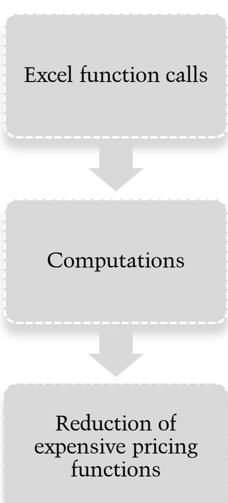
Theta Proxy

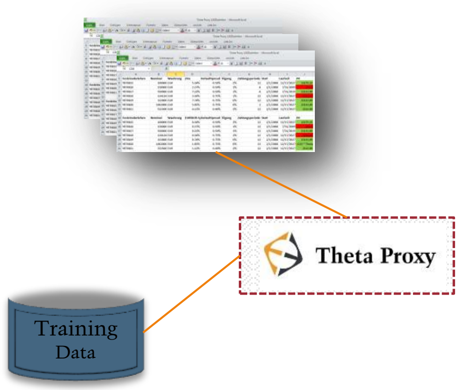
Enabling Real-Time Monte Carlo

Theta Proxy's Innovation

Complex and accurate price calculations for financial products are time-consuming and therefore expensive to calculate. Based on its deep knowledge of financial products, Thetaris has developed the break-through technology Theta Proxy. Theta Proxy is a software technology which accelerates complex function evaluations as they occur in the financial industry. It enables customers to save costs through the efficient reuse of already computed results.

Theta Proxy learns the function described by the computational task to be sped-up and returns a result instantly instead of performing the computation. However, this is not dependent on the exact same input parameters. Theta Proxy uses its knowledge about the computation in returning results for similar inputs. Theta Proxy's technology is based on high dimensional interpolation know-how from artificial intelligence research which ensures high accuracy standards and maximum speed-ups.





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Where can Theta Proxy be applied?

Areas of Application

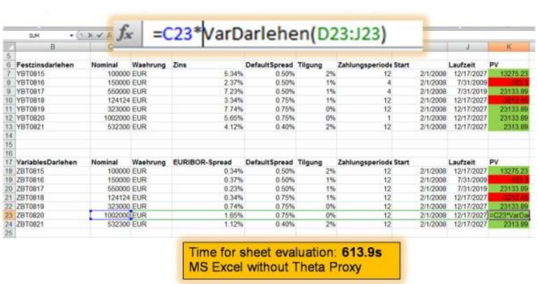
Theta Proxy is applicable to a wide range of computational tasks in quantitative finance and especially Monte-Carlo simulations.

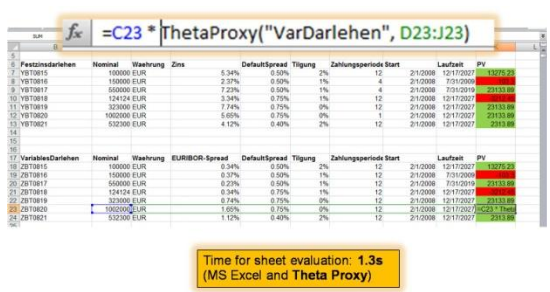
Theta Proxy enables:

- **Real-time risk management**
- **Real-time hedging**
- **Real-time pricing of structured products**
- **Real-time optimization of arbitrage strategies**

Usage scenario

In typical usage scenarios, the Theta Proxy accelerates the calculation of pricing functions between 10 and 1000 times by reducing the redundancy in the computational process. The MS Excel screenshot shows the power of the Theta Proxy. A simple computational wrapper applied to this function has effectively reduced the computation time from 10 minutes to just over a second.





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