

Hedge tests as a model validation tool

Some comments on Drona Kandhai

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Hedge tests constitute an important validation tool

Hedge tests are a powerful tool in (pricing) model validations

- ▶ Internal policies as well as regulators encourage/require not only pure implementation, but also model tests
- ▶ Hedge tests assess model performance by subjecting it to practice test
- ▶ Allegedly *close to / inspired by* how models are applied by Trading / the bank
- ▶ However, some caveats remain
 - Available real market data history possibly (much) shorter than product maturity
 - Simulation of hypothetical market data questionable / model-dependent
 - Setup typically “stylized” in at least some respects

Hedge tests necessitate “stylized” assumptions

Openness on stylized assumptions is advisable as the Front Office will (rightfully?) question them anyway...

- ▶ Praise for professional traders: Successful hedging is more than an algorithm!
- ▶ In hedge test setup need to decide on
 - Hedging frequency → every trading day?
 - Which (bucketed) Greeks to hedge
 - Benchmark for hedge performance
- ▶ Often we neglect
 - Liquidity of hedge instruments
 - Transaction costs
 - Portfolio effects
 - ...

Hedge test outputs are discussion inputs

Hedge test results are (by definition) to some extent setup-dependent and do not reveal “the truth as such”

- ▶ They require interpretation
- ▶ They constitute excellent starting points for discussions with FO quants, traders, market risk manager, ...

What are **your** experiences with hedge tests?

- ▶ For which validation decisions have you experienced hedge tests as a (less) useful tool?
- ▶ How were your approaches and results perceived by your stakeholders?
- ▶ What alternative approaches do you consider relevant?
- ▶ ...
- ▶ ...