ANSWERING YOUR TABLE GAME QUESTIONS

By Bill Zender

This month's article is composed of a number of email questions received over the past several months. As a gaming consultant, I avail myself to casino executives and personnel who have questions regarding game protection and table game management. I have a reason for answering questions of this nature. When I was in my early development period in gaming, I was very fortunate to have access to individuals who did not mind answering my questions and passing along their gaming knowledge. It made life easier as well as quite rewarding. Subsequently, I receive email questions every day from people who are in a similar situation as I was a number of years ago.

Are Match Play Coupons and Promo Chips Hurting My Hold Percentage?

This first email question involves a common question regarding a temporary dip in the casino hold percentage. In this case, the Q&A takes a quick turn toward the most likely culprit, match play coupons and free play chips.

Email question:

I need some advice if you can spare a few minutes. My bosses are sweating the fact that our hold percentage in blackjack is down about 3 percentage points below what we usually hold for the first quarter of this year. We usually hold 18.5 percent, but we are only holding 15.6 for this quarter. Can you give me any suggestions as to what to look for in a situation like this or are they pushing the panic button too soon? I am presently looking into the possibility that they are giving too many match plays and free plays. Any advice you can give me will be appreciated.

Answer:

Match play and free play chips will pull the hold down, but only if their use is in great quantities. The key to raising the hold percentage is simple: get more table decisions, and keep the players in their seats. Instruct the dealers to deal at a good pace, move the cut card further back in the shoe (cutting off half deck on a six-deck game or any game is optimal), use a quick shuffle, and keep the floor from filling the games more than once per shift.

Additional question:

Our match play and free play has jumped 500 percent per quarter. I have tried to tell them (management) in the past that this is hurting us because our players only stay and play if they win the bet. They get up and leave if they lose it. When some of them win $30, $50 or $100 we cannot overcome it with the other $5 losers.

Answer:

Let management know it takes about 38 hands at the same average bet to win back the cost of a match play coupon. That means that the program is only profitable if everyone plays back 39+ hands after playing the coupon. Not! I don't know of any match play promotion in North America (or anywhere else in the world) that makes money on match play. It's a guaranteed loser.

Free play should only be used as a reward tool for previous play. It falls under the same malady as match play if you use free play (play one time) as a game starter or enticer. Management would be better off killing match play/free play, and spending the money on advertising. Note: management won't do away with it. No one does. They will keep giving match play away, and the effect is felt only on the table games.

By the way, giving away $35,000 a quarter in MP/SP has a direct cost to table games on .485 X $35,000 = $16,975 in decreased win, plus it probably increases unnecessary drop (i.e., false drop) by $140,000. I would bet that the MP/SP decreases [your] hold by about 1.5 percent.

Establishing Player Tracking System Metrics

I receive a lot of questions regarding the correct game metrics for input into player tracking systems. This is a real tricky subject to answer since there are a number of variables that come into play. This email is typical of many. The individual wants me to provide them with answers; however the best solution is to ask them more questions, and provide them with a website where they can go and answer their own question. If I give them the answers, how does that help them to resolve this situation in the future?

Email question:

We currently have a Bet Recognition System using RFID cheques. We will be upgrading our player tracking program making our bet recognition system obsolete. We will be using a manual rating system and there is a setting that I'm not quite familiar with, this would be the Skill-Par PercentHard, Skill-Par Percent Average, and Skill-Par Percent Soft. What would be a safe or industry standard setting to use? The games are as follows: blackjack, fortune pai gow, Three Card Poker, Spanish 21, Casino War, World Poker Tour 3X raise and Crazy 4 Poker. Thanks for your help with this.

Answer:

I'm going to give you a website that will help: www.wizardofodds.com. You can look up the different games and see what the mathematical advantage actually is for each game. These advantages would be considered "hard" skill level. Your average skill level is what you feel the average person gives back based on their side bet wagering and inability to play the best strategy. Soft skill level is someone who bets all the side bets and isn't very good at playing the game's strategy.

Before you decide to set these different levels, be sure you develop a system that the floor supervisors understand. You'll find that most of the games mentioned will only need an average skill level; establishing a hard and soft level will be worthless since no floor supervisor will use them. I would use one level (i.e. average) for all games but blackjack and Spanish 21. With the non-blackjack games, you should use the mathematical advantage shown for each game on the Wizard's website for "average." For blackjack and Spanish 21, I would set a hard skill level (which would be the game's mathematical house advantage), and an average at about .8 percent to 1.0 percent higher than the hard level. In almost every situation, soft skill level is a waste of time. Use this information as your basis, and it will keep you in the ballpark without hurting you or the players.

If you have any questions after that, let me know. You need to do the research on this yourself so you know how to do it going forward. By the way, be sure that your rounds per hour settings are correct. Have the surveillance department record rounds per hour on all games, and use that number. Use fast, average, and slow. For instance, blackjack games are faster with one player than with six. Fast games have one to two players, average games three to four, and slow games five to six.

You Can't Use Standard Deviation Variance as a Game Protection Tool

For years, I have been requested to put together a statistical model to determine whether or not a table game customer is gaining a legal or illegal advantage over the casino. With any degree of accuracy, this is not possible. The reason is that it will take too many hand decisions before a statistical model of this nature can predict, with any statistical accuracy, that there is something strange afoot. By that time the money is out of the casino and sitting in an offshore account. The only true method for detecting table game problems in a timely period is through game protection knowledge and observations. The following is my explanation of this situation to a gaming executive.

Email question:

In respect of baccarat, procedurally we are now protected as best we can be and apply all protection methods as recommended by your good self and other leaders in the field. One area however I am keen to explore further is ensuring that our baccarat games remain within the accepted standard deviation parameters. Do you know of any commercially available software programmes that are specifically available for baccarat? I have been told that another casino has a program but that it was developed in house. The level of Far East play that we now have in our casinos is beyond comprehension, and it is important that I can say to the directors that everything in respect of the game that can be possibly be checked, has been.

Answer:

Standard deviation (sd) models are very simple and easy to put together and use. The problem sd modeling presents is that it is a very poor game protection device. For instance, all things are possible; the model only points out incidents that are highly improbable. In baccarat, you can have a person beating the casino for up to 40,000 hand decisions, and still be within two sd (negative) of the norm, or theoretical win. I would suspect if you ran your before-mentioned baccarat customer's play through a sd model, it would indicate that he was still within a probable standard.

Generally, I use the sd model for calculating range of financial risk based on a table maximum limit, or a player's individual limit. The model helps predict the maximum loss at two negative sd deviations. There is an easy rule of thumb that can be applied to baccarat as long as the observed player does not wager a high portion of his money on side bets with a high multiple pay off (increases volatility). The rule of thumb is the player's average bet per decision times 100. If the player were wagering $10,000, his maximum exposure would be $10,000 X 100 = $1,000,000. This is a very close estimate for between 8,000 and 12,000 hand decisions.

The problem; when you get down to the need at hand, determining whether the player is gaining an illegal or unanticipated mathematical edge, the only true solution is to know what to look for in the actual play. If you have any other questions please feel free to ask.

How Many Hands Should My Blackjack Games Produce in an Hour of Play?

This is another question that comes through my email on a regular basis. People are asking for numbers regarding the number of hands per hour their dealers should be dealing. Unfortunately, the answer is not something that is universal. Game speed and hands per hour change based upon the game dealing procedures, experience of the dealers, number of players on the game, type of deck shuffling method and/or sequence used, etc. Based on these variables, a person cannot accurately

gain access to correct numbers by simply asking executives from other casino. However, the following email answer will give you a reasonable idea how to determine your blackjack game's approximate hourly rate.

Email question:

I need some help from you guys. I am trying to develop some standards for blackjack game pace. If you help me out, I will share the final results. What is your average game pace on both manual and machine shuffled two-deck, four-deck, and six-deck games? [Note: This email went out to a number of executives and myself.]

Answer:

As you probably know from our past discussions, asking people from other casinos about their blackjack game pace does not reflect what your casino's blackjack game pace will be. If you are doing a comparison, just remember, they might be getting their game pace numbers from other casinos as well.

The number of players on the table has a big effect. Let me give you the numbers that Tangam Gaming obtained through its trials at Barona Resort & Casino outside of San Diego.

These numbers were based on a standard six-deck face-up game dealt from a multi-deck shuffler, and were accumulated over a six-month period. A table where seven wagering spots are used will result in a return of 54 rounds (or 378 hands) per hour while the table with the single hand played will average 220 rounds (and hands) being dealt per hour.

The Tangam Gaming numbers included deck transfer time. The transfer time of an MD shuffler is about 45 seconds to one minute (optimally it is 30 seconds). If the manual shuffle is a single pass (once through the six decks), add 45 seconds (90 seconds). If the shuffle is a two pass shuffle, add an additional 30 seconds to the 90 seconds.

Continual shuffling machines (CSM) will produce a faster game pace if the floor staff stays on the dealers. To sum it up, manually shuffled games will result in less production per hour as compared to the Tangam Gaming figures, and CSM games should be slightly more productive.

Hand-pitched games are dealt slower than shoe games. This situation results from the extra time players take to make hand decisions. Less experienced players are slow at deciding their hands while higher-limit players almost always play at a face-up pace (almost). Hand-pitched games will experience more shuffles per hour, however the shuffle process times is reduced significantly. Even with some time reduction in the shuffle, I doubt if the time saved during those 12 to 18 shuffle breaks per hour will get close to equaling the time spent with the four or five shuffles an hour experienced by the six deck game. Deck penetration will also have an effect on time and productivity. That's my two cents on this issue. Good luck with your project.

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