

Risk to reward, honestly

RISK TO REWARD RATIO

The risk to reward ratio divides a planned trade's distance to target by its distance to stop, and its honest use is the win rate it implies: a ratio of R breaks even at a win rate of $100/(1+R)$ percent. The ratio describes the trade's geometry, says nothing about whether the target is reachable, and a higher ratio is a bet you will be right less often - not a better trade.

Two prices bracket every planned trade: where it is wrong, from lesson 3, and where you would take what it offered. The distances to each, divided, make the most quoted and most misused number in retail trading.

What does the ratio actually measure?

Geometry. A target 60 pips away against a stop 30 pips away is 2:1, and that statement contains no information about whether price will travel the 60. The ratio compares two intentions; the market has not been consulted.

Its honest work appears when you attach the ratio to a win rate. At 2:1, winning a third of the time exits flat before costs: two losses of one unit against one win of two. That break-even win rate, 100 divided by one-plus-ratio, is the number the ratio has been hiding.

Why is a bigger ratio not a better trade?

A wider target is a claim you will reach it less often. Stretch the same setup from 2:1 to 4:1 and the break-even win rate falls from 33.3% to 20%, which looks like a gift until you ask what stretching the target did to how often price gets there. Ratios move win rates in the opposite direction, and the pair of them together - module 5's expectancy ground - is the only version that means anything.

The dishonest use runs the other way: declaring a 3:1 ratio by parking a target three stops away because the arithmetic looked good. The target belongs where the idea says price can go - a level, a structure, a measured move. A ratio built from an arbitrary target is a fraction with an invented numerator.

Where does the ratio fit in the plan?

As a filter, applied after the stop and target have both earned their places. If the honest geometry of a setup implies a break-even win rate above anything your method has shown, the trade is declining itself. That filter costs nothing and runs before money does.

Worked example - figures in USD

A planned long on EUR/USD: entry 1.087, stop 1.084, target 1.093.

1. Measure both legs from the plan: entry 1.087, stop 1.084, target 1.093 - a risk of 0.003 against a reward of 0.006 per unit of price.
2. Divide them: 2 to 1. Geometry only - the market has not promised the target leg.
3. Extract the hidden number: this ratio exits flat at a win rate of 33.3%, before costs. Below that rate this geometry loses; above it, it makes something - whichever side of it your actual method lands is a fact about your method, not the ratio.

What this means for you

Compute the break-even win rate for your typical setup's honest geometry, and write it next to the risk fraction from lesson 1. You now hold a claim your future record can check: module 5's measurement lessons and the trade journal will tell you which side of that number your trading actually lives on. Until the record exists, the ratio is a filter, never a forecast.

Try it yourself with the risk-reward calculator: <https://ticksprout.com/tools/risk-reward>

Check your understanding

1. A trade has a 2:1 risk to reward ratio. What win rate exits flat, before costs?

- a. 33.3% - one win of two units covers two losses of one
- b. 50% - wins and losses balance
- c. 66.7% - two thirds must win

Answer: a. Break-even is $100/(1+R)$: at $R=2$, 33.3%. The 50% intuition belongs to 1:1 geometry only, and 66.7% is the break-even for the inverse ratio - risking two to make one.

2. What does moving a target further away, purely to improve the ratio, do?

- a. Improves the trade - more reward per unit of risk
- b. Builds the ratio from an invented number: the target no longer marks where the idea says price can go, and the implied win rate quietly falls
- c. Nothing - targets are arbitrary anyway

Answer: b. The ratio only means something when both legs are honest. A stretched target raises the ratio and lowers how often price reaches it, and the second effect is invisible on the ticket. Targets are not arbitrary - they are the idea's reachable claim.

3. Which statement about a 4:1 setup versus a 1:1 setup is true on the arithmetic alone?

- a. The 4:1 is the better trade
- b. The 4:1 tolerates a far lower win rate and will win far less often at an honest target - neither is better until a real win rate is attached
- c. The 1:1 is safer

Answer: b. Ratio and win rate trade against each other. Arithmetic alone ranks neither; the pair of numbers together does, and that pairing is expectancy - the next module's ground. 'Safer' is not a property a ratio has.