

ttm zero

Case Study

TTMzero's Fair Value Pricing supports the customer's hedging strategy for their structured products business



PART OF UNITED FINTECH

Introduction

Faced with the challenge of validating OTC derivatives that are held as hedge instruments, one of the largest Financial Institutions in Central Eastern Europe and a major issuer of structured products sought a specialised independent pricing agent. Traditional valuation agents often struggle to provide reliable valuations for customised OTC instruments, making accurate pricing particularly challenging.

TTMzero's advanced capabilities and in-depth expertise in this field, positioned them as the ideal partner to address these complexities effectively.

Valuation experts

TTMzero is a specialist in RegTech and Capital Markets technology, providing advanced data products and software solutions that help financial institutions manage risk and meet regulatory requirements. As part of United Fintech, the company offers innovative and independent valuation solutions.

Based in Berlin, TTMzero leverages the expertise of its seasoned in-house financial engineers to specialise in Mark-to-Model valuations for a wide range of financial instruments, including OTC derivatives and complex, hard-to-value assets.

Challenge

The customer aimed to implement a robust and independent validation process to manage market risks in their structured product business and enhance their ability to support market-making for customised structured products. To achieve this, validating the indicative prices from their counterparties for OTC derivatives became crucial.

TTMzero's valuation service encompassed the calculation of Mark-to-Model values for the underlying option structures, along with the computation of forward prices and volatility surfaces for the underlyings. This comprehensive approach provided the customer with detailed and actionable insights, enhancing their ability to accurately manage their structured products portfolio.

Project overview

TTMzero was engaged by the customer as a secondary valuation source to validate the indicative prices of OTC derivatives supplied by the customer's counterparties. The process began with an in-depth analysis of the customer's structured products portfolio, identifying more than 50 OTC option structures that required independent valuation.

Solution implementation

Portfolio analysis & setup

TTMzero initially examined the customer's structured products portfolio to identify the underlying OTC option structures. Approximately 50 option structures were identified and implemented for valuation purposes.

Underlying instrument setup

Simultaneously, TTMzero set up the corresponding underlying equity instruments. The valuation of the option structures required computing volatility surfaces for both major & exotic underlyings.

Data delivery via API

TTMzero offers an API-based solution for efficient data provision, designed for seamless integration with the customer's existing systems. The customer sends a request and receives, within seconds, a response containing the fair value and supplementary data for the requested option structure. This real-time capability significantly enhances the customer's operational efficiency.

API request setup

TTMzero designed a specific request format, outlining the data the customer can provide in each API request for each product type. This includes the static data of the requested financial instrument, such as strike price, maturity, barriers, etc. This structured format ensures that the data exchange is efficient and reduces the chances of errors.

API integration & usage

The customer connects to TTMzero's Fair Value Pricing API, submitting requests either as individual requests or in bulk. This flexibility allows the customer to choose the most efficient workflow for their needs.

If all required information is included in the request, TTMzero delivers an API response with the valuation results within seconds. If any information is missing or incorrect, a detailed error message is returned to guide the customer in correcting the request. This real-time feedback loop helps maintain accuracy and efficiency.

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Response & data provided

The API response includes a comprehensive set of data, among others:

- **Fair Value**
- **Forward Prices**
- **Volatility Surfaces**
- **Greeks**

This comprehensive data set ensures that the customer has all the necessary information to validate the prices of their OTC derivatives, effectively supporting the market making of their structured products. The accurate and detailed valuations provided by TTMzero's solution empower the customer to mitigate risks and enhance their market-making capabilities.

Key benefits

1. **Enhanced accuracy:** TTMzero's sophisticated Mark-to-Model valuations ensure precise pricing of complex OTC derivatives.
2. **Timely responses:** The API-based solution provides responses within seconds.
3. **Comprehensive insights:** The detailed data set, including Fair Value, Forward Prices, Volatility Surfaces, and Greeks, equips the customer with a thorough valuation of their financial instruments.
4. **Seamless integration:** The API's design allows for easy integration with existing systems, minimising disruption and ensuring a smooth transition.
5. **Scalability:** The solution's ability to handle bulk requests makes it scalable and suitable for large financial institutions.

Conclusion

By choosing TTMzero, the customer not only gained a reliable secondary valuation source but also significantly enhanced their risk management capabilities and market-making efficiency.

With TTMzero's advanced technology and proficient expert team, the customer transformed their approach to managing complex financial instruments, ensuring accuracy, reliability, and speed.