Tower Rush stake models, loss streaks and risk

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GR10. Total amount at risk

Fields: GR10-06, GR10-07, GR10-11, GR10-12.

In the Tower Rush profile, one active bet per individual tower. The total amount at risk equals this bet; there is no common X point for two panels and three classes of joint outcome. The condition b2=b1(t1−1) and EV of two panels do not apply to this profile; an external comparative example is separated in the mathematics section.

GR16. Stake change rule

ID	Attribute	Value and scope
GR16-02	Stake change rule	MODEL-01: fixed10 BDT; fraction2% of balance with a floor up to 1 BDT; linear10 BDT with an increase of 5 after a net loss and reset10 after a win, cap100 BDT.
GR16-03	Basis for strategy comparison	Same start 1 000 BDT, one iid Uniform array for the three policies in each run, a plan of 100 cycles and the same stop-loss600/take-profit1 500; actual turnover differs.
GR16-05	Planned number of rounds	100 paid cycles maximum; stopping reduces the actual number and T.
GR16-06	Number of runs	12100 independent runs per policy; the table contains results from the arrays.
GR16-09	Stake increase step	Linear step 5 BDT after a loss, cap100 BDT; the geometric ladder is analyzed separately as a different calculation.
GR16-10	Bankroll shortage policy	If the next permissible stake exceeds the balance, the run is terminated; there is no hidden all-in and no negative balance.
GR16-12	Stop-loss condition	Stop when B≤600 BDT after settlement, that is, losses≥400 BDT of the starting 1 000 BDT, not of the peak.
GR16-13	Take-profit condition	Stop when B≥1 500 BDT after settlement; the threshold does not promise that it will be reached.
GR16-15	Share of ruined runs	The ruin criterion is a shortage of the next minimum permissible stake; a stop-loss with a positive balance is not called ruin. The obtained shares are given separately.

ID	Attribute	Value and scope
GR16-16	Monte Carlo error	SE of mean net=sd/sqrt(12100); for zero ruin frequency, the one-sided 95%-bound is 1−0,05^(1/12100), not zero risk; the calculation pertains to the approved mathematical model.

GR24. Share of rounds in which a stake is placed

ID	Attribute	Value and scope
GR24-01	Share of rounds in which a stake is placed	Exact pace plan: 90 of 120 available cycles during the active window, participation 75%; skipped 30 cycles do not create T.
GR24-03	Pauses per period	Period 60 min, pauses 14 min, active46 min=2 760 s; a full cycle according to the adopted calculation 23 s gives 120 opportunities, 90 accepted according to the plan.
GR24-07	Session net loss limit	Personal stop-loss400 BDT of the initial bankroll 1 000 BDT; the deposit limit 10 000 BDT/day is a different restriction.
GR24-09	Event of the limit triggering	At TEMPO-01:90 stakes of 10 BDT →T900 BDT; at a control h3% the expected loss is 27 BDT for fixed T. At LIMIT-01 after net−410 BDT the balance 590 and the limit 400 stopped the next stake.

Losing streaks and ladders

Metric MODEL-01	Formula	Computed
Specified block of 5 losses	q^5	3,6227%
Mean expectation of the first streak 5	(1−q^5)/((1−q)q^5)	54,852538 trials
At least one streak 5 in 100	DP over the current tail 0…4, absorption at 5	84,9437%

I did not replace the probability of at least one streak with the probability of a specified block and did not treat overlapping windows as independent. The ladder at b0=10 BDT, g=2:10,20,40,80,160…; after four losses L150 BDT, next160 BDT is already greater than cap100 BDT, although the balance 850 BDT is positive. If cap100 is removed, after six losses L630 BDT the balance 370 BDT does not cover the next 640 BDT. For a target recovery at t1,5, L150, the profit targets 10 require b=(150+10)/(1,5−1)=320 BDT, not an arbitrary doubling.

Related documents

- Tower Rush RTP, payout data and statistical models
- Player limits, self-exclusion and help resources