Indices · Index analysis foundations · lesson 7 · 6 min read

Moving averages, and what they compute

> **MOVING AVERAGE**
>
> The mean of the last n closes, recomputed each period. It is a transformation of price and contains nothing price does not - its value is that it makes a slow question, where has this been lately, answerable at a glance.

An average is arithmetic, not analysis. Knowing exactly what it computes prevents most of the ways it gets misused.

What it is

Add the last n closes, divide by n, plot the result. Tomorrow the oldest close drops out and the newest drops in. That is the whole mechanism.

So it lags by construction: it is describing a window that ends today and began n periods ago. A long average turns slowly because most of its window is old, not because it is measuring something more durable.

Two things people read into it that are not there

Support. Price bouncing off an average is the attention mechanism from lesson 6, not the average doing anything.A signal. A crossing is two windows changing their relative order, which is a description of what has already happened.

The index-specific caution

An average computed across a futures roll includes a step nobody traded - module 2 lesson 7. On a continuous chart, an average spanning a roll date is partly measuring the splice.

And an average on the cash series excludes overnight hours entirely, so the same average on the 24-hour series is computed over different data with the same name. Both are correct; they answer different questions.

Where it genuinely helps

As context rather than as a trigger. Whether price is above or below its own recent mean, and whether the mean is rising, are cheap summaries of where you are - and they are honest as long as nobody claims the line has power.

Check your understanding

1. Why does a longer moving average turn more slowly?

a. It measures a more durable trend
b. Most of its window is old data, so a new close changes the mean less
c. It filters out noise mathematically

Answer: b. It is arithmetic on a window. A slower turn is a property of the window length, not evidence of a stronger signal.

2. What is wrong with a moving average that spans a futures roll on a continuous chart?

a. Nothing, rolls are priced in
b. It averages across a step nobody traded, so it is partly measuring the splice
c. It cannot be computed across contracts

Answer: b. The join between contracts is an artefact. An average spanning it includes a jump no participant experienced.