



## *Baccarat One Card Advantage Play*

I am writing this memo to discuss a Casino Advantage play which is occurring throughout the casino industry in the game of Baccarat and its' variants, Mini-Bacc and Midi-Bacc. For the uninitiated, a Mini-Bacc table can accommodate seven (7) customers, a Midi-Bacc table (slightly larger arc) accommodates nine (9) players while the old full size Baccarat table (three dealers) can seat fourteen. The rules of play for all three table types are essentially the same, with minor variations in dealing procedures or techniques. The mechanics of this particular advantage play will also be essentially the same for any baccarat table type.

By way of background, you might remember that in the mid 1980's I authored a computer study entitled, **The Effects of Marked Cards in Baccarat**. The intent of the study was to quantify the relative strength of each playing card value in a Baccarat hand. Simply stated, what advantage (if any) would be afforded, and to which side...Player or Banker, if in some way knowledge of the first card was gained in advance of a Baccarat hand. (In point of fact, knowledge of any one card in either hand could afford a potential advantage.) The study accepts all forms of first card or one card knowledge as essentially immaterial to the overall question. Whether first card or one card knowledge is gained by marked cards, card sequencing, flashed cards, cards dealt in error, shoe peeks or covert camera scams, the resulting mathematical relevance is the same. The study was a direct result of a Baccarat prosecution for which I was the expert witness for the Department of Justice in New Jersey where-in \$3,000,000.00 was stolen. Initially, I wrote a computer program which simulated the game of Baccarat as offered in casino play.

The program was written in Basic Language and was very straight forward in nature. This is due to the fact that the game of Baccarat and its' rules of play are very straight forward and rigid and from a mathematical viewpoint are Strategically Static...there is no decision afforded to either the Banker or Player sides at anytime in regards to cards drawn or declined. The initial questions posed are;

```
GA BASIC.EXE
DO YOU WISH TO SEE A LISTING OF CARDS PLAYED...<Y...N>N
DO YOU WANT TO DESIGNATE THE VALUE OF THE 1ST CARD..<Y..N> N
HOW MANY HANDS OF BACCARAT TO PLAY? 30000_
```

Results: 30,000 hands show Bank Adv. as expected

```
GA BASIC.EXE
PLAYER WINS = 13394
BANK WINS = 13777
TIE HANDS = 2829
TOTAL HANDS = 30000

PLAYER % = 44.65%
BANK % = 45.92%
TIES % = 9.43%
BANKER ADVANTAGE = 1.28%

ALL CARDS RANDOMLY SELECTED
DO YOU WISH TO RUN THE SAME NUMBER AGAIN..<Y..N..>_
```

Next the simulation was run designating first card values. For brevity sake, consider the most powerful card (9) and least powerful card (10)

The image shows two screenshots of a BASIC.EXE simulation window. The top window shows results for a first card selection of 9, and the bottom window shows results for a first card selection of 0. Both windows display statistics for player wins, bank wins, tie hands, and total hands, along with percentages for player, bank, and ties, and a player advantage percentage.

```
C:\> BASIC.EXE
PLAYER WINS = 16772
BANK WINS = 10355
TIE HANDS = 2873
TOTAL HANDS = 30000

PLAYER % = 55.91%
BANK % = 34.52%
TIES % = 9.58%
PLAYER ADVANTAGE = 21.39%

FIRST CARD SELECTED WAS.... 9
DO YOU WISH TO RUN THE SAME NUMBER AGAIN.<Y..N..>
```

```
C:\> BASIC.EXE
PLAYER WINS = 12482
BANK WINS = 14825
TIE HANDS = 2693
TOTAL HANDS = 30000

PLAYER % = 41.61%
BANK % = 49.42%
TIES % = 8.98%
BANKER ADVANTAGE = 7.81%

FIRST CARD SELECTED WAS.... 0
DO YOU WISH TO RUN THE SAME NUMBER AGAIN.<Y..N..>
```

It should be remembered that the above simulations assume first knowledge. Therefore, if you knew the first card was a 9, 8, or 7 you would wager on the Player Side. Conversely, if the first



card were a 10, Ace, 2, 3, or 4 you would wager on the Bank Side with knowledge that the Player would be receiving a weak card.

A quick summary of the results shows the following;

Most powerful cards are the 9 then 8 then 7

Least powerful cards are the 10, Ace, 2, 3, 4

Essentially neutral cards 5 & 6

Be aware, that if in some way a customer were to know the value of any one card in either Player or Banker hands they could wager with a positive expectation... Sometimes wagering with the knowledge that a powerful card would be dealt to the Banker (or Player), other times wagering against the Banker (or Player) simply knowing that a weak card would be dealt to that hand.

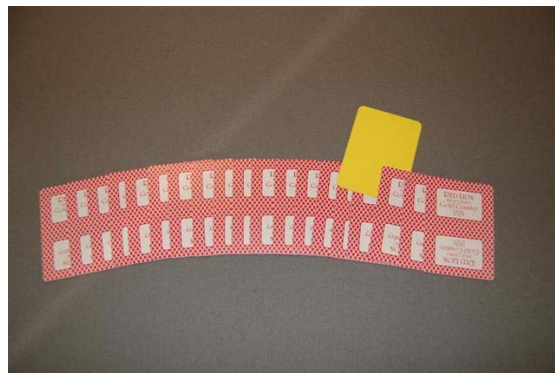
Let's Push the Envelope and assume every card in a Baccarat game was marked. You would see significant wagers on the Player Side when the first card dealt in a hand was a 9 or 8 or 7 respectively. You would notice heavy wagers on the Bank Side when the first card dealt to the Player was a 10 or Ace or 2 or 3 or 4. Therefore, by tracking wagers in direct correlation to the first card dealt, a pattern would emerge suggesting that playing card integrity had in some way been breached. Theoretically, customers could wager on every hand in a Baccarat shoe (appx. 75 to 80 hands) with a positive expectation, (some cards obviously more powerful than others). Wagers could be adjusted based upon the relative strength of the known card.

Keep in mind that customers (cheating crew) could sit out, lower their wagers or offset each other when encountering a relatively weak or neutral card in a particular hand.

Now let's close down the envelope and assume that only one card in the entire eight deck shoe is known for certain. That is the subject of this report. Although there are many methods by which one card can be ascertained, we will be looking at One Card Back Card Advantage.

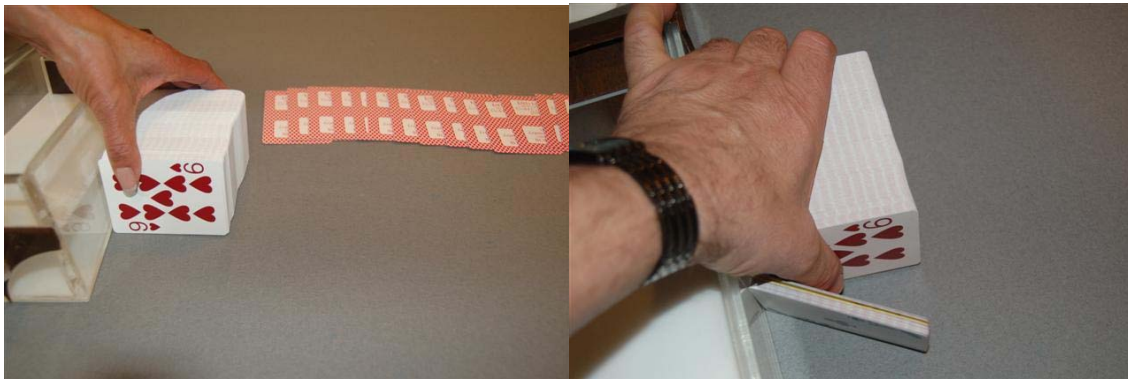
This particular advantage play is not new to the casino industry, but emerges with regularity. The advantage is gained as follows;

- The baccarat dealer prepares the Pad with "Too" an exact number of cards on the layout. (See photo)
- **QUICK DEFINITION of PAD:** After a Baccarat Shuffle-Up and after the customers' cut, the dealer places a second cut card either 14 or 16 cards from the back of the eight decks. When this second cut card is encountered it signals the customers and dealer that only one or two hands remain to be dealt in the shoe.



**Notice you can count exactly 19 cards  
(16 card Pad & 3 Additional cards)**

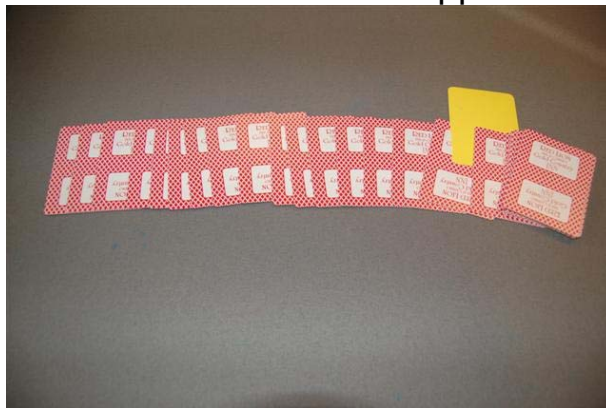
- With "Too an Exact" number of cards on the layout customers can know with certainty the exact position of one card...The card behind the dealers thumb...before the Pad is placed at the back. (In this example, 19 cards will be placed behind the 9 of hearts.)



**The 9 is exactly the 397<sup>th</sup> card in the shoe (416 cards (8 dks) minus the 19 Pad = 397) - Notice 19 Cards placed behind the 9**

- From this point on, the scheme is quite simple. The customers would count all cards played...the Burn Cards and the total number of cards dealt in each hand of play, round after round.
- When the 397<sup>th</sup> card is approached, near the end of the shoe, a simple calculation is made. Which side (Player or Banker) will receive that card.
- If by chance, the 397<sup>th</sup> card is played as a draw card in the hand before, then an Advantage cannot be used in that shoe
- NOTE: Keep in mind, that knowledge of one card is not a lock on the hand, just an advantage. The customers can and do lose the wagers.

- NOTE: Keep in mind, that surveillance may not be able to as accurately predict the back card, particularly in video review. Cards past the Pad may be on top of one another and visible to customers, but not the camera.
- As always; The Procedure Is Stronger Than The Move...so two simple remedies are offered;
  1. When creating the Pad, do not use too exact a number of cards. Rather use more approximately  $3/4^{\text{th}}$  of a deck.



**Notice now, you cannot know the exact number of cards past the Pad and cannot then predict with certainty the exact position (number) of the Back Card**

2. Do not create a traditional Pad. Rather just estimate approximately 16 cards from the back and insert the second cut card. Back card is never seen.





**GEORGE JOSEPH**

DYNAMIC.  
REVEALING.  
PROVEN.

I will be completing a much more extensive report regarding this and many other Baccarat issues. However this memo should acquaint you with this particular Baccarat scheme.

Should you have any questions, please contact me.

Respectfully Submitted,

**George D. Joseph**  
Worldwide Casino Consulting, Inc.

GJ/ccj