

Runner-Runner Voodoo

Brian Alspach

As Bib Ladder seated himself opposite me, he gave out that subtle roll of the eyes that any poker player recognizes as signalling "you'll never believe what happened to me." The only question facing me was whether to acknowledge the non-verbal cue. Given all that I've learned from the old guy and his strong intelligence, I jumped ahead in the silent conversation and said, "Bib, you've played long enough to know that these things happen all too frequently. What was it this time?"

"I flopped a set of 10s and some guy, who never should have entered the hand in the first place, flops bottom pair and stays in to catch a runner-runner flush. He now has a lot of my chips!"

Bib is smart enough to know that it is foolish to berate a player who is fundamentally weak, but catching cards and building a stack. Instead, he got up from the table, poured himself a cup of coffee and talked with me for ten minutes before returning to the game. Our conversation started me thinking about the probabilities involved in various runner-runner situations.

Dear reader, please resist the temptation to attack players who beat you when they have no business chasing all the way to the river. You want them in the game because eventually they will give all their chips, and possibly more, back to the other players. If they leave because of verbal abuse, you have removed a chip inventory from the game. On the other hand, if you just can't help yourself, you may as well at least know the odds involved in various runner-runner miracles.

Let's look at Omaha high-low first. Suppose a player holds A-2-H-H, where H denotes a card of rank 9, 10, J, Q, or K, and the flop comes with one low card he can use and two cards of rank H. What are the chances he will catch a runner-runner low? There are 45 unseen cards so that there are 990 choices of two cards for the turn and river (we don't care in which order they are dealt). There are 10 choices for two distinct qualifying low ranks, and there are four choices for a card of each rank. Thus, the probability of the player catching a runner-runner low is $16/99$. This is a little less than $1/6$ so that the odds against catching a runner-runner low are about 5-to-1. In other words, a player who chases a low in this situation is bucking 5-to-1 odds for half of the pot. You tell me whether this is a smart thing to do if you have no shot at high as well.

Now suppose a player has A-2-3-H and flops one low card and two cards of rank H. If the low card has rank 4 through 8, then the odds against a runner-runner low are about 3-to-1. If the low card has rank A, 2, or 3, then the odds

against a runner-runner low revert to the above situation, that is, 5-to-1.

Now suppose a player has A-2-3-4 and flops one low card and two cards of rank H. Then the odds against a runner-runner low are about 3-to-1 no matter what the rank of the flopped low card is. The only advantage of A-2-3-4 versus A-2-3-H, when only one low card flops, is that the former hand is more forgiving if the flopped low rank duplicates a rank in your hand.

Finally, the odds given above apply to any low draw with one low card in the flop. The reason I used the above types of hands is that the player is at least drawing to a nut low. So in similar situations with other low runner-runner draws the odds remain the same against making a low, but a player making a non-nut low still may lose to a better low.

When considering hold'em, I'm going to treat it differently by comparing the chances of a strong hand after the flop losing to a runner-runner draw. The first situation we consider is the situation raised by Bib Ladder above. One player flops a big set and another player with two suited cards catches one card of his suit. There are 45 unseen cards after the flop giving us 990 possible combinations for the turn and river. There are 10 unseen cards from the flush suit, but two of them give the player with the set either quads or a full house. Thus, there are 28 ways the flush draw can catch a winning flush. This gives a probability of $14/495$ or odds against of about 34-to-1.

The odds just calculated are a ballpark figure for Bib Losing because there may be a couple of combinations that give the underdog a straight flush or quads or a better full house. The odds will not change for this basic scenario.

Another situation is an underdog catching two perfect cards to make a straight. The numbers here depend on how many combinations give the player a straight and how many of the required cards the stronger hand has in his hand. For example, a player holding 4-6 who catches a 5 on the flop has three combinations that give him a runner-runner straight. If the underdog has only one combination that gives him a straight, then the odds against catching the runner-runner straight are about 55-to-1. If there are two combinations that produce a runner-runner straight, then the odds against are about 27-to-1. Finally, if there are three combinations that give the player a straight, the odds against are about 17.5-to-1.

The longest odds against I personally witnessed occurred about four years at Casino Regina. My friend H and I were eliminated from one of the Station Classic tournaments about the same time. We entered the same 10-20 cash game with H sitting on my immediate left. On his immediate left was F. It soon became apparent that F was playing almost every hand and running hot as a pistol. He had a huge stack of \$5 chips in front of him and won several hands in the first few minutes we were there.

About twenty minutes after H and I sat down, the following hand took place. I was under the gun and folded. H raised and had about five callers including, of course, F. The flop came J-5-5 and H flashed me his hand. He held J-J and had flopped a rare monster. He checked because of the action at the table and was proved correct as there was a bet and two raises by the time the action returned to him. He called. The turn card was a 3. He checked again and F

now led the betting. The other two players simply called, but now H raised with his jacks full. F reraises and only one of the other players calls. H caps the betting and F and the other player call. The river card is another 3. H and F end up capping the betting after the river card and the third player folds.

F turns over 3-3 and rakes in the huge pot. H is stunned for a few moments and then starts to laugh at the outrageous runner-runner catch F has made. H is one of the best-natured people I know and his laughter is genuine. About three minutes later, F is called to a game at another table and we know we'll never see those chips again.

So what are the odds involved in the situation just described? There are 990 possible combinations for the turn and river and F can win with only one combination, namely, 3-3. Thus, the odds against this happening are 989-to-1. That is the worst it can get. So if someone needs two perfect cards to make some hand like quads or a straight flush to beat you, realize that player is going up against odds of 989-to-1. He is not going to make it often, but on the rare occasion you get runner-runnered this way, try to be like H and laugh it off.

One other situation I want to mention is the odds against someone flopping a pair and catching a runner-runner full house. Here you are looking at odds of about 164-to-1 against. So you won't lose this way very often.

When I walked by Bib's table about 90 minutes later, he was well endowed with chips and the flush chaser he had lost to earlier was asking for another tray of chips.