



UNIVERSAL RISK TECHNOLOGY™

Universal Risk Technology, (URT) is a robust fusion of calculus and cutting edge software engineering that eliminates the need for resource intensive finite difference methods, also known as “bumping”. Developed by FINCAD, this advanced proprietary technology enables first order sensitivities of price to market data to be calculated immediately and precisely for any possible exposure point.

WHERE IS IT USED?

URT is used within F3.

WHAT DOES IT MEAN FOR END USERS?

Comprehensive – Users no longer have to be selective about what sensitivities they calculate because F3 provides an exhaustive list. F3’s Risk Report utilizes URT to provide information about the sensitivity of a trade or a portfolio of trades to ALL market data on which the valuation of that trade or portfolio depends, as well as the hedge factors needed to hedge away the instantaneous market and credit risk.

Universal – URT enables F3 to produce first order sensitivities for ANY trade or portfolio of trades, no matter how complex the trade, portfolio or valuation model.

Efficient – URT allows for the immediate analysis of any newly defined instrument or trade type, without a system restart.

Accurate – By utilizing URT, F3 avoids the inaccuracies that are inherent in sensitivities calculated using bumping. While bumping produces approximations, URT produces exact analytical results. In addition, because all sensitivities in the Risk Report are automatically propagated through any calibration process, F3 provides sensitivities for each market data instrument, and not just for intermediate model parameters.

Fast – URT enables F3 to produce a comprehensive and accurate Risk Report as part of the valuation algorithm in a fraction of the time needed to achieve a similar report using bumping. As the bumping method is less efficiently structured than URT, it takes far longer to compute - especially for a large number of risk factors.

F3 revolutionizes portfolio-level analysis.

“The F3 Risk Report is a lot quicker than industry standard curve bumping. RR was <0.01 seconds, curve bumping 20 seconds for a sample risk calculation – and the results are practically identical.” - Amrish Ganatra, Founding Partner, Cerebra