The multi-leg cost multiplier

> **MULTI-LEG COSTS**
>
> Every leg of a multi-leg options position pays its own commission and its own spread, on entry and exit - so a four-leg structure pays roughly four times the frictions of a single option, and the total cost can quietly exceed the structure's maximum profit. The elegant defined-risk structures of module 5 are elegant on paper and expensive in practice, and pricing every leg is the discipline that keeps the elegance honest.

Module 5's structures are built from several options at once - and each option in them is a leg that pays its own commission and its own spread, both ways. This lesson prices that multiplication, because it is where paper-elegant structures become practically expensive.

The multiplication

Commission per leg: a four-leg structure pays four per-contract commissions on entry and four on exit - eight charges where a single option pays two (lesson 1).Spread per leg: each leg crosses its own bid-ask, so the structure pays the spread on every leg, both ways - and if any leg is illiquid, that leg's wide spread is in the total (lesson 2).The total against the max profit: a defined-risk structure has a capped maximum profit, and the summed frictions of all its legs come out of that cap - so the costs can be a large fraction of, or even exceed, the best case.

Where elegance meets cost

The defined-risk structures of module 5 look clean on a payoff diagram - a capped loss, a capped gain, a defined range - but each leg is a real trade with real frictions, and the diagram does not show them. A four-leg structure on liquid options is manageable; the same structure on illiquid options can pay so much in summed spreads and commissions that its capped profit is mostly consumed before the underlying moves. The elegance is in the shape; the cost is in the legs; and a reader who prices only the shape has priced half the position.

The pricing discipline

Price every leg: commission per contract per leg, spread per leg at its real width, both entry and exit, summed into the structure's total cost - then measure that total against the structure's maximum profit, not the underlying's price. A structure whose frictions consume most of its capped upside is not the elegant position the diagram suggested; it is an expensive way to express a view the costs have already half-defeated. The multi-leg multiplier is why module 5's structures must be costed leg by leg, and why they belong on liquid options or not at all - the cost discipline that keeps the payoff diagram honest.

Check your understanding

1. Why can a four-leg structure's cost exceed its maximum profit?

a. The legs cancel out

b. Each leg pays its own commission and spread on both legs, so the summed frictions of four legs come out of the structure's capped maximum profit - which they can consume or exceed

c. Structures are taxed more

Answer: b. The payoff diagram shows the capped shape but not the legs' frictions. Eight commission charges and four spreads, both ways, come out of the capped upside - elegant on paper, expensive in practice.

2. What does pricing only the payoff shape miss?

a. The strike prices

b. The legs' frictions: each leg is a real trade with its own commission and spread, invisible on the diagram - a reader who prices only the shape has priced half the position

c. The expiry date

Answer: b. The elegance is in the shape, the cost is in the legs. Structures must be costed leg by leg against their max profit - which is why they belong on liquid options or not at all.