Double or Nothing, the gambling

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Double or Nothing

Would you accept to play at "Double or Nothing" with a 50:50 chance?

Introduction

In my country a man who presented himself like a philanthropist that he was pretending to want to help people who demonstrated him that they are risk prone entrepreneurs and lucky, offers a gamble in which they could choose to play just one time:

- 10, 100, 1000 euros

For each euro, they would got a coin lunch with 50% of doing nothing and 50% of being paid 1.5 times back. As you could imagine the outcome would be to loose 25% but usually more because certain coins were not exactly 50:50 but slightly unbalanced.

He used a Ponzi word-by-mouth scheme to granting himself the lucky opportunity of playing against a flood of chickens!

Obviously, the presentation was pretending that the winning would be granted because $1.5 - 1 = +½$ while the truth was $1.5 \times ½ - 1 = -¼$, because each coin lunch would costs 1.

Gambling Strategy

Gambling at "*Double or Nothing*" with a chance of 50:50, might worth a play.

Just in the case I can play an initial sum of money that I would not care to lose AND if I could bet the winning on the next play.

For example, playing $10, after 10 times of doubling I would gain $10.240 and the probability to lose the initial sum would be:

- $P(10) = 1-(½)^{10}$.

Now, trusting the gambler being fair about his promises AND under the conditions of deciding –at least at the beginning – how long playing AND the total sum of money that could be lost AND which would be acceptable to lose, I could accept the offer once.

In fact – using N as generalisation of the rule and $1 as basic coin – the winning outcome would be

- $\text{win}(n) = (2^n) \times (½^n) - 1 \times (1-½^n) = +½^n$

So, technically speaking the best number of times to play is zero because $½^n = 1$ which means that not playing I would save my initial $1 and longer I will play hugely will increase the probability to loose the initial $1.

However, the idea of loosing $10 for a "fair" probability of winning $10k is appealing. Once in a life or once at year. Now, the problem stays in what that "appealing" means for people which usually means "repetitive" instead of "once a time, it might worth of trying".

After all, who never plays never wins and who plays always loose everything. Moreover, the sunk cost of past gambling should be forgotten. Thus, once a time might became a repetitive tactic of a continuative long-term loss. This is the main difference between a tactic and a strategy: memory and outlook.

So, the best long-term strategy is not playing or playing rarely as rarely as possible which on the limit means do not play at all.

Gambling as Waste Management

Personally, I believe that never playing is wrong but the right number is lim—>0 or better expressed in frequency (numbers / time):

- limit N—>0, T—>+oo; of (N/T)

This problem has not any other solution in math than zero but in finance could be expressed as:

- a tiny yearly budget that could be wasted for the sake of trying be fooled.

Under such perspective, we waste a lot of money in useless and wrong things/decisions which a tiny budget on gambling is not an issue. It would be a second/third degree of wasting.

No luck from above

Life is a waste under certain point of view because everything would be ended in nothing on the very very long term. So far, the gambling attitude and the God belief are based on the same assumption that

- someone or something loves us above and despite oddities and not everything would be a complete waste;

and these two assumptions are at risk of being a scam, both.

Note about the AND logic

The AND denotes a logic binary two factors operator for which (a) AND (b) is true if both are true at the same time, otherwise false.

Because we can always assign that

- (x) := (a) AND (b)

and we can always do (x) AND (c) the 2-factors nature could be extended to any N-factors with N belonging to Natural Numbers.

This might be seem obvious but instead it is tricky because the multiple factors logic AND operator requires that ALL the conditions would be simultaneously true. Instead – in the practice – we verify a&b then x&c which is not a simultaneous comparisons and a&b could change while we have stuck with previous assumption memorised into (x).

This is the reason because the scammers are able to break into our logic. Because leveraging on our attention and emotions, they are able to trick us to consider multiple conditions being simultaneously true which it is not:

Look at my hand, there is no trick. Look at the table, there is no trick. Look at me and the other my hand put the trick on the table. Now, let's playing.

Now, let's paying!

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JOHN LAW: THE GAMBLER WHO BROKE FRANCE

An article on Money Week by Seán Keyes, 12/04/2012

[Why we should care about John Law? Because he is one of the fathers of the modern economy and finance!]

In 1720, John Law was lucky to escape Paris with his life. His investment scheme had made him one of the richest men in France. But it collapsed – and when it did, it ruined the entire nation. With a mob behind him baying for blood, he stole away to Brussels with one exquisite diamond – the last remnant of his enormous fortune.

It wasn't the first time that Law had been forced to run for his life. In 1697, aged 26, he had fled London. At the gaming tables of society London, he had flirted with the future Countess of Orkney. Her husband challenged him to a duel. Law won, killing the husband, but earning himself a death sentence. He sprung jail and stole off to the continent. There, his attention was drawn to mathematics, banking and gambling.

Law hit Europe's gaming tables. He understood the new science of probability and he used it to his advantage – among his tricks, for example, he would offer wealthy gamblers tempting prizes at vanishingly small probabilities.

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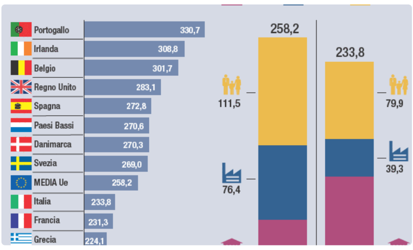

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