

Betting Units, Bankroll & Kelly

How much to actually stake — the unit, flat staking as the sane default, and exactly what the Kelly criterion prescribes when you have an edge.

Selection decides your edge; staking decides whether you last long enough to realize it. This reference sets out the arithmetic of bet sizing: what a unit is, why flat staking is the sane default, and exactly what the Kelly criterion prescribes when you genuinely have an edge — plus why full Kelly is so rarely used. Every figure is re-derivable. Reference material only, not financial advice.

01 The unit

A unit is a fixed fraction of your bankroll used to size every bet. At 1%, a \$2,000 bankroll makes a \$20 unit; at 2%, a \$40 unit. Keeping bets the same size relative to funds means a rough patch shrinks stakes automatically and a good run grows them, with no emotional decision each time.

02 Flat staking, the default

Flat staking means one unit on every bet. Its strength is that it removes the two most common bankroll killers — chasing losses by sizing up and pressing winners past your edge. For a bettor who cannot yet measure their edge, it is the correct choice, because every more aggressive method needs an edge estimate you may not have.

03 The Kelly formula

Kelly stakes a fraction $f^* = (b \cdot p - q) / b$, where b is the decimal odds minus one (net profit per unit), p is your estimated win probability, and q is $1 - p$. It ties the stake directly to how far your estimate beats the price.

04 A worked example

At +120 (decimal 2.20, so $b = 1.20$) with an estimated $p = 0.50$: $b \cdot p = 0.60$, minus $q = 0.50$ gives 0.10, divided by $b = 1.20$ gives $f^* = 0.0833$ — stake 8.33% of bankroll. The price's own implied probability is $1/2.20 = 45.45\%$, so a 50% estimate is a real edge. If your estimate equals 45.45%, Kelly returns zero: fair price, bet nothing.

05 Why fractional Kelly

Full Kelly maximizes long-run growth on paper but is highly volatile and assumes your estimate is exactly right. Because edges are usually overrated, full Kelly tends to overstate. Betting a half or quarter of the figure sharply cuts swings and cushions an over-optimistic edge, at a small cost to theoretical growth.

06 The overestimation trap

Kelly's output is only as good as the p you feed it. Bettors tend to overrate their edges, so an inflated probability produces a stake too big for the edge that really exists. Fractional Kelly is partly a sizing method and partly a humility discount on your own confidence — which is why disciplined users bet a fraction of it.

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Play responsibly

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