Introduction

Peek Baccarat is a wild variation of the well-liked Baccarat game. With this novel idea, players have the thrilling chance to "peek" at one to four cards in the middle of the game and then raise their initial wager if the cards revealed help their hand. This is the first time that Baccarat has ever offered players the chance to make unique wager changes while the round is still in progress.

The game stands apart with a magnificent gold and green setting and a novel expanding betting grid that allows players to change their bets in the middle of the game, even though the rules are the same as in regular Baccarat.

Peek Baccarat charges a 20% fee for the opportunity to view one to four cards prior to putting a wager on either the Player or the Banker.

The "peek" component of the game, in which the dealer deals the Player and Banker two cards face down after the betting period has ended, is what makes it so beautiful. The thrill now begins when the dealer shows the player one, two, three, or four cards so they can sneak a glimpse.

The player has the option to use the innovative expanding betting grid to Double or Triple their stake if the revealed cards are advantageous for their hand. After the regular betting period has ended, this is a fantastic opportunity to reverse a decision.

Objective of the study

The study aims at determining what house-edge the player gets to see 1 card, 2 cards, 3 cards in that subsequent order and determine their effect on the expected winnings on the game.

The study is also interested in determining the effect of the removal of each card on house-edge and the expected winnings.

Results.

The simulation was carried out to assess the best winning combinations, the cards/states that had a negative coefficients we considered not fit, so the model picked the positive coefficients as the best combinations to guarantee a winning advantage.

The study simulated a total of 18 models to assess the effect of adding each given card as well as the effect of removal of any specific card from the model

	Model1	Model10	Model2	Model3	Model4	Model5	Model6	Model7	Model8	Model9
STATEA	3394.246	-330724.3	4512.621	4734.679	-10868.19	-14947.01	-13679.67	-33170.43	-32166.3	-41947.68
STATE2		-3696670	-500463.2	-493884.6	-924835.1	-377648	-223835.4	-365370.3	-332643.2	-447504.8
STATE3		7350897		-26877.6	176728.4	572014.2	597649.4	1159880	1101800	1335320
STATE4		2831348			730607.8	727370.1	719747.2	768175.4	764997.5	987215.2
STATE5		-1.48e+07				-636768.1	-755800.3	-1509544	-1500026	-1824059
STATE6		-5400060					-213451.6	-383227.3	-406612.1	-559596
STATE7		1.19e+07						738534.5	723765.3	1033526
STATE8		5452970							147292.6	411628.1
STATE9		-4560818								-370519.3
STATE10		-6859263								
Intercept	742995.5	4634148	922674.2	929597.4	699088.6	615237.3	698406.9	595246.6	529701.9	530876.2

For the first model, Model1, the study was interested in establishing the effect of card one on the horse show, it has been established that has a positive effect on the peek baccarat game as the game starts, it follows that this card has an expected winning of 77,689.746 units. With this guarantee in place, a player can therefore decide whether to play or not.

The second simulation produced a model 2 which assessed the effect of adding a card 2 in model 1, the study established that the second card had an inverse influence on the horse shoe, it follows that on addition the card two has a negative influence on the expected winnings, a gambler is therefore advised to explore other options. The 3rd card according to model3 has a negative effect on the house edge, the study doesn't advise the move. The 5th model has it that a combination of 3rd and 4th cards has a positive influence on the house edge.

The 5th model assessed the of adding card 5, in this model, the model simulated a negative coefficients for states A, 2 and 5, it follows that the three cards have a negative influence on the house edge. Similarly, for the 6th model, an introduction of card A, 1, 2, and 6 have a negative influence on the house edge, this is as a result of the negative simulated coefficients, in this model, playing cards 3 and 4 in that succession is likely to triple one's bet.

In the seventh model, the study suggests playing cards 3, 4 And 7 in that succession to maximize the expected winning, a combination of these three cards in this model has guaranteed winning edge after the game.

In the 8th simulation, in this model, the study suggested a combination of card 3, 4, 7 and 8 as the ones bearing the winning advantage.

Model9 also gave the 4 possible card combinations, the model has it that card 3, 4, 7 and 8 are tipped to maximize one's winning advantage, this model was arrived at as a result of adding a 9th card on the 8th model.

The 10th model was arrived at by adding the 10th card to the model, it gave a winning combination of cards 3, 4, 7 and 8 just like the 9th model, according to model 10, playing the 4 combinations in any given way is likely to guarantee a winning advantage and staying ahead of the game.

The study also assessed the effect of withdrawing a card on the winning advantage and the effect it has on the house edge, the simulation resulted into 8 more models as shown below;

	Model11	Mosel12	Model13	Model14	Model15	Model16	Model17	Model18
STATEA	-10612.12	20049.21	95326.45	-9782.994	-14319.18	-24510.94	-19242.47	-41947.68
STATE3	690543.5		-1528397	657250.9	747477.6	990919.8	856997.3	1335320
STATE4	761644.8	582135.2		773264.2	806075.8	857155.4	813527	987215.2
STATE5	-497133.2	947345.6	4251218	-365397.7	-593910.1	-1029078	-821378.7	-1824059
STATE6	-74517.96	452154.2	1703374		-107816.9	-244713.8	-180982.5	-559596
STATE7	-126711.9	-1272614	-4043529	-177128.1		371462.6	191510.5	1033526
STATE8	-90632.42	-605626	-1971301	-164190.1	-50853.62		-1556.608	411628.1
STATE9	84031.31	515525.6	1666140	105579.2	26251.38	-84859.46		-370519.3
STATE10	699326.6	1396733	3132273	739129.9	613731	403835.5	497584.9	
STATE2		232678.4	1123687	-103071.1	-140480.8	-263471.7	-191174.2	-447504.8
Intercept	101057	-303583.2	-1320377	90808.02	168082.2	327902	233005.6	530876.2

The 11th model assessed the effect of removing card 2 towards player's advantage, this model gave a winning combination of cards 3, 4, 9 and 10, and the model predicts that this is the best winning combination which is likely to result in high returns.

The 12th model was simulated by removing card three at the third state of the game, after removing this card, the winning combination was cards A, 2, 3, 4, 5, 6, 9 and 10, this model provides lots of flexibility as it has as many winning combinations as possible.

The study simulated the 13th model that presented a winning combinations of several states containing cards A, 2, 5, 6, 9 AND 10. This model was simulated by ejecting card 4 and including the rest in the model. The subsequent model, model 14, was arrived at by simulating all the cards except for card 6, this model established a winning combination of cards 3, 4, 9 and 10, this model advices the player of playing this combination to stay ahead of the game.

The next model was model 15 which excluded card 7, the best winning combination for this model is cards3, 4, 9 and 10, the same combination as model 14. The next was model 16 which excluded card 8, the best winning combination according to this model was established to be card 3, 4, 7 and 10. The next simulated model was model 17, this model excluded card 9, its winning combination was cards 2, 3, 7 and 10, playing these cards in any given order guarantees a high expected returns.

Last model that was simulated was model 18 which was arrived at after excluding the card 10, this model provided a combination of card 3, 4 , 7 and 8, playing these combinations in any given order guarantees high expected returns.