

Risky Business

The NFC Championship – The Big Questions

With just over two minutes remaining in the game, Matt LaFleur made what is sure to be the most scrutinized decision of the NFL season. Facing a 4th and goal from the 8-yard line and trailing by 8 points he made a most puzzling choice to kick a field goal. It shouldn't come as a surprise to anyone who has been following our analysis of fourth down decisions over the years, that this was likely a blunder. In absolute terms it was only about a 3% GWC error (reducing their winning prospects from 10.8% to 7.8%) but that is due to the fact the Packers were already a significant underdog in this situation. What is more telling is that in a relative sense they squandered about 28% of their available equity. When Matt LaFleur defended his decision in the post-game press conference he referred to the trust he had in his defense. That line of reasoning has to be put in proper context. Here are some of the main considerations at the root of this fourth down:

- How often can the Packers score a touchdown and what is the required success rate?
- How often can the Packers succeed on a 2 PAT?
- How often will the field goal succeed?
- With three timeouts, how often can the Packers stop the Bucs and get the ball back?
- What is the effect of the resulting field position when they fail on fourth down?

The beauty of the EdjSports' customized simulation is the ability to accurately weight all of these outcomes and their respective frequencies. This is precisely what is captured in the model's assessment of a -3% GWC error. Full consideration of the team strengths is also embedded in the simulation using Football Outsider's DVOA metrics. To provide some additional perspective on the decision we will calculate the required success rate for the Packers with some conservative assumptions.

- Packers score touchdown (prior to 2 PAT attempt): Packers' GWC = 25.3%
- Packers fail and Bucs take over on 8-yard line: Packers' GWC = 3%
- Packers kick field goal and touchback on subsequent kickoff: Packers GWC = 7.6%

The Packers risk $(7.6 - 3) = 4.6\%$ GWC to gain $(25.3 - 7.6) = 17.7\%$ GWC and therefore need to succeed on the fourth down $4.6 / (4.6 + 17.7) = 20.6\%$ of the time. It is certainly not a stretch to imagine that Aaron Rodgers and the top-rated passing offense in the NFL (*#1 in Football Outsiders passing DVOA*) can convert the 4th and 8 more than $1/5$ of the time.

After the successful, albeit misguided, field goal, the subsequent kickoff provided another fascinating choice. With 2:05 remaining and three timeouts, the Packers needed to get the ball back. A touchback would have preserved the two-minute warning as effectively a fourth timeout. Instead, Mason Crosby kicked to the 8-yard line and induced the Buc's Jaydon Mickens to attempt a run back. According to historical NFL statistics, a returned ball will burn

more than 5 seconds more than 84% of the time and result in squandering the value of the two-minute warning. However, Mickens appeared to abort his return at the Tampa Bay 17-yard line and left the Packers with 2:02 on the game clock. As it played out this was more advantageous for the Packers than a touchback. Small differences in GWC to be sure, but every amount of equity matters at such a crucial moment.

- Bucs begin drive at 25-yard line with 2:05 remaining (after touchback): Packers GWC = 7.6%
- Bucs begin drive at 17- yard line with 2:02 remaining (actual return): Packers GWC = 8.7%
- Bucs begin drive at 27-yard line with 1:59 remaining (historical NFL average runback): Packers GWC = 6.9%

Finally, perhaps the most unusual strategy occurred after the Bucs picked up 9 yards on the subsequent first down. Facing a 2nd and 1, LaFleur cleverly took an intentional encroachment penalty that cost 5 yards of field position and gave the Bucs a 1st and 10.

- Bucs 1st and 10 on their 31-yard line: Packers GWC = 6.2%
- Bucs 2nd and 1 on their 26-yard line: Packers GWC = 4.0%

This ploy improved the Packers GWC by 2.2% because of the clock preservation! As one of my colleagues noted, it was hard to believe that LaFleur could find this gem but botch the 4th and 8 moments earlier. Of course, Arians should have declined the penalty but didn't appear to notice that he had been duped. That fact will undoubtedly be lost on him as he celebrates his appearance at Super Bowl LV on his home field.