

Terra Quantum and BBVA Complete Pilot for Advanced Exotic Derivatives Pricing Solution

The two companies have demonstrated the potential of AI-driven and quantum-inspired methods to enhance the speed and efficiency of exotic derivatives pricing.

ZURICH, SWITZERLAND, February 6, 2025

/EINPresswire.com/ -- [Terra Quantum](#) and BBVA have successfully completed a pilot project, demonstrating the potential of AI-driven and quantum-inspired methods to enhance the speed and efficiency of exotic derivatives pricing.

Structured products, such as exotic derivatives, involve complex payout structures and require accurate, high-speed pricing across a wide range of market conditions and parameters. Advanced computational methods are essential to efficiently navigate these high-dimensional problems while meeting the accuracy and performance demands of financial institutions.



The pilot explored innovative approaches, including Neural Networks and Tensor Network Layers, to address the challenges of rapidly pricing these complex products, considering broad parameter ranges and granular increments for exotic derivatives covering several underlying assets. The results show that these techniques can achieve significant improvements in computational efficiency and speed, while maintaining accuracy.

“

The results confirm that AI-driven approaches, combined with quantum-inspired techniques, can deliver meaningful improvements in complex pricing problems, with clear pathways for further optimization.”

*Martin Hofmann, Chief
Business Officer at Terra
Quantum*

Key Achievements

Through the collaboration, Terra Quantum demonstrated:

- Improved Speed and Accuracy: Achieved millisecond-level pricing while meeting target accuracy thresholds across various test scenarios.
- Scalability: Successfully managed large parameter

spaces, aligning with the requirements of complex exotic derivatives.

- Efficiency Gains: Model compression techniques enabled 260x faster inference on standard CPU hardware, improving computational efficiency and cost-effectiveness

While alternative approaches, such as Tensor Train Cross (TT-Cross), provided valuable insights, the project highlighted the greater robustness and flexibility of Neural Networks for handling real-world complexities at scale.

A Step Towards Future Applications

The successful completion of this pilot highlights the potential for advanced AI and quantum-inspired methods to streamline pricing tools for financial institutions. Terra Quantum's solution demonstrates clear opportunities for further development and deployment in production environments.

"We are pleased to be collaborating with an industry leader in quantitative methods, such as BBVA," said Martin Hofmann, Chief Business Officer at Terra Quantum. "The results confirm that AI-driven approaches, combined with quantum-inspired techniques, can deliver meaningful improvements in complex pricing problems, with clear pathways for further optimization."

"As a bank heavily focused on technological innovation, at BBVA we need to test out the latest cutting-edge technologies to help optimise complex financial calculations," explains Escolástico Sánchez, Head of Quantum at BBVA. "The pilot we have just completed with Terra Quantum is a further step in this strategy."

Media Contact

Victoria Jodl

Global Head of Communications

E-Mail: vj@terraquantum.swiss

Phone: +41 79 8131588

About Terra Quantum

Terra Quantum Group is a leading quantum technology company based in Germany and Switzerland. It provides "Quantum as a Service (QaaS)" in three core areas, the first one being "Quantum Algorithms as a Service". Here, customers are provided access to an extensive library of algorithms, such as hybrid quantum optimization and hybrid quantum neural networks, which can be used for solving complex logistics problems or pattern recognition, among other things. Terra Quantum also develops new quantum algorithms for its customers or adapts existing algorithms to their specific needs. Secondly, through "Quantum Computing as a Service", Terra Quantum offers its customers access to its proprietary high-performance simulated quantum processing units (QPU), the quantum ecosystem's physical QPUs, while also developing native QPUs. The third division is "Quantum Security as a Service," through which Terra Quantum offers its unique solutions for secure quantum and post quantum communications worldwide. Visit us

on [LinkedIn](#) and our [webpage](#).

About BBVA

BBVA is a global financial group founded in 1857 with a customer-based approach. It has a strong position in Spain, it is the top financial institution in Mexico, it has leading franchises in South America and in the Sunbelt region in the United States. It is also the major shareholder of BBVA Garanti, in Turkey.

Its purpose is to make the opportunities of this new era available to everyone. This purpose is focused on customers' real needs: to provide the best solutions and help them to make the best financial decisions, through an easy and convenient experience. The bank is based on solid values: customer first, we think big, and we are a single team. Its responsible banking model seeks to achieve a more inclusive and sustainable society.

Veronica Combs

HKA Marketing Communications

+1 714-422-0927

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/783619959>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.