



Impact of Going First on Winning an NHL Shootout

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In this analysis we looked at the impact of a team going first on the NHL shootout. The NHL shootout was added to regular season play for the 2005-6 NHL Season. When a game remains tied after a 5-minute overtime, the two teams engage in a shootout. Over the last six regular seasons, teams have engaged in shootouts after 1138 games. There have been 7977 shots taken during those games. Previously we have studied at the impact of individual shooters and goalies on the shootout over the first four years of the shootout and found no significant impact of either goalies or shooters.

For this analysis, our focus is the effects of the home team and of going first on winning the shootout. Downloading the results of each shot from NHL.com, we then augmented those data with the team that won and the team that went first¹. We have created the following summaries from these data in the table below.

	Home Wins	Away Wins	Totals
Home Team Shoots 1 st	363	399	762 (33.0%)
Away Team Shoots 1 st	176	200	376 (67.0%)
Totals	539 (47.4%)	599 (52.6%)	1138 (100%)

Further as we were entering these data, we noticed a difference in the winning percentage for teams that went first in longer shootouts. That pattern can be seen in the table below.

Winner	Shootout Length (in Shots)				Totals
	4 shots	5 shots	6 shots	8 or more shots	
Team Shooting 1 st	62	92	213	196	563 (49.5%)
Team Shooting 2 nd	70	206	131	168	575 (50.5%)
Totals	132	298	344	364	1138

From these tables we note several things:

1. Away teams (599/1138 = 52.6%) are slightly more likely to win shootouts than home teams (563/1138 = 47.4%). This difference is significant ($p < 0.05$).
2. Away teams go first 67.0% (762/1138) of the time.
3. Going second results in winning about 50.5% (or 575 /1138) of the time. This difference is more but not *significantly* ($p > 0.3$) more than 50%.
4. Shootouts that lasted more than 6 shots were more likely (53.8% of the time) to be won by the team that went first while shootouts that were 6 or fewer shots were less likely to be won by the team shooting first (47.4%). These differences were not significant ($p = 0.05$). Only 32% of shootouts lasted more than 6 shots.

¹ For future reference there were three discrepancies between NHL.com shootout summaries and the recorded play by play files. In one game a shot was missing; in two others an extra shot was recorded. We used the information in the play by play files as the 'ground truth' for this analysis.