The Greeks as a risk dashboard

> **THE GREEKS AS RISK MEASURES**
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> The Greeks read as a risk dashboard: delta (exposure to the underlying's direction), gamma (how fast that exposure changes), theta (the decay bleeding daily), and vega (exposure to volatility changes). Each is a risk the position carries, and reading them together says what the position is really exposed to - which for options is never just direction. The Greeks are introduced fully in module 8; here they are the risk view a position must be read through.

Options carry risks a share never had - to time, to volatility, to the rate of change of exposure itself - and the Greeks measure them. Read as a risk dashboard, they say what a position is really exposed to, which is the risk module's concern. Module 8 gives them their full treatment; this lesson reads them as risks.

The four risks the Greeks measure

Delta - directional exposure: how much the position moves with the underlying (module 2); the risk that the underlying moves against the position, and the most familiar one.Gamma - the change in exposure: how fast delta itself changes as the underlying moves; the risk that a position's directional exposure shifts rapidly, largest near the money and near expiry - the risk that the position becomes suddenly more directional than expected.Theta - the decay: how much time value the position loses per day (module 1's decay, measured); the buyer's standing risk and the seller's income, quantified as a daily number.Vega - volatility exposure: how much the position's value changes when implied volatility moves; the risk of the volatility crush (module 1) or expansion, which can move a position's value with the underlying standing still.

Reading the dashboard together

The Greeks matter as a set: a position can be delta-neutral (no directional exposure) and still lose to theta (decay) or vega (a volatility drop) - so reading only direction misses most of an options position's risk. A long option is long delta, long gamma, short theta (bleeding decay), and long vega (exposed to volatility falling); a short option is the mirror. Reading the four together says what the position actually risks - and for options, that is a combination of direction, time and volatility that no single number captures. The dashboard is how an options position's real risk is seen.

Why the dashboard is the risk view

An options risk plan reads positions through their Greeks: the portfolio's total delta (its net directional exposure), its total theta (its daily decay bleed or income), its total vega (its volatility exposure) - so the account knows what it is really exposed to, beyond the direction a share portfolio would show. A book that looks directionally balanced can carry a large vega exposure that a volatility shift would punish, or a large theta bleed - risks invisible without the dashboard. Module 8 develops the Greeks fully,

including how they interact and change; the risk module uses them as the instrument panel through which options risk is actually read, because for options, direction alone is never the whole risk.

Check your understanding

1. Why must options risk be read through more than delta?

a. Delta is inaccurate

b. A position can be delta-neutral and still lose to theta (decay) or vega (a volatility drop) - so reading only direction misses most of an options position's risk

c. Delta only works for calls

Answer: b. Options carry risks to time and volatility a share never had. The Greeks read together say what the position really risks - a combination no single number captures.

2. What does a delta-balanced book's dashboard still reveal?

a. Nothing further

b. Its total theta (daily decay bleed or income) and total vega (volatility exposure) - risks invisible without the dashboard that a share portfolio would never show

c. Only the commission

Answer: b. A directionally balanced book can carry a large vega or theta exposure. The dashboard is how an options position's real risk - direction, time and volatility - is actually seen.