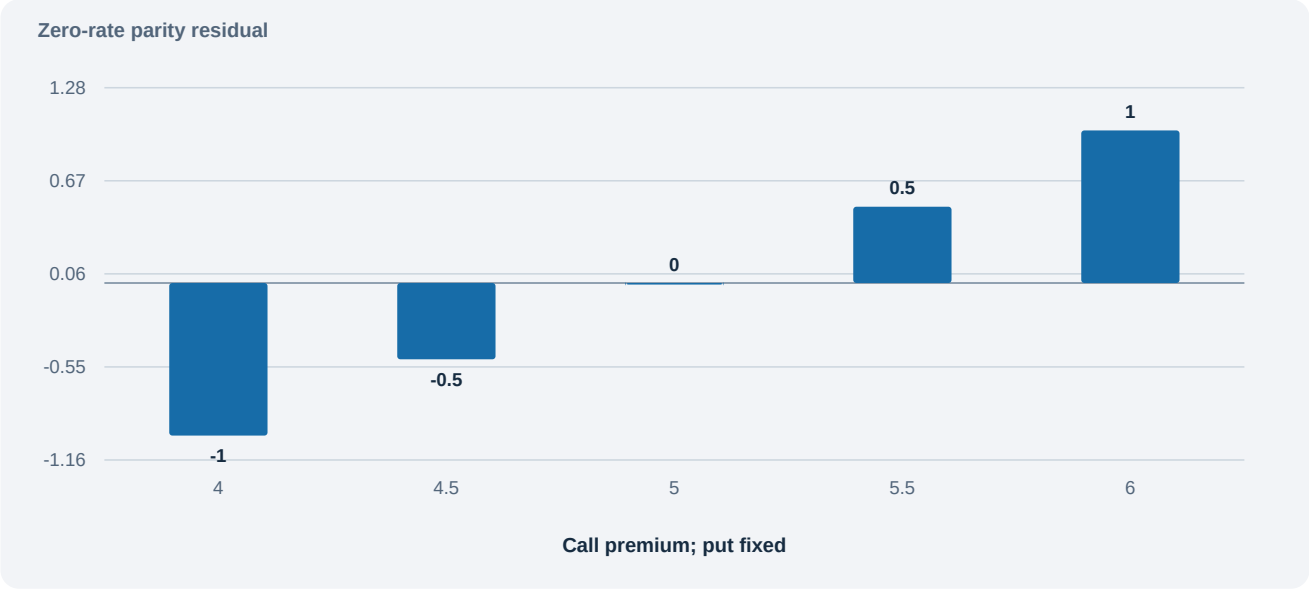
Zero-rate put-call parity check

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

For European options with one strike and expiry on a non-dividend-paying underlying, zero-rate parity links the call-minus-put price with spot-minus-strike. The worksheet deliberately assumes zero interest.

FORMULA Parity residual = call - put - (spot - strike)

SCENARIO 01: European, no dividends, zero rates; spot 100, strike 100



WORKED EXAMPLE

At call 5 and put 5, residual is zero: call - put = spot - strike. Frictions are excluded.

COMMON MISTAKE

Applying the zero-rate identity to dividends, nonzero rates or inconsistent quotes creates a false discrepancy.

BEFORE YOU USE THE CALCULATION

1. Match strike and expiry.
2. State European and zero-rate assumptions.
3. Use synchronized tradable prices.

COMPARE TWO MORE INPUT SETS

Scenario 05: European, no dividends, zero rates; spot 140, strike 100. At call 49 and put 9, residual is zero: call - put = spot - strike. Frictions are excluded.

Scenario 10: European, no dividends, zero rates; spot 190, strike 100. At call 104 and put 14, residual is zero: call - put = spot - strike. Frictions are excluded.

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