One underlying, many contracts: correlation on the board

> **BOARD CORRELATION**
>
> The futures book's two correlation dimensions: within a board - months of one underlying are one exposure at slightly different tenors, never diversification - and across boards, where each future inherits its underlying's cluster from the underlying's own track. A futures book is a set of tethers into every asset class it touches, and the heat ledger must count along the tethers.

Every track has counted its clusters. The futures version counts in two directions - down the board, and out along the tether - and both counts are inherited machinery.

Down the board: months are one exposure

Two months of the same underlying move nearly as one - the curve connects them, per two tracks of carry lessons - so front plus back is a larger position with a term-structure tilt, not two positions. The legitimate two-month position is the calendar spread, deliberately trading the tilt itself - module 8's business, sized as one position with its own (smaller) risk. The error this half of the lesson kills: a book showing 'long March, short June' as two entries when it is one spread, or worse, 'long March, long June' counted as diversified when it is double.

Out along the tether: futures inherit their underlyings' clusters

An index future clusters with equities: the equity track's sector and market layers arrive through the tether - a book long index futures beside long stocks is one market-layer bet, counted once.Commodity futures cluster by the commodity track's plumbing: energy with energy, the dollar under everything - unchanged.The cross-asset weather exists too: the macro regimes that move rates move index futures and metals together in ways each underlying track noted - the heat ledger's cluster lines follow the underlyings, and the futures wrapper adds nothing and hides nothing.

The count, assembled

The futures heat ledger therefore reads: months collapsed per underlying first - one line per underlying, spreads as their own smaller lines - then underlyings grouped by their own tracks' clusters, then the budget applied per cluster as always. The book that looked like six positions is routinely two bets and a spread - the platform's oldest audit, with the board supplying a new place for the double-count to hide. Module 7's review will run this exact regrouping on the record.

Check your understanding

1. Why are two long months of the same underlying never diversification?

a. Exchanges margin them together

b. The curve tethers them: they are one exposure at slightly different tenors - a larger position with a term tilt, counted as one line

c. They share a settlement window

Answer: b. Carry connects the months; the correlation is structural. The deliberate version is the calendar spread - one position trading the tilt - and the accidental version is a double-count.

2. How does a futures book's heat ledger group across boards?

a. By exchange

b. By the underlyings' own clusters: each future inherits its underlying track's grouping through the tether - index futures with equities, energy with energy

c. By contract month

Answer: b. The wrapper adds no correlation and hides none. Months collapse per underlying, underlyings group per their tracks, budgets apply per cluster - inherited machinery, assembled.