Risky Business – Super Bowl LV

## No Quarter

Well, we didn't see this one coming. The Buccaneers and Tom Brady had a surprisingly easy go of it against the Chiefs in Tampa on Sunday. The Chiefs' GWC dipped below 5% early in the 2<sup>nd</sup> half and it only got worse from there. This was a greatly anticipated match up with what was expected to be a complex plot. As Aaron Schatz from Football Outsiders expertly dissected in his Super Bowl preview (link here), there were many key questions heading into Sunday. Looking at full seasonal DVOA performances, the Bucs stacked up well against the Chiefs and were actually a clear favorite in our simulation under that comprehensive assumption. But the major question was around how to weight more recent performances. The Chiefs appeared to be hitting their stride in the playoffs and looked like a team ready to take down consecutive championships. With heavier weighting to recent performances, the EdjSports model showed the Chiefs as a slight favorite at 53%. There were also concerns about the absence of left tackle Eric Fisher and the mobility of Patrick Mahomes. The relative merits of in-game decision making between Bruce Arians and Andy Reid had to be considered as well. Reid finished 6<sup>th</sup> in our EdjSports CCI rankings while Arians was ranked 30<sup>th</sup>. As we saw in last years' Super Bowl, 4<sup>th</sup> down decisions can have an enormous impact on an outcome if the difficult decisions present themselves. While all of these factors were potentially relevant, it turned out to be a bungled 2<sup>nd</sup> quarter by the Chiefs that will define this Super Bowl. They simply weren't present, at least mentally, for a crucial 15 minute stretch. The combination of penalty errors by the Chiefs and a merciless assault by the Bucs left little in doubt as the field was transformed for the Weednd show.

When examining penalties, it is important to consider context. Some penalties such as unnecessary roughness after the play is blown dead are essentially pure cost. Lining up offsides also offers little upside. Holding and pass-interference can be much more complicated as we may not know how the play would have unfolded without the penalty. Here is a breakdown of the Chiefs' costly penalties and poor execution during the 2<sup>nd</sup> Quarter. In each instance we will account for the GWC difference in the actual game state before and after the penalty.

Game State	Play Situation	Penalty	Cost to Chiefs
14:46 2 <sup>nd</sup> Quarter,	Bucs 2 <sup>nd</sup> and 10 from	Unnecessary	-5.0% GWC
Bucs trail 3-0	their own 30-yard line	Roughness, 15 yards	
	3-yard pass	and first down.	
	completion		
9:18 2 <sup>nd</sup> Quarter,	Chiefs punt on 4 <sup>th</sup> and	Offensive holding. 8-	-7.4% GWC
Chiefs trail 7-3	8 from their own 17-	yard penalty and	
	yard line	subsequent 29-yard	
		punt	
7:55 2 <sup>nd</sup> Quarter,	Bucs 3 <sup>rd</sup> and 4 at	Defensive holding. 5	-13.6% GWC
Bucs lead 7-3	Chiefs 32-yard line.	yards and automatic	
	Short pass intercepted	first down.	
	at 30-yard line.		
6:15 2 <sup>nd</sup> Quarter,	Bucs 4 <sup>th</sup> and 5 at the	Defensive offside. 5-	-5.6% GWC
Bucs lead 7-3	Chiefs' 22-yard line.	yard penalty and first	
	Successful field goal	down	
0:24 2 <sup>nd</sup> Quarter,	Bucs 1 <sup>st</sup> and 10 on	Defensive pass	-5.8% GWC
Bucs lead 14-6	their own 42-yard line.	interference. 34-yard	
	Pass incomplete	penalty and first down	
0:13 2 <sup>nd</sup> Quarter,	Bucs 1 <sup>st</sup> and 10 on	Defensive pass	-2.7% GWC
Bucs lead 14-6	Chiefs' 9-yard line.	interference resulting	
	Pass incomplete	in 1 <sup>st</sup> and goal at 1-yard	
		line.	

While the aggregate penalty cost to the Chiefs is a staggering -40.1% GWC, it may not be a fair assessment of the true cost. As mentioned earlier it is difficult to tell how much some of the penalties altered the outcome of the play. At least 12.4% of the cost had virtually no upside, and perhaps we can discount the other 27.7% for unknowns. We can debate the true cost and the proficiency of the officiating crew, but it still appears the Chiefs squandered at least ¼ of a game in equity with mental errors in their most damaging quarter of the season.