

# Turkish Economy Bank Selects FINCAD Analytics for FX and Interest Rate (IR) Options Pricing and Risk

## Highlights

### Client

Turkish Economy Bank

### Business objectives

- Support a new ALM project
- Calculate options prices and Greeks
- Calculate cash flows for inflation index bonds

### Requirements

- Pricing and risk coverage for exotic instruments
- Flexible valuation and risk solution able to be easily integrated with existing risk system

### FINCAD solution

- FINCAD Analytics Suite for Developers

### FINCAD features

- Valuation and risk analytics suite for simple through to exotic derivative and fixed-income instruments
- Easy-to-use software development kit for integrating FINCAD valuation and risk capabilities into new applications

### Success factors

- Fast and accurate functionality for pricing approximately 3000 FX and IR instruments
- Easy calculation of expected inflation rates and cash flows of inflation indexed bonds
- Necessary pricing and risk data to fuel Basel III and BRSR reporting
- Flexible valuation and risk technology for adapting to future regulatory and market change

## Situation

Turkish Economy Bank (TEB) is a partner of one of the world's largest financial groups, BNP Paribas, and is active in commercial, private and retail banking. TEB's clients consist of financial institutions, large corporations, small-to-medium-sized businesses and private customers.

TEB set forth on an asset-liability management (ALM) initiative. As part of this project, the bank required the ability to calculate options prices and Greeks, and cash flows on inflation index bonds.

At the onset of the project, TEB had planned to calculate pricing for their products using their existing risk management solution. However, the bank targeted several new types of instruments that they wanted to add to their portfolio, including options caps/floors, digital caps/floors, cross currency swaps and bond options. These instrument types could not be priced or risk managed with the existing system. Therefore, TEB began looking for a best-of-breed valuation and risk solution that provided coverage for these complex instruments. The bank also required that the new solution be based on flexible architecture, so it could be easily integrated with their existing risk management technology stack.

## FINCAD's Solution

Consultants working with TEB on their current risk management system recommended FINCAD Analytics Suite for help pricing complex instruments. Upon further research, TEB management found that the solution was an ideal fit for their business needs.

FINCAD Analytics Suite is a sophisticated, yet easy to use, valuation and risk analytics library for derivative and fixed-income instruments. FINCAD also provides a software development kit for integrating FINCAD Analytics Suite valuation and risk capabilities into new applications or for augmenting existing systems.

TEB uses FINCAD to generate prices and risk sensitiveness of all FX and interest rate (IR) options in their portfolio. "Using FINCAD, we can easily calculate expected inflation rates and cash flows of inflation indexed bonds, the fair value, Greeks, and probabilities of FX and IR options for differentiated and exotic products," said Arzu Aksu, Project Manager at TEB, IT side.

## About FINCAD

An established leader with more than 25 years of experience, FINCAD provides innovative and trusted financial analytics software to organizations worldwide. With deep market understanding, a client-centered business approach, and unmatched quantitative and software engineering expertise, FINCAD is uniquely positioned to lead the market in enterprise valuation and risk technology. FINCAD serves more than 1,000 organizations across the globe. To learn more about FINCAD's award-winning solutions, please visit [fincad.com](http://fincad.com).

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TEB's Asset Liability Management, Market Risk and Business Analytics departments all rely on FINCAD results to aid in decision-making.

## The Results

TEB utilizes FINCAD Analytics Suite on a daily basis for pricing approximately 3,000 FX and IR instruments. The bank was pleased to find that the FINCAD solution was operational in a rapid timeframe. Using the developer toolkit, the bank was able to set up more than 25% of their products in just three months. "FINCAD Analytics Suite is one of the best solutions for pricing all aspects of derivative products traded in major financial markets around the world," commented Aksu.

Since implementing the solution, the bank has benefitted from the ability to price a wide range of derivatives products and to do so accurately. "FINCAD offers several differentiated functions and models for pricing FX and IR options. This valuable functionality has enabled us to customize as we need according to TEB's portfolio," stated Aksu.

TEB also relies on the FINCAD solution to meet the regulatory reporting requirements of both Basel III and the Banking Regulation and Supervision Agency of Turkey (BRSA). Prices and Greeks generated in FINCAD are used as inputs that feed regulatory reports.

Looking forward, TEB anticipates that the flexibility of FINCAD technology will enable them to easily adapt to inevitable market and regulatory change. "As regulations evolve and increase, we're seeing the importance of risk management rise as well," said Aksu.

Mustafa Ulak, Manager of Risk Management at TEB added, "FINCAD Analytics Suite has given us access to timely, accurate risk data, and the freedom to price a multitude of different instruments. Having these key abilities will be an important part of complying with current regulatory demands and will help us adapt to future changes in regulation and the overall marketplace."

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Arzu Aksu, Project Manager at Turkish Economy Bank