## Risky Business Week 11

## As the famous New Orleans Jazz Musician, Louis Armstrong once said, **"There's some folks, that, if they don't know, you can't tell 'em"**

Sean Payton appears to have trouble dealing with the number 11. Last week we discussed how his decision to kick a field goal on fourth-and-goal from the 1-yard line late in the game trailing by 11 points was a very poor decision. He squandered 7.5% GWC (a drop from 12.8% GWC to 5.3% GWC) by pursuing the fallacy of the two-score game. Against the Eagles on Sunday, with his team trailing by 14 points and only 7:14 remaining in the game, what did he do? You guessed it! He chose to kick a field goal on fourth-and-7 from the Eagles' 10-yard line to reduce his deficit to 11 points and turn it in to a 'two-score game'. Because the Saints were already in such a desperate position, this conservative choice only reduced his GWC from 4.2% to 2.7% (a small absolute cost of 1.5% but more than 1/3 of his available equity).

Against the Titans last week, we speculated that recency bias may have been a big factor that clouded his judgement. The Saints had failed to get across the goal line on three consecutive attempts beginning with a first-and goal on the 4-yard line. Although he certainly should factor all available information into his decisions, the fourth down is still an independent choice that is dictated by the current game state. We performed some research on goal line attempts from the 1-yard line over the past twenty years to see if there was any correlation between prior failures and success rates. In instances where the team was motivated to score a touchdown the overall success rate was 54.5% (+/- 0.57%). When adjusted for only attempts that followed a prior failure and didn't change the field position, the success rate was 54.9% (+/- 1.1%). These figures indicate there is no compelling reason to adjust behavior in such a situation based on the result of the prior play.

It is difficult to tell exactly what was going through Payton's mind against the Eagles. As we discussed last week, the two-score fallacy also has components of overconfidence bias and postponement of regret. Although the GWC is slim under any strategic path, it is still painful to see a coach squander so much of their available equity on such a misguided approach. Imagine a team trailing by 5 points with one play remaining in the game on the opponent's 40-yard line. If the coach took a knee rather than attempting a "Hail Mary" his job might be in jeopardy. Yet this is a perfectly fair analogy to what Sean Payton did on this fourth-and 7.

Through week 11, Payton has accumulated approximately 40% GWC, or 4/10 of a game in cumulative fourth down errors. While this places him 17<sup>th</sup> among his coaching peers on fourth down play-calling, we expect to see him drop further without some adjustment in his reasoning.

## 2000-current

Overall success rate: 0.5446 ±0.0057 OVer n=7613 Success rate after prior failure: 0.5491 ±0.0107 OVer n=2171

Another Sean Payton fg

HOLY CRAP. The Saints kicked a field goal down 14 with only 7:14 left. And they ran a screen the play before on 3rd and 9 to set up a potential easier 4th down 4.2% GO vs. 2.7% kick. Over 33% relative drop.