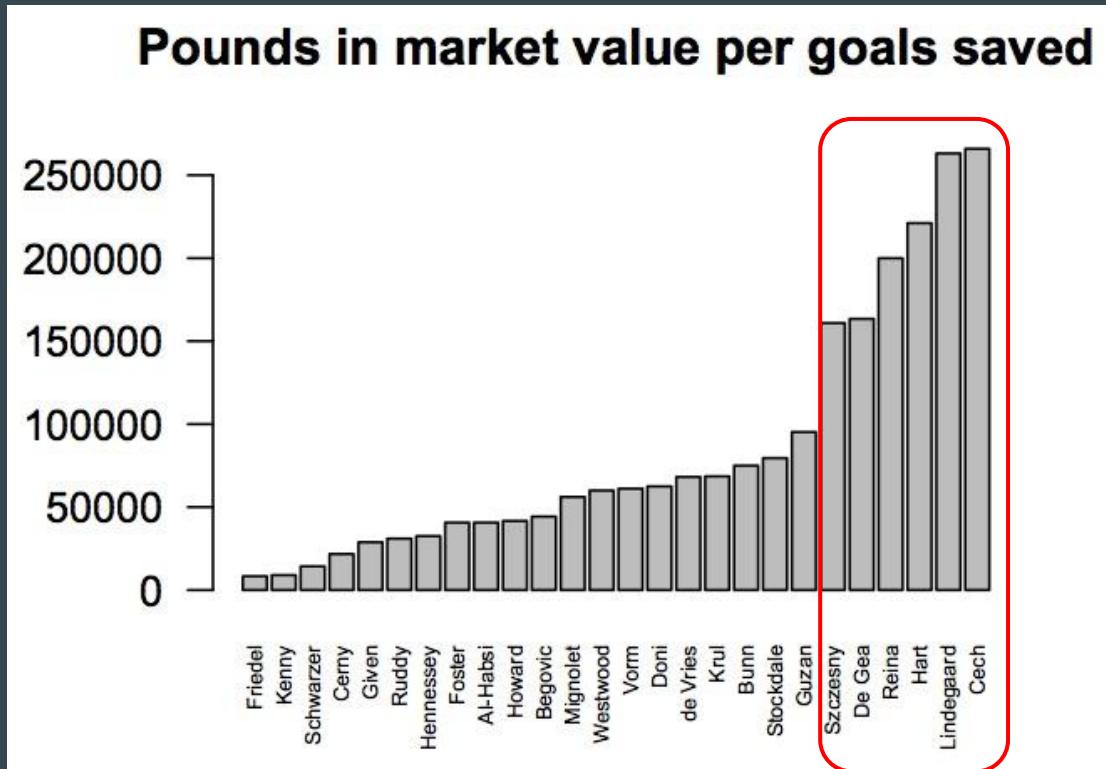
The other side of the goal: The value of saves (3)

Performance indicator	Correlation to market value	Correlation to market value without "Big Five" goalkeepers
Saves per season	0.301	0.678
Save percentage	0.183	0.183
Save Talent	0.257	0.209

Market value per save: **Big Five - 212k euro**   **Other - 47k euro**

Defenders

Defender Talent vs. Market Value
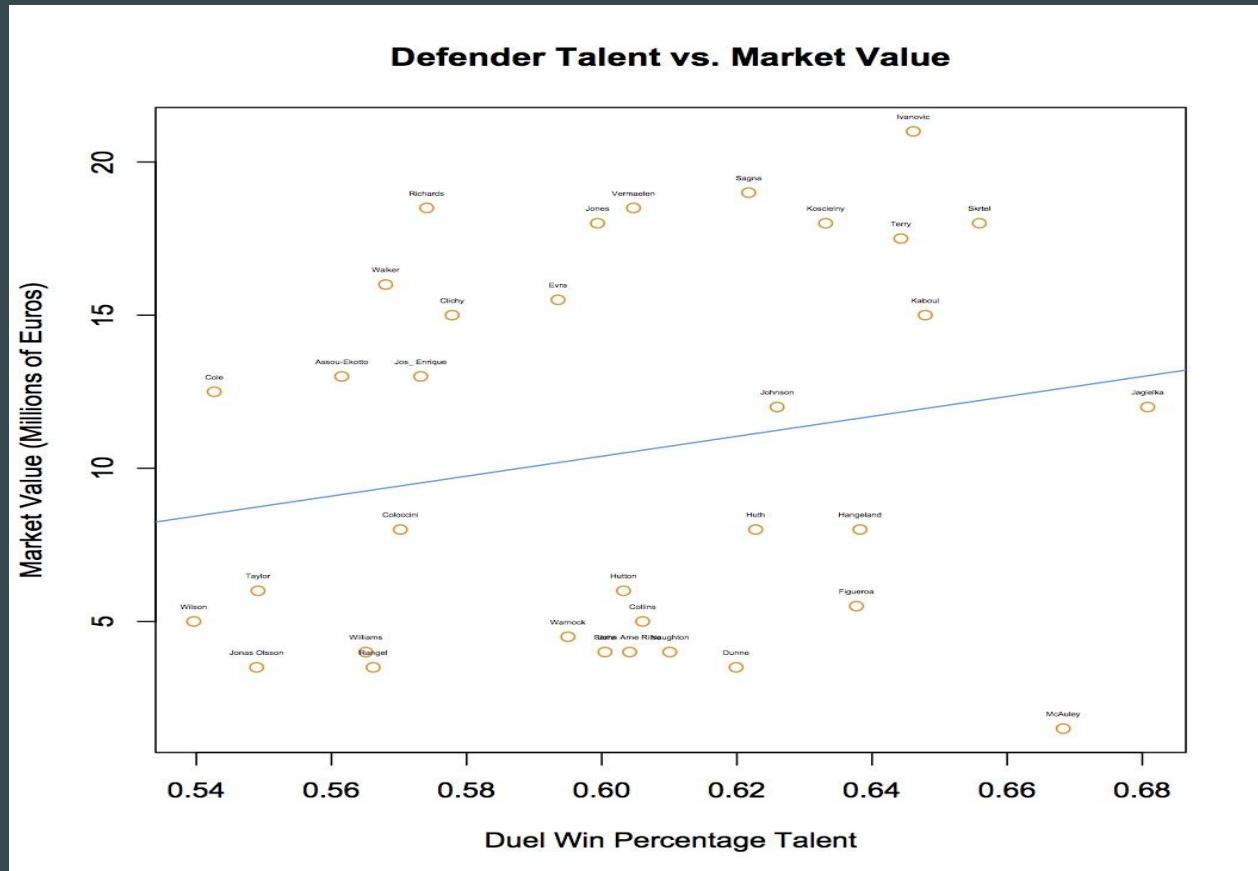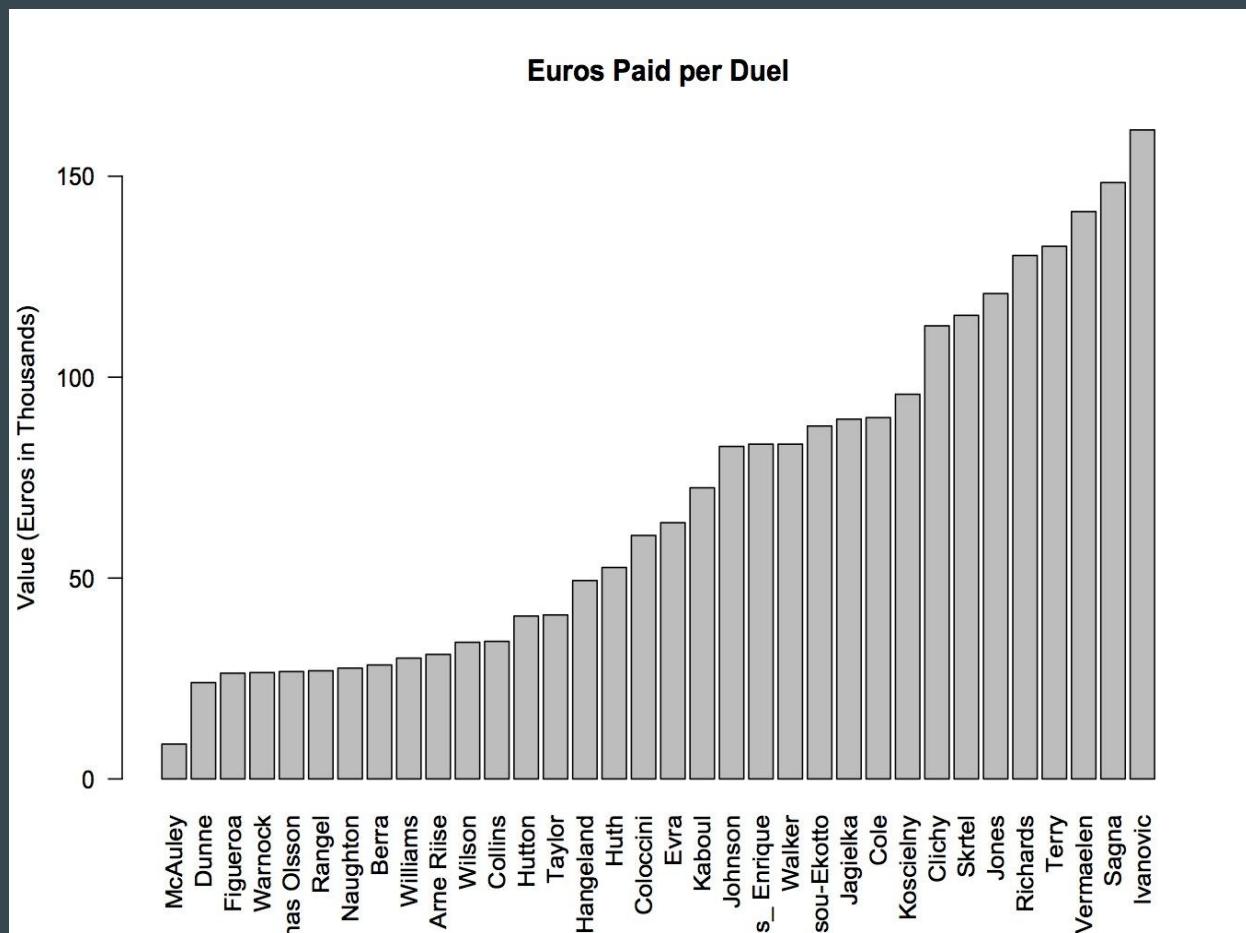
Defenders

Conclusion

- Certain clubs are willing to pay more for certain actions, especially the "Big Five" clubs
  - Spending data in last 5 years in English Football supports this
- A goal is worth 18 times a save, and 21 times a duel
- Action count correlates better with market value than skill level for scoring and saving, but not winning duels

English Premier League Spending Last Five Years

#	Team	Money Spent on Player Purchases Last 5 Years
1	Manchester City	£472,800,000.00
2	Manchester United	£432,700,000.00
3	Chelsea	£475,959,000.00
4	Liverpool	£354,100,000.00
5	Arsenal	£258,625,000.00
6	West Ham	£120,600,000.00

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