

WHAT MAKES TOM BRADY SUCCESSFUL?  
HOW DOES HE KEEP REACHING FOOTBALLS BIGGEST  
STAGE?

VINCE LOMBARDI  
TROPHY

**6X**

**CHAMPIONS**

XXXVI • XXXVIII • XXXIX • XLIX • LI • LIII

★ ★ ★ ★ ★



**Passer rating:** calculated using a player's passing attempts, completions, yards, touchdowns, and interceptions.

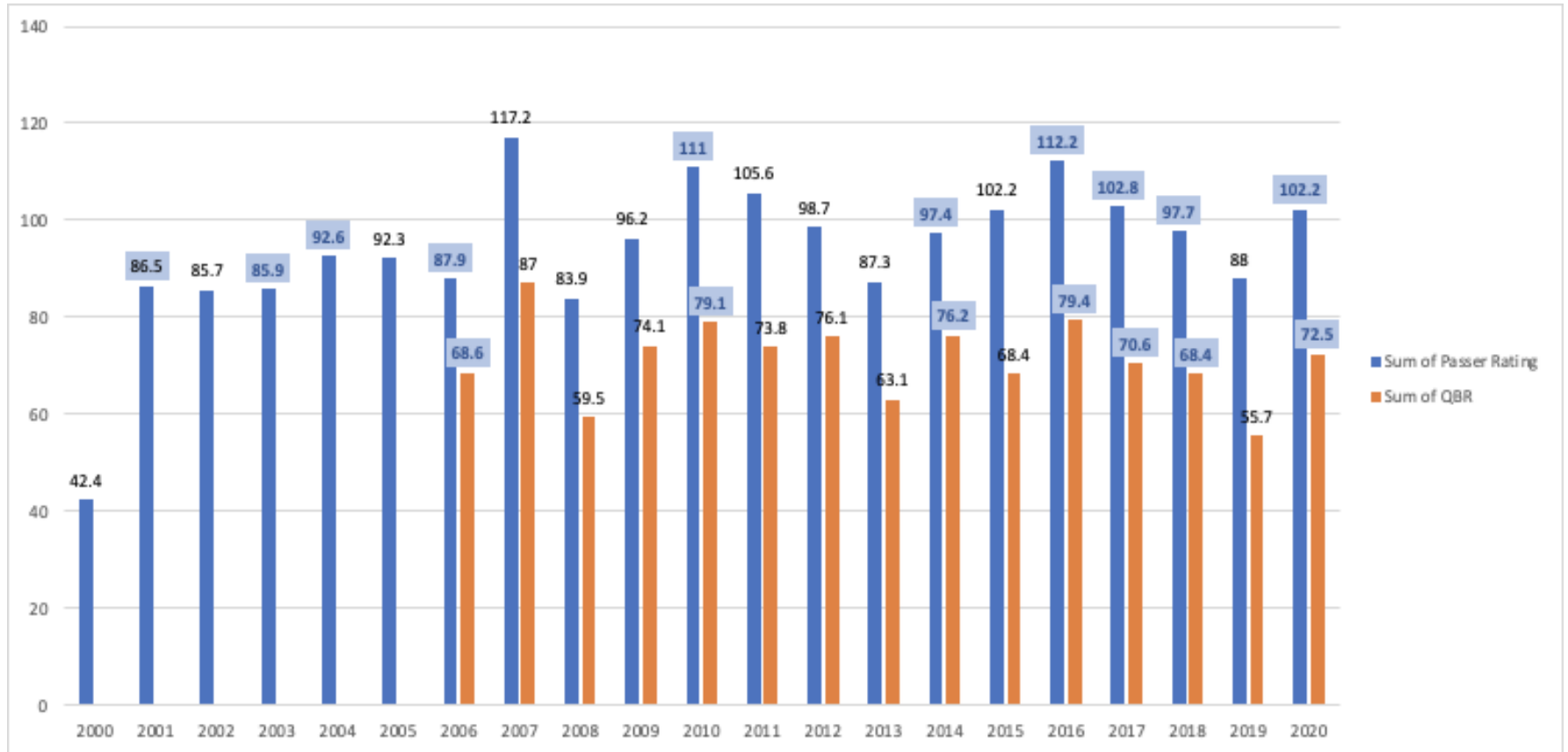
**QBR:** It incorporates all of a quarterback's contributions to winning, including how he impacts the game on [passes](#), [rushes](#), [turnovers](#), and [penalties](#).

**Turn over ratio:** is calculated by subtracting the total number of giveaways (interceptions & fumbles lost) from the total number of takeaways (interceptions & opponent fumble recoveries).

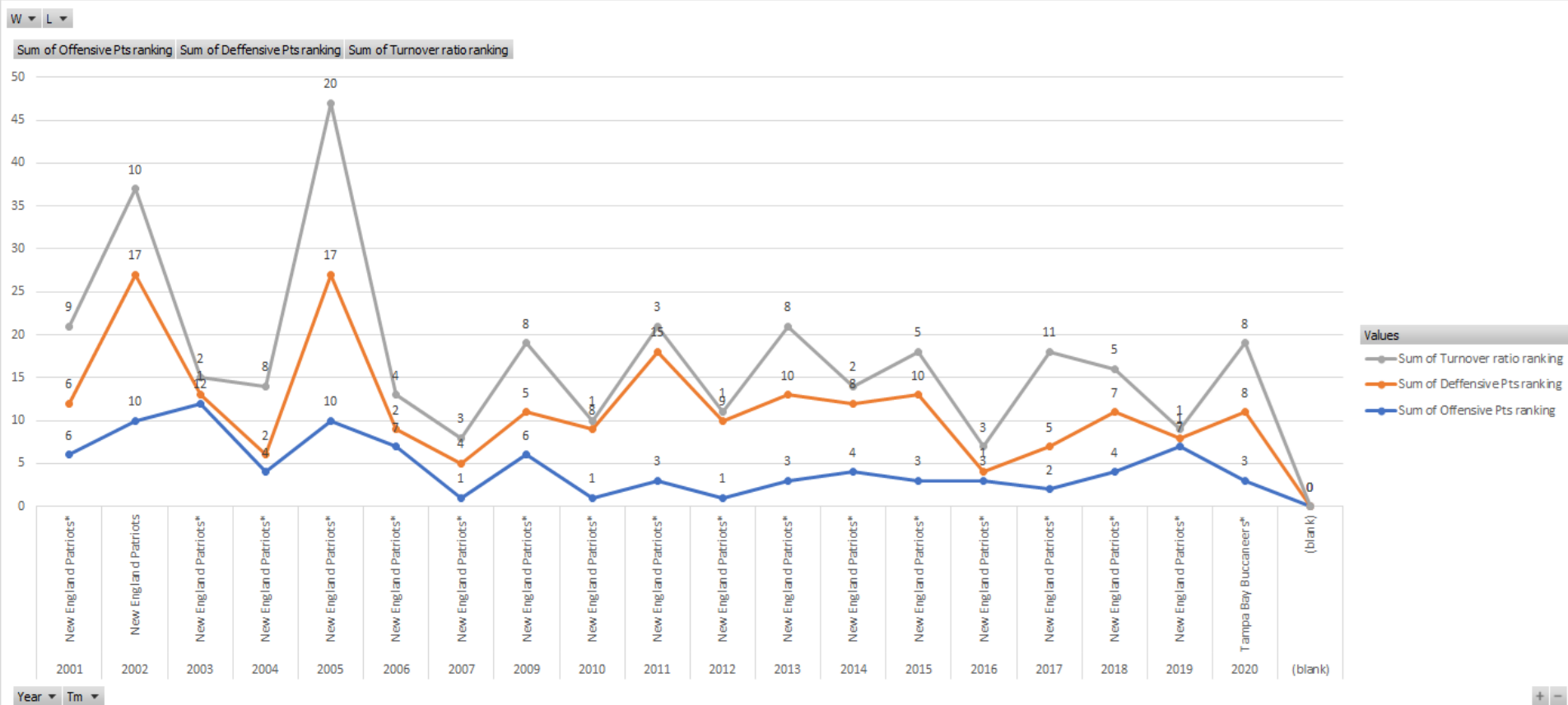
**Offensive rankings:** calculate, yards per play, first downs, rushing attempts, rushing yards, yards per rush, passing attempts, passing yards, yards per pass, turnovers, penalties, and time of possession

**Defensive rankings:** calculate, yards per play, first downs, rushing attempts, rushing yards, yards per rush, passing attempts, passing yards, yards per pass, turnovers, penalties, and time of possession

# Regular Season Passer Rating and QBR



# Regular Season Team Rankings



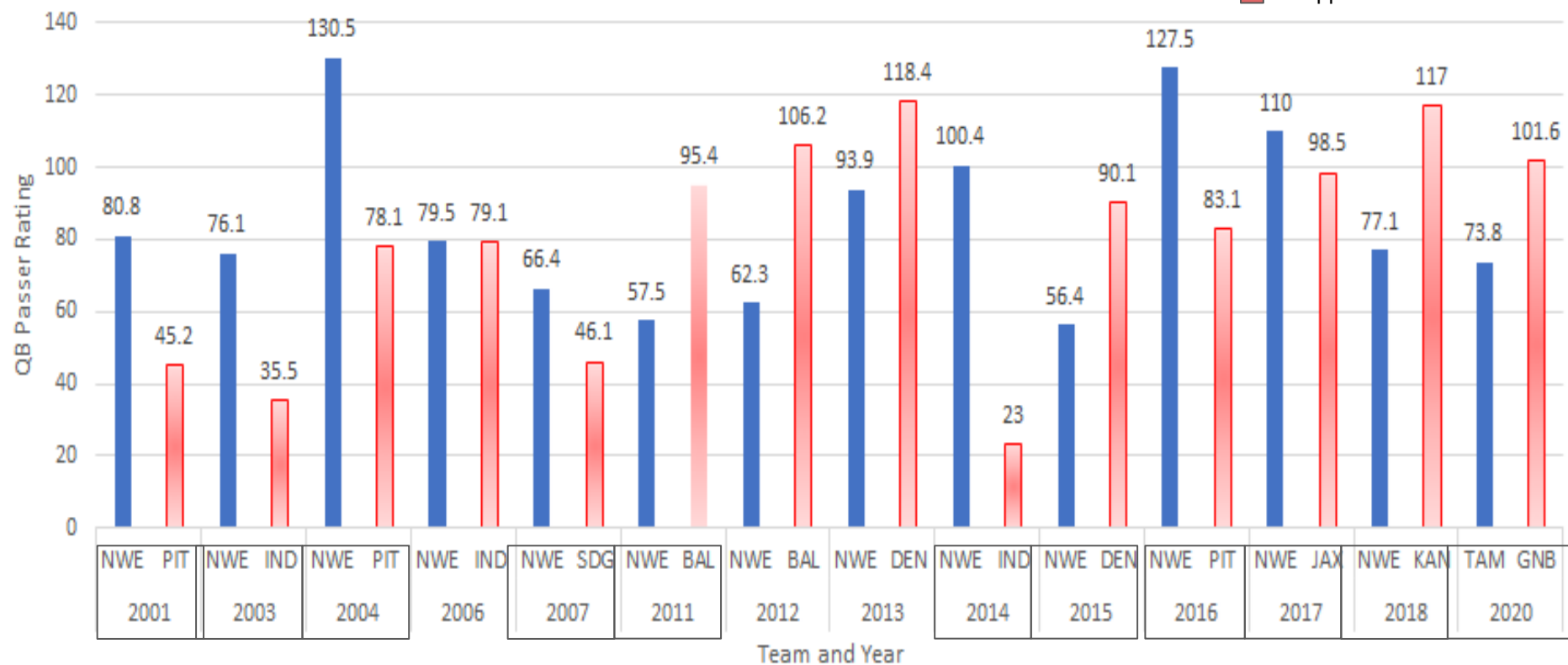




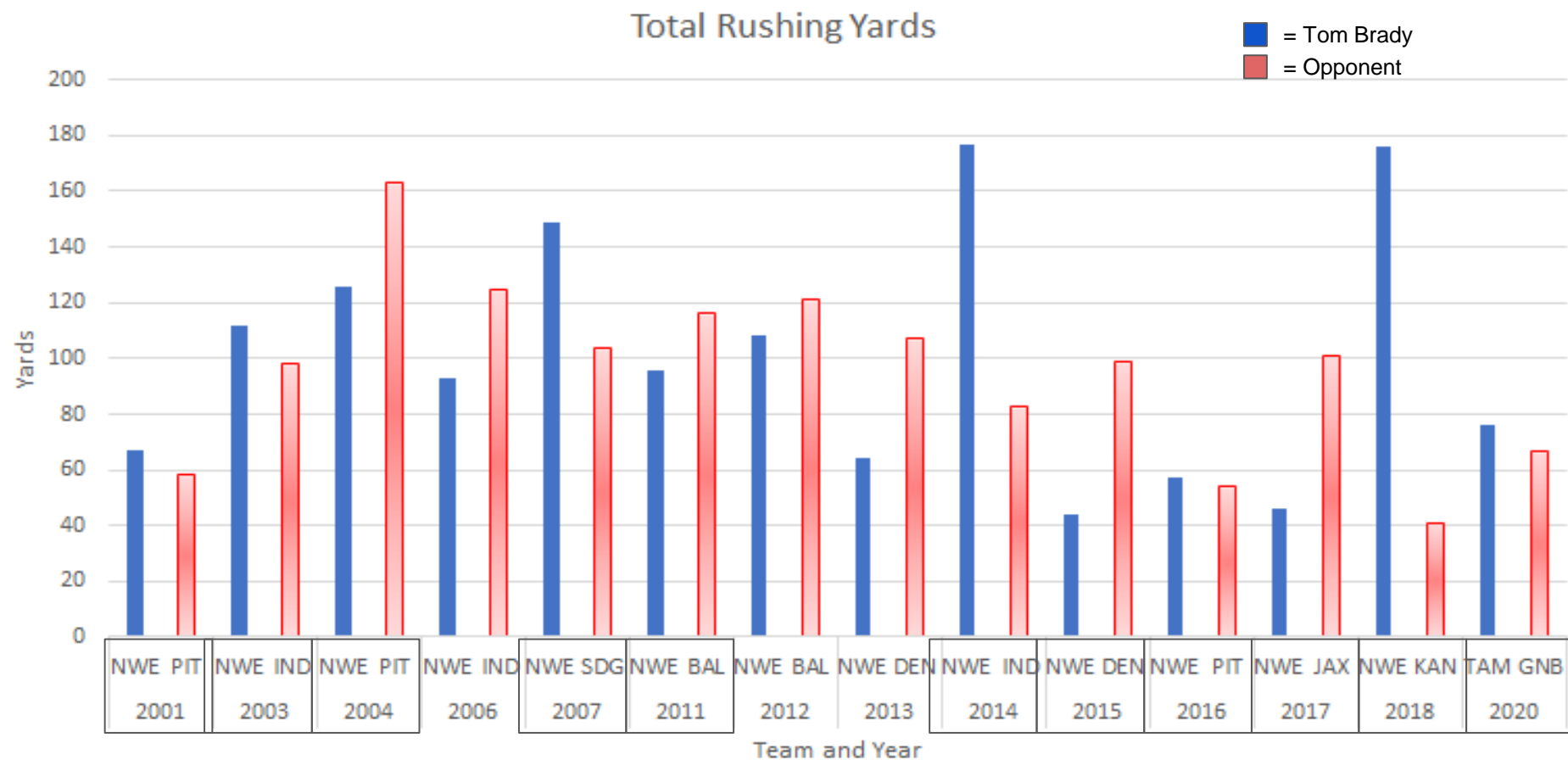
CHAMPIONSHIP

## Conference Championship Passer Ratings ( out of 158.3)

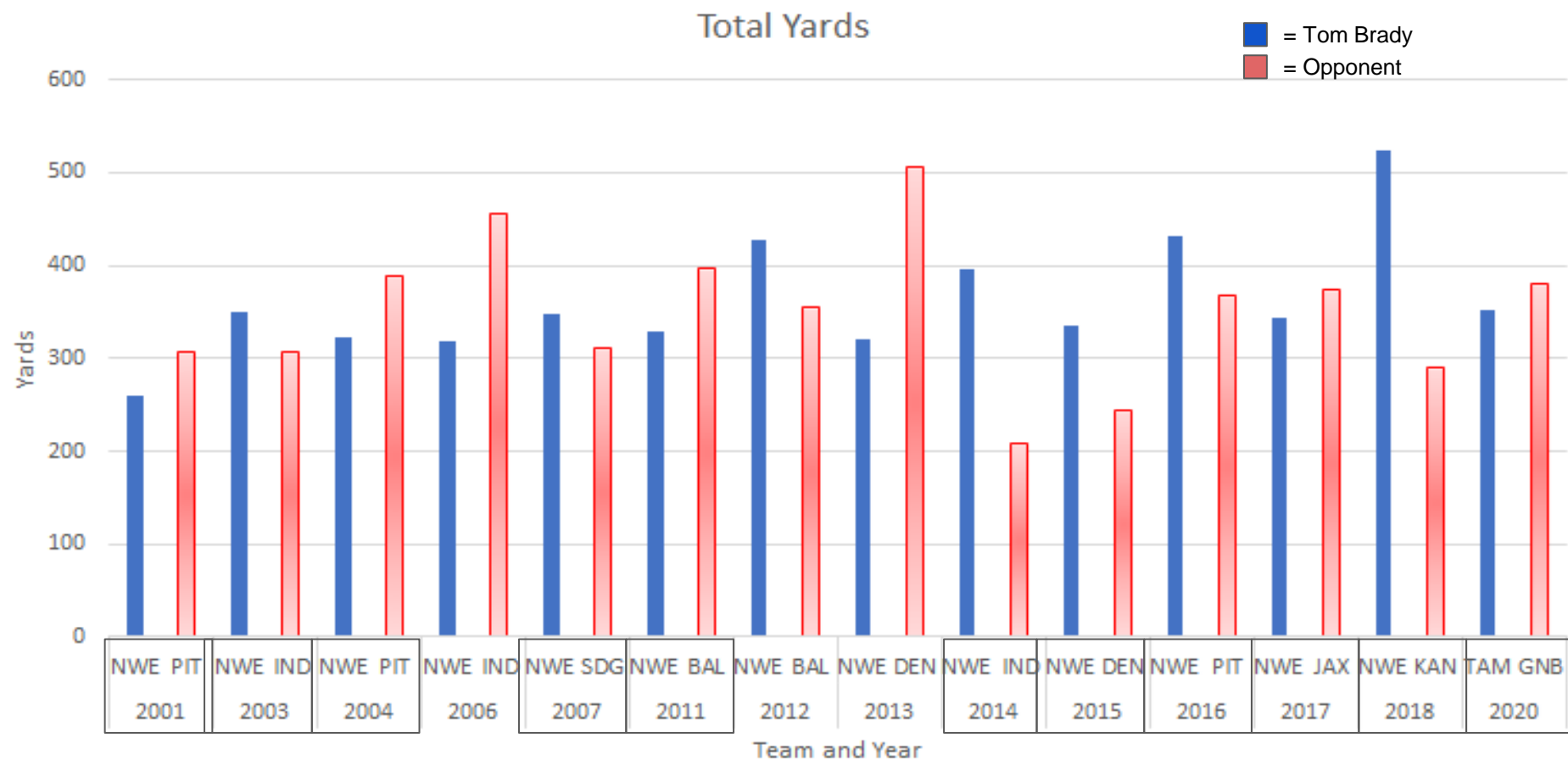
■ = Tom Brady  
■ = Opponent



Team and Year



Sum of Total yards



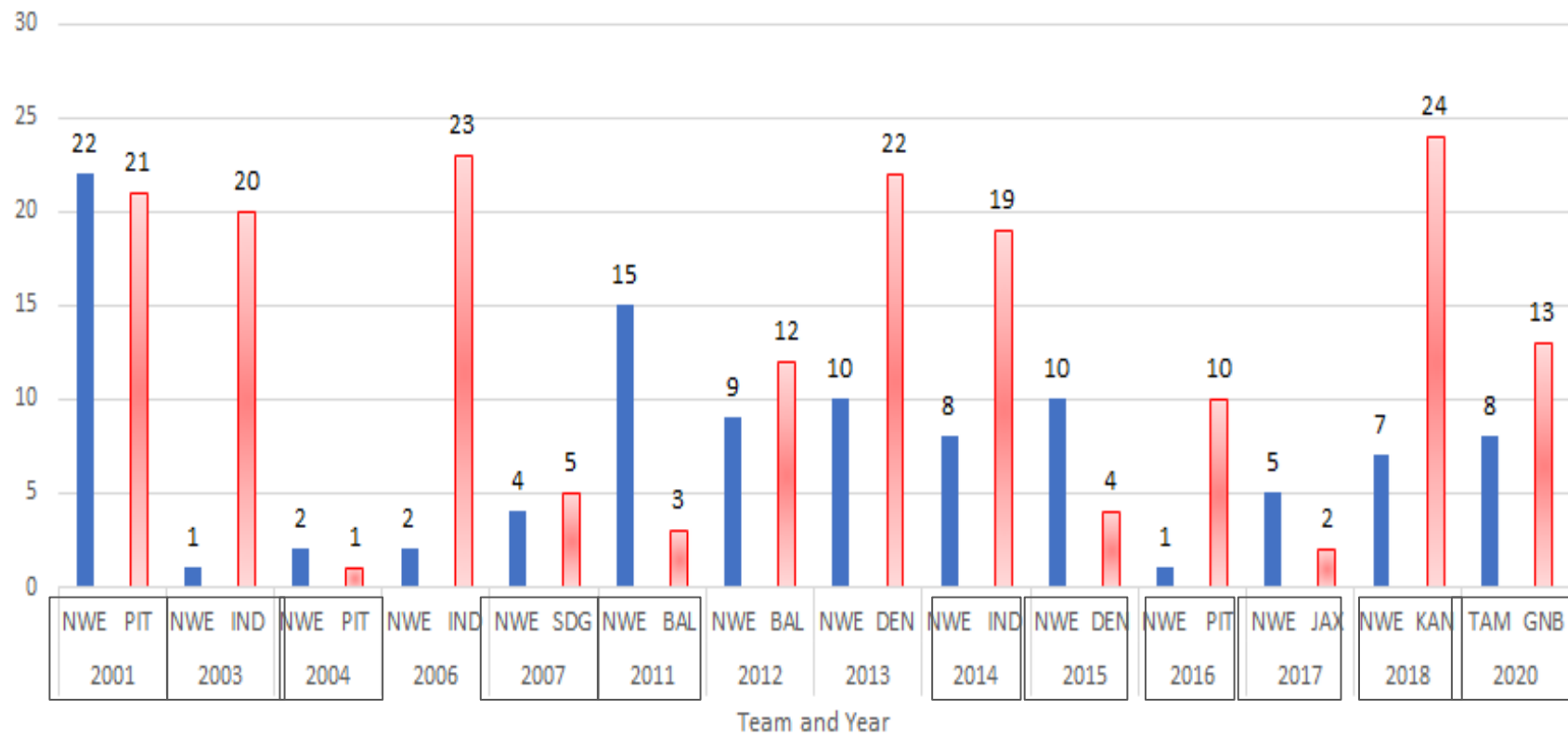
Year ▼ Team ▼

+ -



## Defensive Ratings

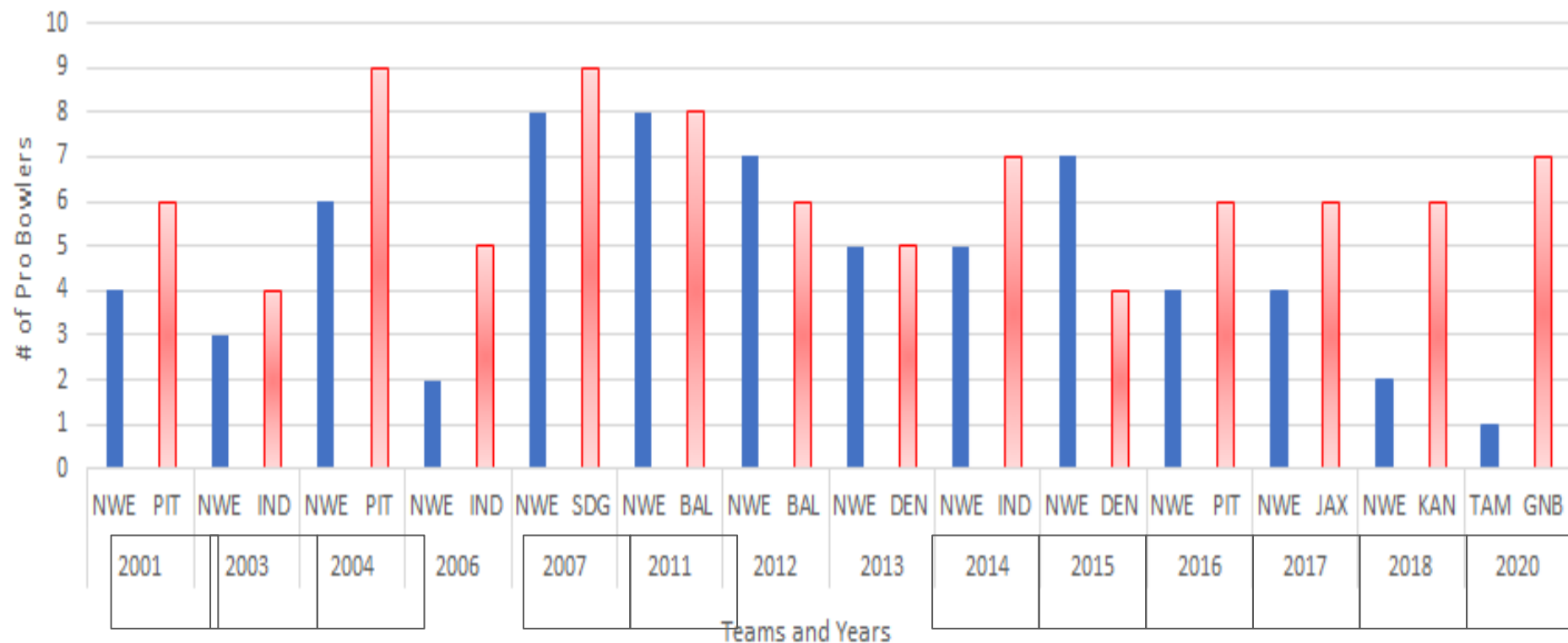
■ = Tom Brady  
■ = Opponent



Sum of # Pro Bowlers

## Pro Bowlers per Team

■ = Tom Brady  
■ = Opponent



Year ▼ Team ▼

+

-

# Conference Championship Summary

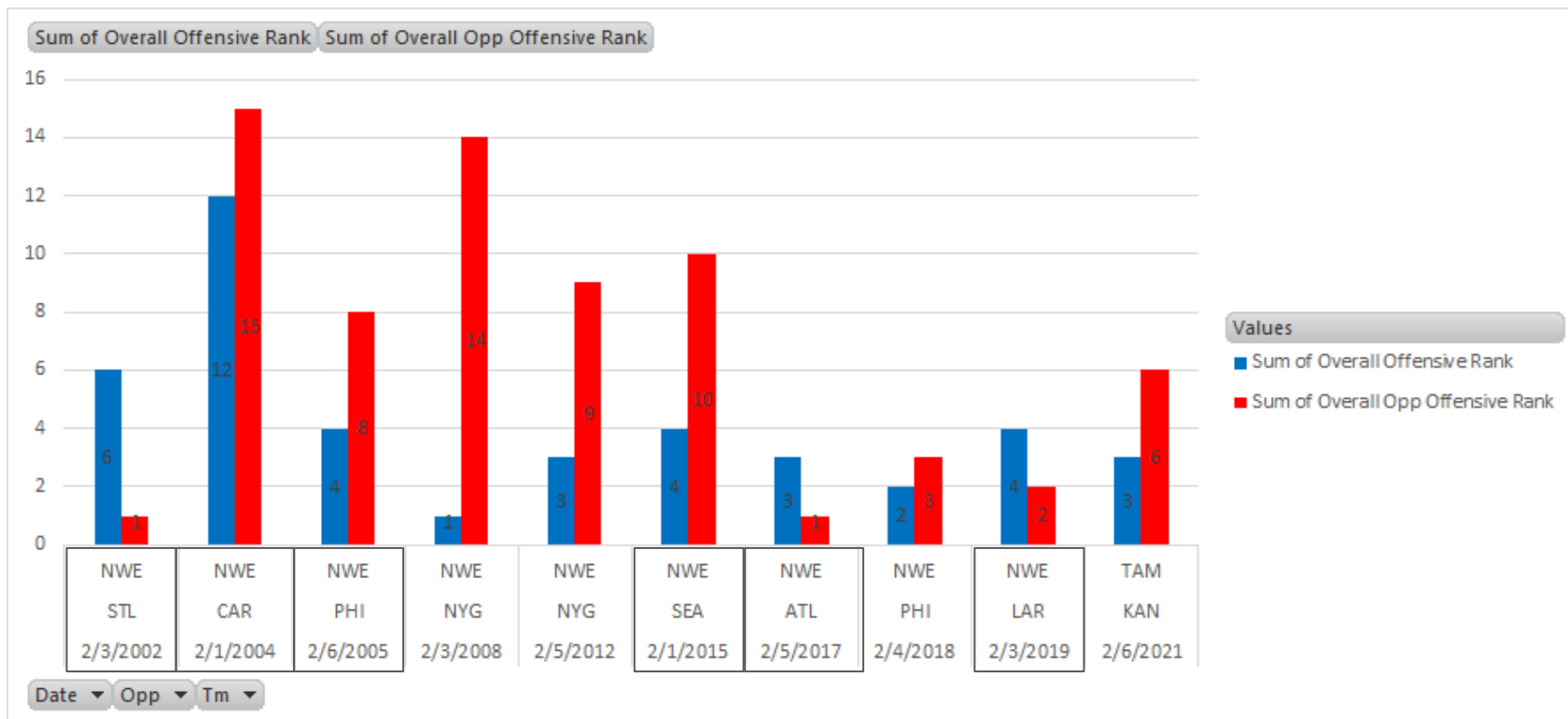
Result	Passing Yards	Passer Rating	Interceptions	Rushing Yards	Rushing TDs	Defensive Rating	Offensive Rating	Pro Bowlers
Tom Brady Wins	260.36	86.95	1.27	102.36	1.45	8.10	4.22	4.73
Tom Brady Losses	267.33	78.57	1.00	88.33	0.67	7.00	3.67	4.67
Opponent Losses	235.55	73.96	1.55	89.45	0.73	12.10	6.33	6.55
Opponent Wins	321.67	101.23	0.33	117.67	1.00	19.00	4.33	5.33

Super Bowl

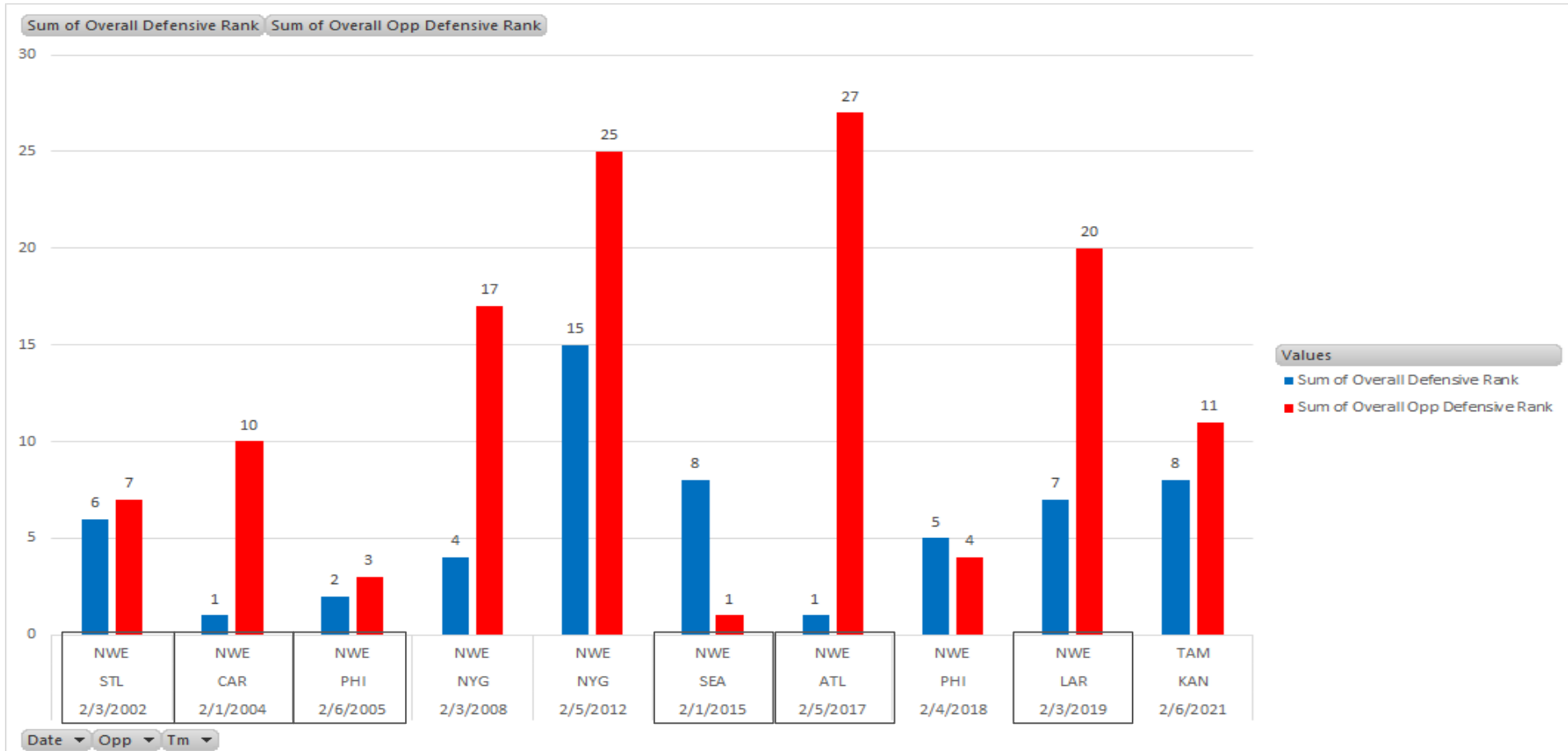




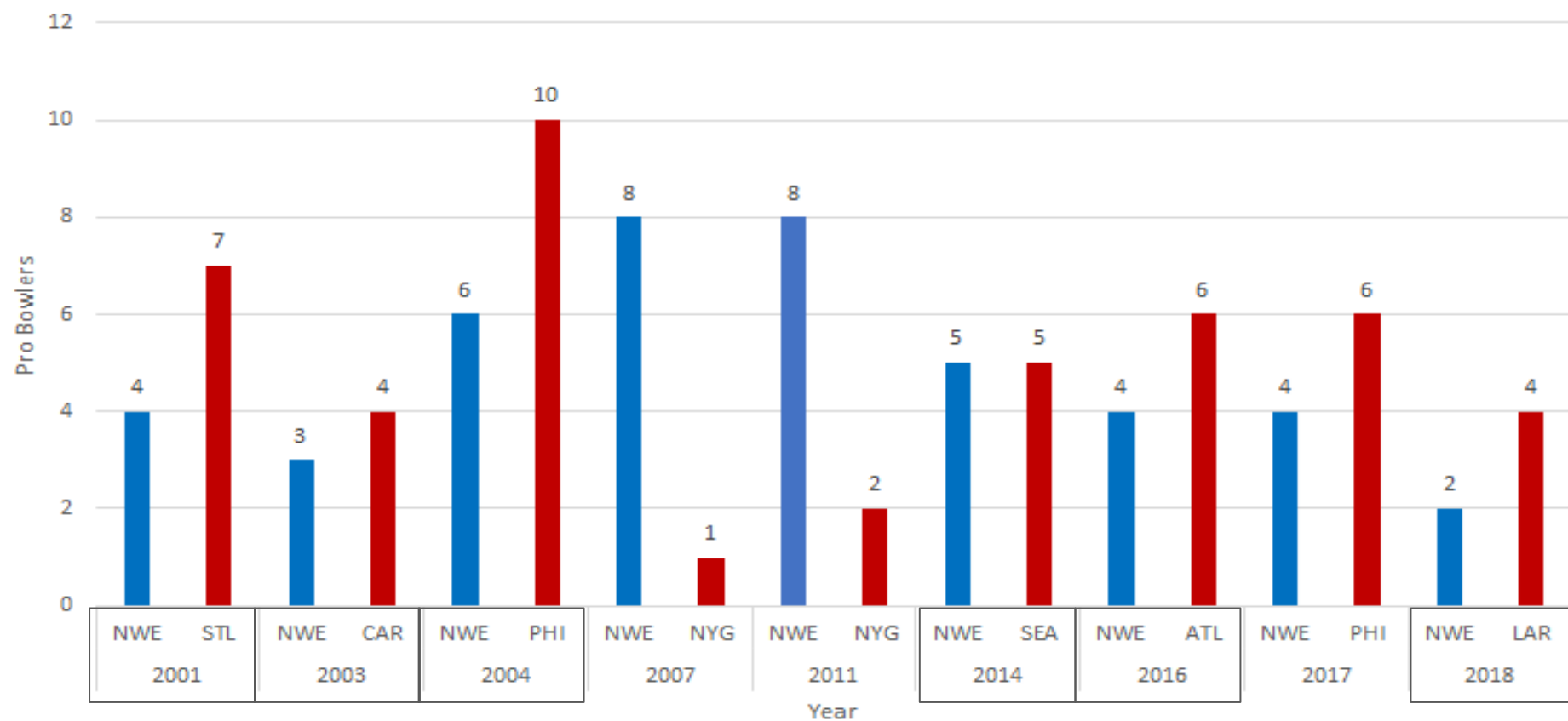
# Super Bowl Offensive Rating vs Opponent



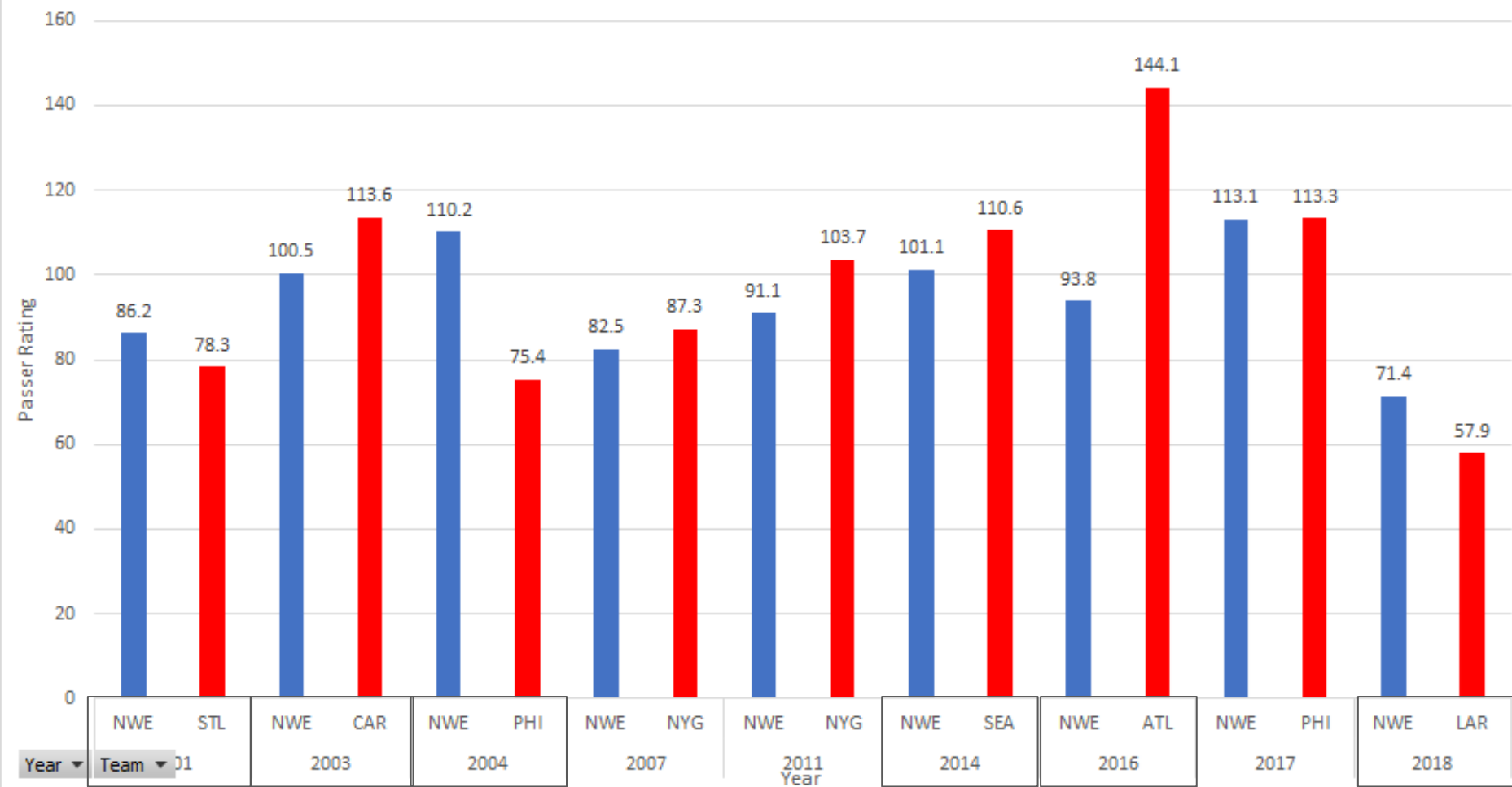
# Super Bowl Defensive Rating vs Opponent



## Pro Bowlers on Tom Brady's Team vs Opposition



## Tom Brady Super Bowl Passer Rating vs Opposition





# Super Bowl Summary

Result	Passing Yards	Passer Rating	Rushing Touchdowns	Rushing Yards	Interceptions	Turnovers	Pro Bowlers
Tom Brady win average	287.00	93.87	0.83	114.50	0.83	0.86	4.00
Tom Brady loss average	331.67	95.57	0.67	80.33	0.33	1.00	6.67
Opponent loss average	271.33	96.65	0.67	92.50	1.17	1.57	6.00
Opponent win average	301.00	101.43	0.67	123.00	0.67	0.67	3.00
Kansas City 2020 average	316.00	108.20	0.81	112.40	0.38	0.63	7.00

## Bonus: Super Bowl Projection

- Vegas odds have only predicted the Super Bowl winner correctly in 3 out of the last 10 Super Bowls.
- Vegas odds currently predict the Kansas City Chiefs to win by 3 points

Our Super Bowl Prediction is for the Kansas City Chiefs to win.



## Data from Pro Football Reference

- CSV and Excel files
- Championship and Super Bowl
- Ratings, yards, touchdowns

```
Out[3]: 'Championship_QB_data.csv'
```

```
In [7]: 1 champ_df=pd.read_csv(championship_csv)
2 qb_df=pd.read_csv(qb_csv)
3 # champ_df
4 # qb_df
```

```
In [8]: 1 championship_stats_df=pd.merge(champ_df,qb_df, on="Result",how="outer")
```

```
In [9]: 1 championship_stats_df.columns
```

```
Out[9]: Index(['Tm_x', 'Year', 'Unnamed: 2_x', 'Opp_x', 'Result', 'OT_x',
'Rushing yards', 'Rusing TDs', 'Tm_y', 'Year?', 'Unnamed: 2_y', 'Opp_y',
'OT_y', 'Pass completions', 'Pass completetions',
'Pass completion percent', 'Passing yards', 'Passing TDs',
'Interceptions', 'Passer rating'],
dtype='object')
```

```
In [12]: 1 champ_df=championship_stats_df.drop(['Tm_y', 'Year?', 'Unnamed: 2_y', 'Opp_y', 'OT_y'],axis=1)
```

```
In [14]: 1 champ_stats=championship_stats_df.rename(columns=
2         {'Tm_x':'Teamn',
3         'Unnamed: 2_x':'@',
4         'Opp_x':'Opponent',
5         'OT_x':'Overtime'
6         })
```

```
In [15]: 1 champ_df=champ_stats.drop(['Overtime', 'Tm_y', 'Year?', 'Unnamed: 2_y', 'Opp_y', 'OT_y'],axis=1)
```

```
In [16]: 1 champ_df=champ_df.fillna(0)
```

```
In [41]: 1 champ_df["Offensive Rating"]=[0,"1","3","1","4","5","2","3","11","19","3","6","4","1","3","1","10","3","12","1","5","2","7"
2 champ_df["Defensive Rating"]=[0,"13","8","24","7","2","5","1","10","4","10","19","8","22","10","9","12","15","3","4","5","2"
<
>
```

```
In [42]: 1 champ_df
2 champ_df.to_csv('champ.csv')
- -
```



Parth Patel, Cole Bergstrom, and Michael Young

Data collected from:

Pro Football Reference - <https://www.pro-football-reference.com/>

**6X**  
**CHAMPIONS**

