

Improving fairness in match play golf through enhanced handicap allocation

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In amateur golf, lower handicap players “give strokes” to higher handicap players based on their handicap differential in order to make head-to-head matches fairer. In match play, the standard way to allocate handicap strokes uses the “course-defined hole ranking”. Preliminary data analysis reveals that course-defined hole rankings are not-consistent with either difficulty or holes at which low- and high-handicapper performance differs the most. Using a bootstrapped simulation of over 70,000 matches based on 392 rounds of golf, we show that the standard stroke allocation method and course-defined hole ranking favor the better player in 53% of matches. Then, we investigate the impact of three potential changes to stroke allocation: modifying the hole ranking; giving both players their full handicaps instead of using their handicap differential and awarding extra strokes to the weaker player. We show that fair matches can be achieved by giving the weaker player 0.5 extra strokes, equivalent to a tie-breaker on a single hole, and that giving both players their full handicap makes outcomes robust to hole rankings. Together, these simple changes can improve fairness in match play golf.