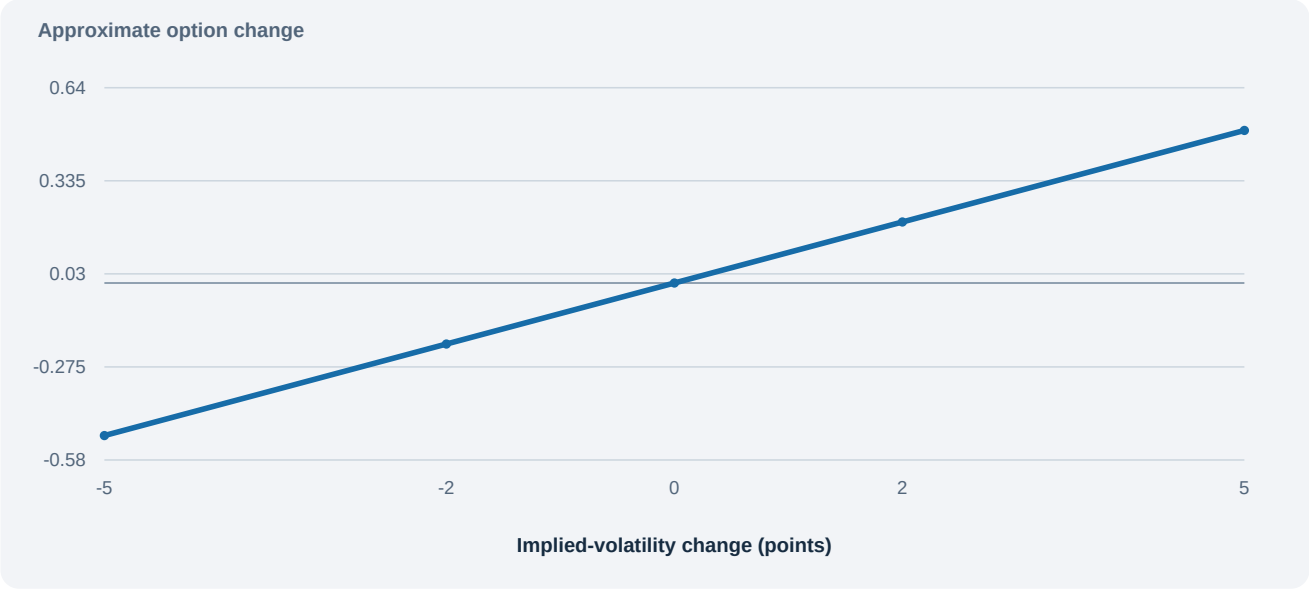
Vega and volatility-point changes

Option sensitivities | Original synthetic example | Edition 2026-11-26

Vega estimates an option-value change for a small implied-volatility change. Quote conventions matter: this worksheet uses vega per one percentage point of volatility.

FORMULA Approximate value change = vega per point x volatility-point change

SCENARIO 01: Vega 0.1 per one volatility percentage point



WORKED EXAMPLE

A +2 percentage-point volatility change adds approximately 0.2 per unit, holding other inputs fixed.

COMMON MISTAKE

Using a decimal volatility change with a per-percentage-point vega creates a factor-of-100 error.

BEFORE YOU USE THE CALCULATION

1. Read the vega convention.
2. Hold other inputs fixed.
3. Use percentage points consistently.

COMPARE TWO MORE INPUT SETS

Scenario 05: Vega 0.5 per one volatility percentage point. A +2 percentage-point volatility change adds approximately 1 per unit, holding other inputs fixed.

Scenario 10: Vega 1 per one volatility percentage point. A +2 percentage-point volatility change adds approximately 2 per unit, holding other inputs fixed.

Background context: Options Industry Council: Greeks and volatility

Learn. Analyze. Practice. Trade Smarter. | Original calculations; background sources provide context.

Synthetic values are not historical market data. Educational material; trading can result in substantial losses.