

Sizing by maximum loss

SIZING BY MAX LOSS

Options are sized by the position's maximum loss, not its premium and not the underlying's price - because the leverage makes the premium a misleading anchor and the underlying exposure a different number again. For a defined-risk position the maximum loss is known (the premium times the multiplier, or the spread's width), and the risk budget divided by it gives the size. For undefined risk, there is no maximum loss to size by - which is the point.

The platform sizes every position by its risk; options size by maximum loss specifically, because the leverage of module 3 makes the premium a dangerous anchor and the underlying exposure yet another number. This lesson makes maximum loss the sizing input.

The defined-risk sizing

For a defined-risk position, the maximum loss is knowable: a long option's is the premium times the contract multiplier - a premium of 5 on a 100-share contract is a £500 maximum loss per contract - and the position size is the risk budget divided by that. A £1,000 risk budget over a £500 maximum loss per contract is 2 contracts, exactly the platform's risk-over-loss division, with the maximum loss as the denominator. The maximum loss is the honest risk number because for a long option it is the whole risk - the option can go to zero, and that is the loss, bounded and known.

Why not the premium or the underlying

Not the premium alone as a fraction: 'it's only a small premium' sizes by cost, not risk - and the leverage means a small premium controls large exposure; the premium IS the max loss for a long option, but it must be sized as risk, not dismissed as small. Not the underlying exposure: an option controls far more underlying than its premium, so sizing by the underlying's value overstates a long option's risk (which is capped at the premium) - the option's max loss, not its notional, is the risk. The multiplier always: the max loss is per-share premium times the multiplier - the cash figure, not the quote, exactly as every track converted per-unit to cash.

The undefined-risk problem

For undefined-risk positions, this sizing method fails by design: there is no maximum loss to divide by, because the maximum loss is unbounded or catastrophic (lesson 1). This is not a gap in the method - it is the method telling the truth: a position with no sizeable maximum loss cannot be sized by maximum loss, and the honest conclusion is that it cannot be sized safely by the platform's discipline at all. Undefined-risk positions require margin-based limits and active management the track describes but does not recommend, and the sizing method's silence on them is the warning. Size defined risk by its known maximum loss; treat undefined risk as the unsizeable thing it is.

Check your understanding

1. A long option has a premium of 5 on a 100-share contract, and the risk budget is £1,000.

What is the position size?

- a. 10 contracts
- b. 2 contracts: the maximum loss is £500 (premium 5 times the 100 multiplier), and £1,000 over £500 is 2 - the risk budget divided by the known maximum loss
- c. 5 contracts

Answer: b. The maximum loss is the premium times the multiplier - the whole risk of a long option. Risk budget over max loss is the sizing, exactly the platform's division.

2. What does the sizing method's failure on undefined risk reveal?

- a. A flaw in the method
- b. The truth: a position with no sizeable maximum loss cannot be sized safely by the platform's discipline at all - the method's silence is the warning
- c. That undefined risk is safe

Answer: b. It is not a gap but the method telling the truth. Undefined-risk positions cannot be sized by max loss because their max loss is a catastrophe - the sizing's silence is the flag.