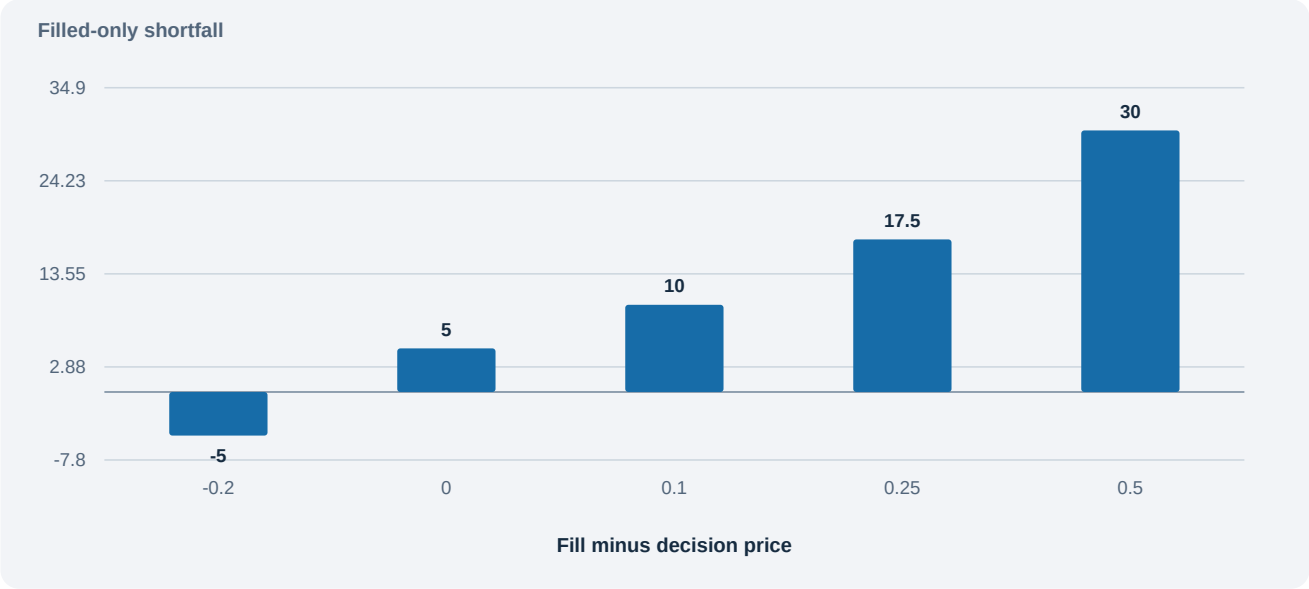
Implementation shortfall on filled units

Execution arithmetic | Original synthetic example | Edition 2026-11-26

For the filled portion of a buy order, implementation shortfall compares the actual execution cost with buying those same units at the decision price, then adds explicit charges.

FORMULA Shortfall = units x (fill - decision price) + charges

SCENARIO 01: Filled buy: 50 units; explicit charges 5



WORKED EXAMPLE

A fill 0.1 above decision price gives 10 shortfall including 5 charges; unfilled units are excluded.

COMMON MISTAKE

Ignoring unfilled opportunity cost is acceptable only if the metric is clearly restricted to filled units.

BEFORE YOU USE THE CALCULATION

1. Declare the filled-only scope.
2. Store the decision timestamp.
3. Separate price impact from explicit charges.

COMPARE TWO MORE INPUT SETS

Scenario 05: Filled buy: 150 units; explicit charges 9. A fill 0.1 above decision price gives 24 shortfall including 9 charges; unfilled units are excluded.

Scenario 10: Filled buy: 275 units; explicit charges 14. A fill 0.1 above decision price gives 41.5 shortfall including 14 charges; unfilled units are excluded.

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