

Evaluating “The Best”: Is Tom Brady Overrated?



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Is Tom Brady Overrated?

- INTRODUCTION: *Research Questions and Methodology*

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- ANALYSIS OF TRUE TALENT:
 - Pass Completion Percentage
 - Percentage of Interceptions
 - Percentage of Touchdown Passes
 - Sack Percentages

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- CONCLUSIONS

INTRODUCTION

- All-Pro (2010, 2007, 2005)
- Comeback Player of the Year (2009)
- AP NFL Player of the Year (2010, 2007)
- Best Breakthrough Athlete (2002)
- Sports Illustrated Sportsperson of the Year (2005)
- Bert Bell Award (2007)
- Best NFL Player ESPY Award (2008)
- Super Bowl MVP (2002, 2004, 2015)
- Four game suspension (2016)



RESEARCH QUESTIONS

What is Brady's True Talent against Observed Statistics in:

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Sacks

METHODOLOGY

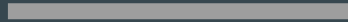
DATA: 2015 quarterback stats from Pro-Football-Reference.com

METHOD: Regression to the mean of true talent

$$\sigma_T^2 = \frac{\sum_{i=1}^n \frac{(S_i - \mu_T)^2 - (\sigma_L^2)_i}{2(\sigma_T^2 + (\sigma_L^2)_i)^2}}{\sum_{i=1}^n \frac{1}{2(\sigma_T^2 + (\sigma_L^2)_i)^2}}$$

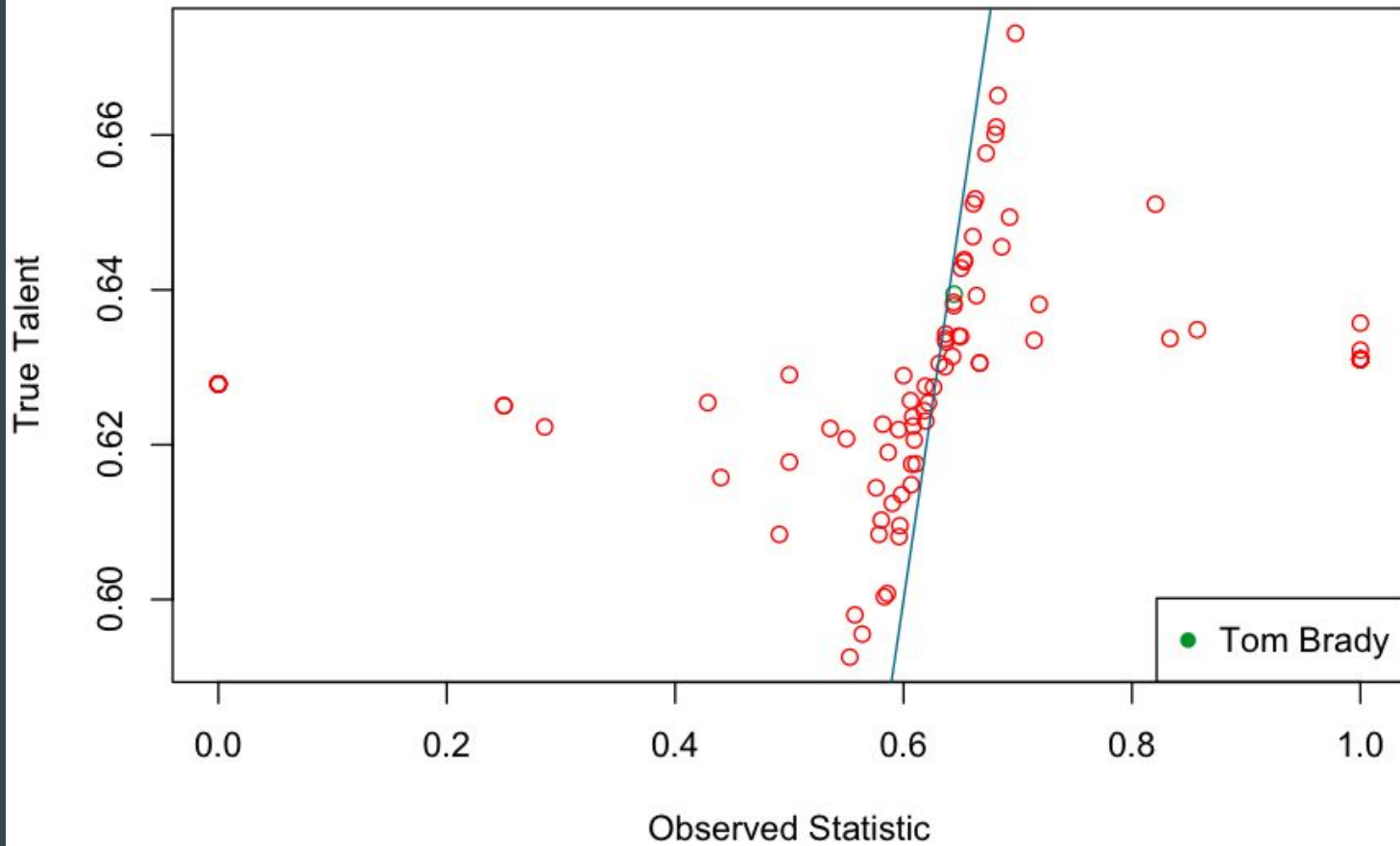
PASS COMPLETION

completed passes

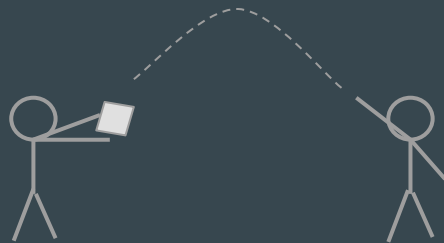


attempted passes

NFL Quarterback Pass Completion



PASS COMPLETION



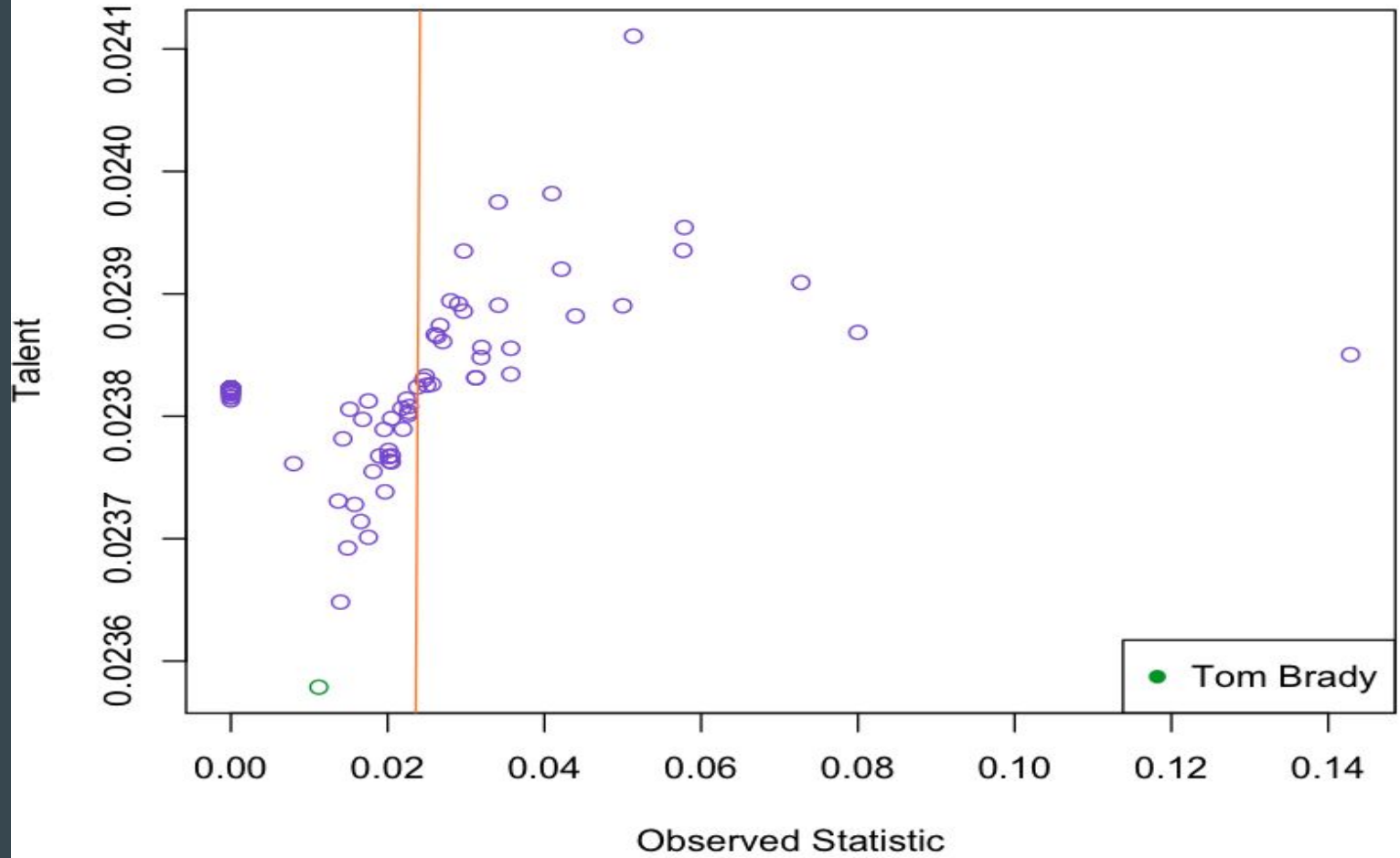
Player	Observed	True Talent	League Average	Standard Deviation
Tom Brady	64.4%	63.9%	63%	2.7%

INTERCEPTIONS



Player	Observed	True Talent	League Average	Standard Deviation
Tom Brady	1.1%	2.36%	2.38%	0.09%

NFL Quarterback Interception Percentage



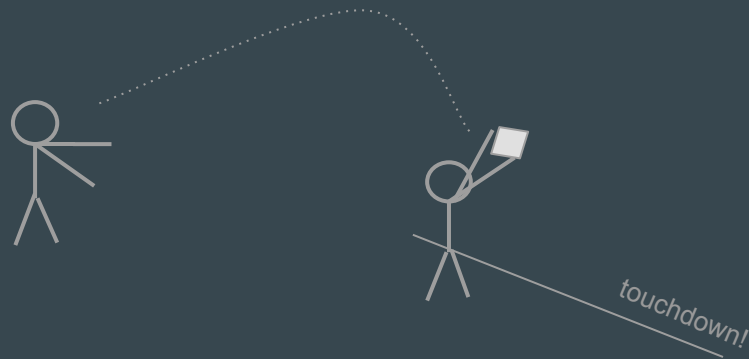
Touchdown Passes

passes resulting in touchdowns



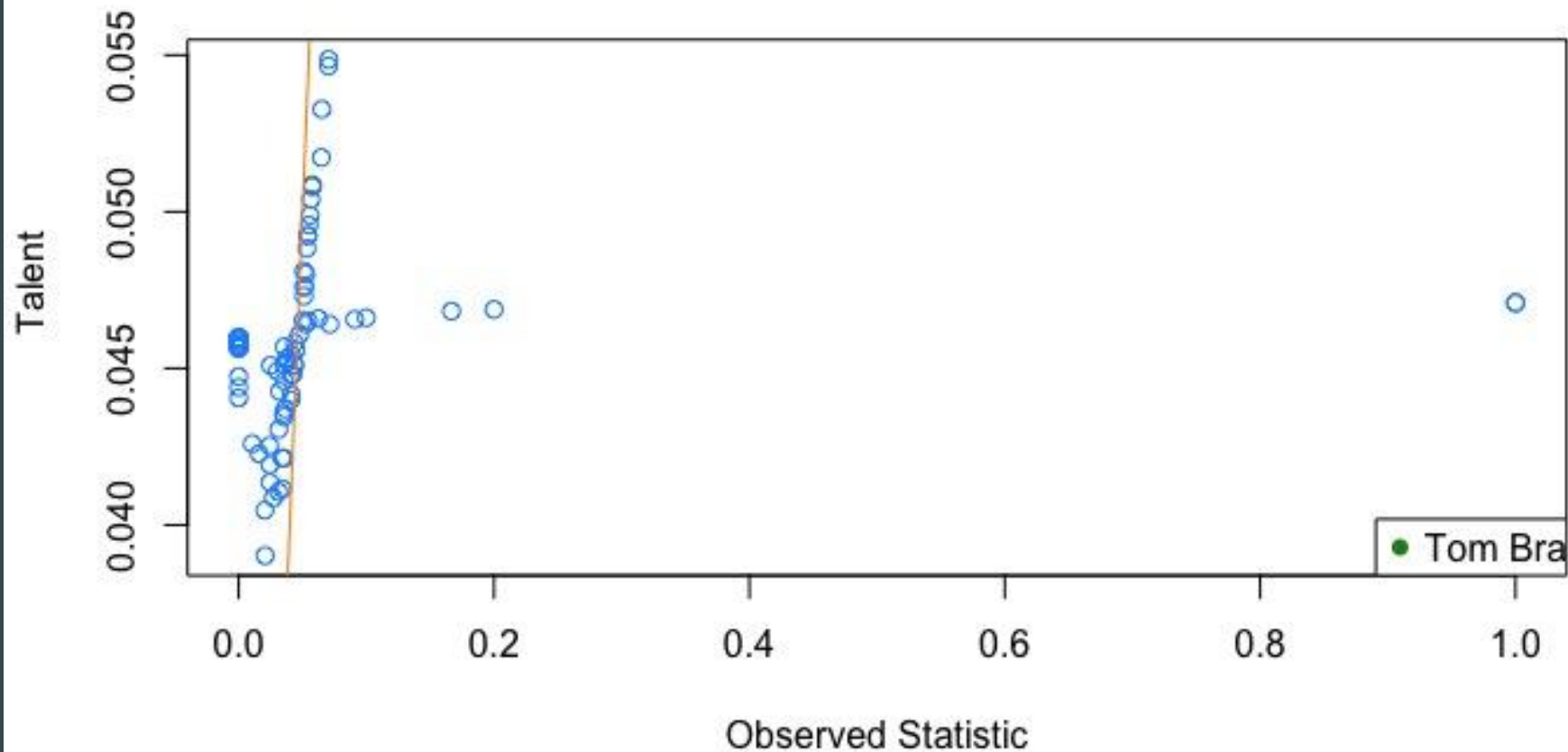
attempted passes

Touchdown Passes



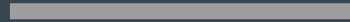
Player	Observed	True Talent	League Average	Standard Deviation
Tom Brady	5.77%	5.09%	4.6%	0.7%

NFL Quarterback Touchdown Passes



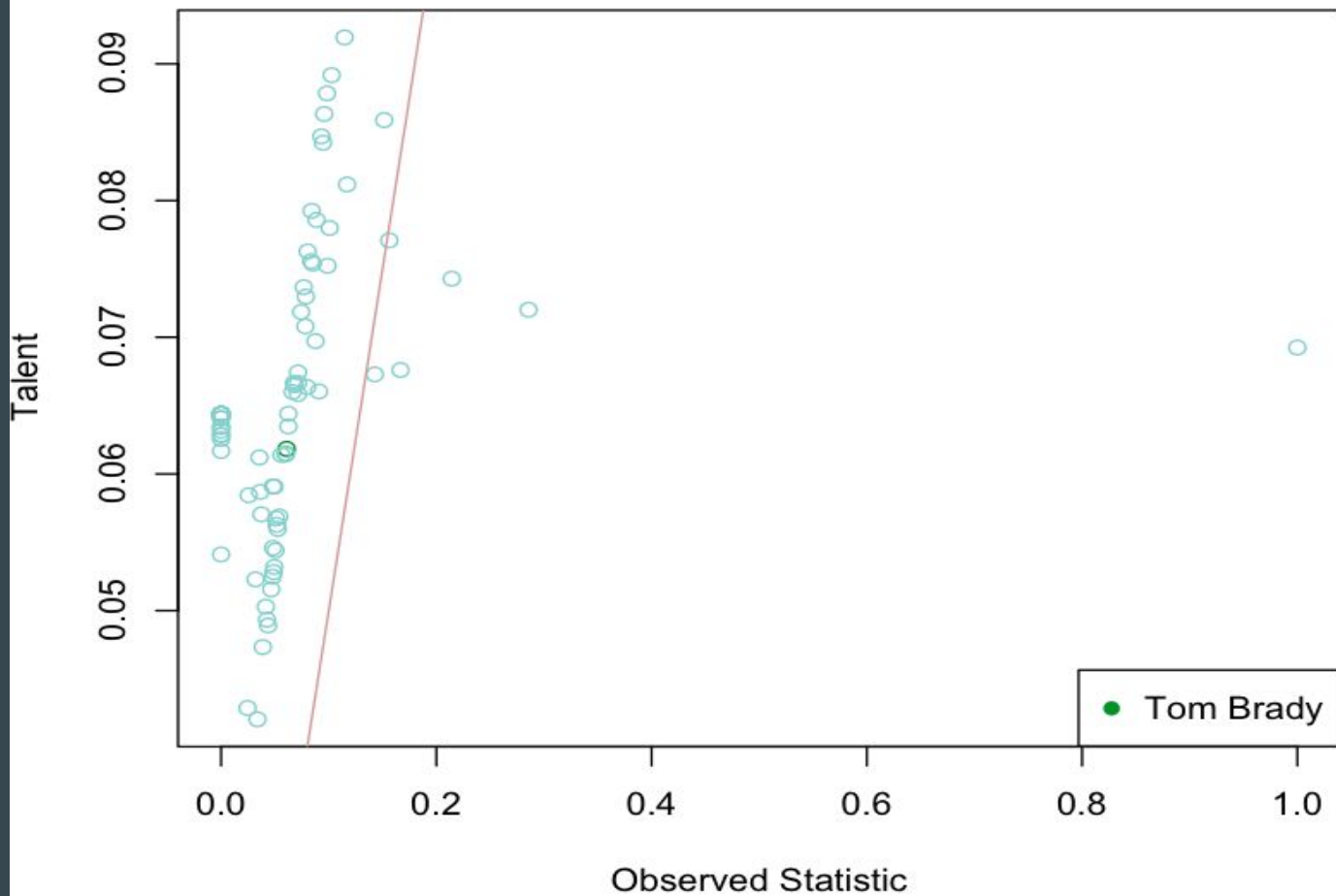
PERCENTAGE SACKED

times sacked



attempted passes

NFL Quarterback Pass Completion



PERCENTAGE SACKED

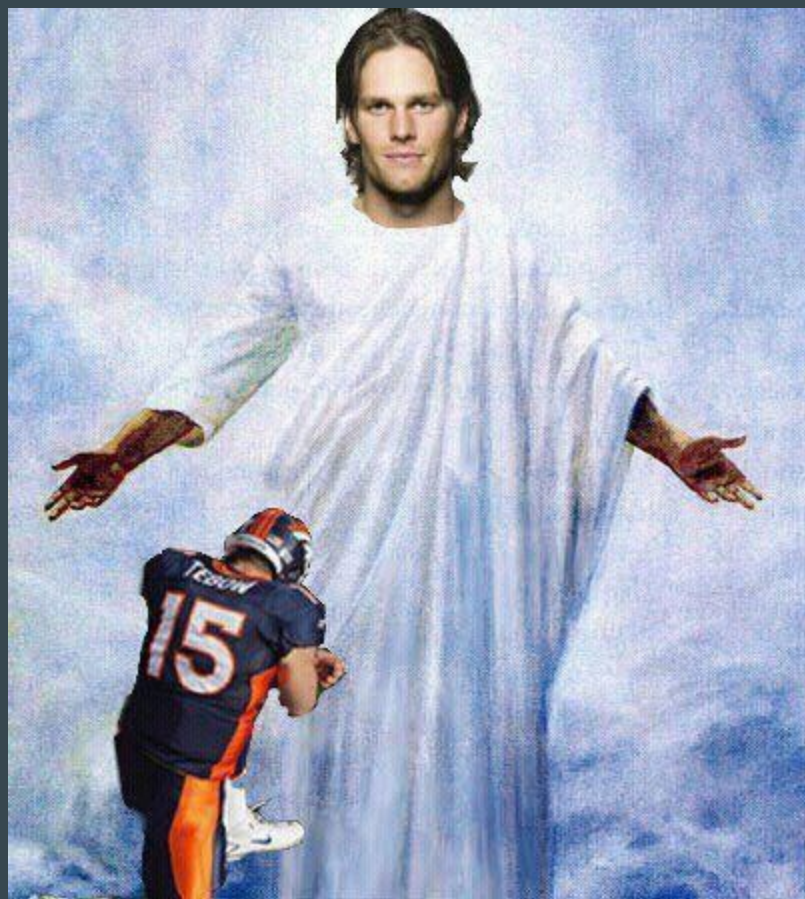


Player	Observed	True Talent	League Average	Standard Deviation
Tom Brady	6.1%	6.2%	6.5%	1.7%

Implications and Suggestions for Future Research

Alternative methods that eliminate the bias of the quarterback position:

- Perform regression to the mean within other positions and players on the field
- Change up the dataset! Look at game totals rather than season totals.
- Consider a Bradley Terry Model to account for Home Field Advantage.
- Consider a Rasch model to compare Brady's talent to that of his receivers, or the defense of the opposing team.



Conclusion

- Pass Completion
- Interception Percentage
- Touchdown Percentage
- Sacked Percentage

So...Is Tom Brady Overrated?

Thank you!
Questions?

REFERENCES

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