

Risky Business – Playoffs Week 1

4th Down Decisions Shape the Opening Weekend of the NFL Playoffs

The EdjSports' Coach rankings are unique with respect to the considerable amount of weight that is placed on fourth down decisions. The reason, as we often proclaim, is that they affect outcomes more than most people realize. The opening week of the NFL playoffs was defined by several controversial fourth down choices, and revealed that when it comes to the adoption of analytics in the NFL, we still have a long way to go.

Cumulative GWC Lost on Fourth Down Decisions

		Net GWC Advantage	Winners
Colts (-5.0%)	Bills (-7.4%)	Colts +2.4%	Bills
Rams (-2.6%)	Seahawks (-8.9%)	Rams +6.3%	Rams
Bucs (-0.6%)	Wash (-1.0%)	Bucs +0.4%	Bucs
Ravens (-4.8%)	Titans (-23.8%)	Ravens +19.0%	Ravens
Bears (-1.7%)	Saints (-6.5%)	Bears +4.8%	Saints
Browns (0.0%)	Steelers (-7.3%)	Browns +7.3%	Browns

While the table identifies just how much these decisions matter, there can be an opportunistic element to how many difficult fourth downs are encountered. For instance, close games can often create more highly leveraged opportunities that warrant aggression, and lopsided affairs may do just the opposite. Also, despite the benefits of superior fourth down decision making, it will likely not over compensate for a team that is strongly disadvantaged in talent, such as the Bears against the Saints. That being said, the most notably poor performances were attributed Seattle (3pt fav), Pittsburgh (5pt fav), and Tennessee (3.5 pt dog). All teams that had high hopes in the post-season.

Here is a deeper look at a few of the most talked about fourth down decisions of this past weekend.

- Indianapolis Colts, 4th and goal at the Buffalo 4-yard line, 1:52 2nd Quarter leading 10-7.
 - The television analysts couldn't get enough of this one at halftime. The Colts took a shot at the endzone and failed. Moments later the Bills marched down the field for a touchdown. Was Frank Reich too aggressive here? We don't think so. Our analysis shows the decision to be a close one, but prefers the touchdown attempt by +0.5% GWC. Interestingly, a terrible offside penalty by Colts' defensive end Kemoko Turay seemingly went unnoticed during the halftime commentary. On a critical 4th and 3 for the Bills on the subsequent touchdown drive, this cost the Colts -7.5% GWC.

- Seattle Seahawks, 4th and 1, own 34-yard line, 1:29 2nd Quarter, trailing 20-10
 - This was one two poor choices on fourth and one by Carroll during the 2nd quarter. He previously cost his team -2.0% by kicking a field goal at 10:34. In this instance he leaves 2.6% GWC on the table by punting. Attempting to retain possession as a favorite to convert the first down, and close out the half with a score is essential here. Carroll again confirms why he was rated so poorly in the EdjSports' Coach Rankings.

- Pittsburgh Steelers, 4th and 1 on their own 46-yard line at the start of the 4th quarter trailing 35-23
 - The Steelers couldn't have gotten off to a worse start in this game. But here, with 15 minutes remaining in the game they had managed to claw their way back. Tomlin should have gone for this without hesitation. His attempt to entice the Browns to jump offside is inexcusable. Especially at this moment when the Steelers were finally showing some life. The punt drops the Steelers' GWC from 12.8% to 9.8% and squanders nearly 25% of his available equity!

- Tennessee Titans, 4th and 2 on the Ravens' 40-yard line, trailing 17-13 with 10:06 remaining in the game.
 - As noted in the table, Vrabel's performance against the Ravens was atrocious. This was the worst fourth down decision of the weekend and one of the worst of the year. It was also one of the most talked about. 'Expert' commentator Tony Dungy defended Vrabel's strategy, without any substantive criteria of course. The punt costs the Titans -13.7% GWC. To illustrate just how clear this blunder is, consider the following example which allows for the most favorable assumptions to back Vrabel's choice.

Hypothetical Result	Titans' GWC
Failed first down attempt at line of scrimmage, Ravens take over 1 st and 10 at their own 40-yard line	17%
Titans execute a perfect punt and pin the Ravens on the 1-yard line	25%
Titans only gain the minimum required to yards resulting in 1 st and 10 at the Ravens' 38-yard line	42%

These assumptions attempt to create the strongest, although very unrealistic, argument in support of Vrabel's decision. The hypothetical analysis drives home the point of how misguided and costly this was. Under these circumstances, the Titans would be risking $(25\% - 17\%) = 8\%$ GWC, and standing to gain $(42\% - 25\%) = 17\%$ GWC. This creates a required conversion rate of $8/(8+17) = 32\%$. Even if

the Titans **knew** they would execute a perfect punt and they would not get any excess yardage on the first down, they would still only need to convert this less than 1/3 of the time. An average NFL team might be expected to convert 56% of the time in this situation. Oh, and the Titans happen to have a guy named Derrick Henry who was inexplicably left without the ball on this play, and the two preceding downs.