

Persistence is not always a virtue

Go for the quick take at the casino

Your best chance when gambling is to stake all at one go, says **S.Ananthanarayanan**.

As gambling systems are usually with the odds slightly against the player, in the 'long run', it is certain that the player would lose. This is the reason that her best chance is to play for the 'short run'.

Mumbai's own 'Matka'

In this ingenious money spinner for the underworld, players (read victims) placed bets on an 'opening' or a 'closing' number, which could be 0 to 9, for the chance to win 9 times the money staked. It is obvious that the Matka operator would win, in the 'long run', because he would receive ten units for every nine units he paid out.

Yet, generations of Mumbaikars played Matka with zeal and determination. How did they expect to profit?

Delusive Fortune

A number of 'systems' were developed. If a player took it that she would win once every ten time she played, and she played Re 1 each time, she had to be just a little lucky to win Rs 9 before she had invested the full Rs 10. And once she had won that Rs 9, she could take it that a new series had started. A popular system was when a punter doubled her bet every time she played. Then, no matter when she won, she would cover well over everything she had lost till then. Such high investors must have been popular with the operators.

The trouble is that it is far from certain that a punter would win once in every ten tries. This is because in 10 tries, there all kinds of possible outcomes – no wins at all, exactly one win, exactly 2 wins, 3 wins and so on. To have no wins means to *lose* every time. Losing any one time has a 9 in 10 chance, or 0.9. For this to happen 10 times in a row, the chance works out to 0.35. Winning exactly once is to lose 9 times. It works out that to win in exactly one of the 10 tr round and to loose all the others has a chance of 0.39.

Expectation goes awry

When we think of winning more times, like exactly 3 times, 4 times, and so on, the high figure, or 0.9, the losing chance, enters the reckoning a less number of times, and the probability comes crashing down (see table I). It turns out that the chance of winning *at least* once, which is the total of the chances of winning once, twice, and so on, which is also just the chance of *avoiding*

losing every time, comes to 0.65 (notice, this is $1 - 0.35$). Now this is hardly the expectation of the average punter, of being sure to win once every ten tries!

Table I – chances of wins in 10 ties

No of wins (N) in 10 tries =>	0	1	2	3	4
Chance of exactly N wins	0.35	0.39	0.19	0.06	0.01
Chance of at least N wins	1.0	0.65	0.26	0.07	0.01
Chance of at most N wins (ie, N or less than N wins)	0.35	0.74	0.93	0.99	0.99

The chances of winning at least once in ten tries gets even lower as the total number of tries is increased. In the second table, for instance, the chance of at least 10 wins in 100 tries is 0.55. In fact, in 100 tries, it is almost certain that one would win at least 5 times, but the chance of winning at least even 11 times is only 0.42.

Table II – chances of wins in 100 tries

No of wins (N) in 100 tries =>	0	10	20	30	40
Chance of exactly N wins	0	0.13	0	0	0
Chance of at least N wins	1.0	0.55	0	0	0
Chance of at most N wins	0	0.58	0.99	0.99	0.99

But the Matka King thrives

But because some wins keep happening, and the winners celebrate in the view of all, the others think they are just having a ‘bad patch’ and take lessons in patience. But the organizers of the racket know that the more the players the more stable their assured income.
