

## Highlights

### Client

Arca Vita Spa

### Business objectives

- Introduce powerful analytics libraries
- Model structured bonds
- Perform scenario analysis

### Requirements

- Easy-to-use and highly reliable software solution
- Ease of integration with Excel and other existing systems

### FINCAD solution

- FINCAD Analytics Suite for Excel

### FINCAD features

- User-friendly derivatives valuation solution
- Cross-asset coverage of derivatives and fixed income instruments
- Access to FINCAD's knowledgeable support services team

### Success factors

- Ability to perform detailed ALM and scenario analysis
- Ability to constantly monitor portfolios
- Flexible curve building

## Situation

Founded in 1987 and based in Verona, Italy, Arca Vita Spa offers life insurance services to retail, private and corporate clients. As of June 2010, Arca Vita Spa has operated as a subsidiary of Unipol Gruppo Finanziario S.p.A.

Arca Vita required a robust analytics library for derivatives valuation. Initially the firm attempted to build their own analytics libraries in Microsoft Excel®, however they soon realized a more powerful tool was needed for performing advanced analysis.

When Arca Vita set forth on their technology evaluation process, they had requirements for a solution that could allow them to model numerous structured bonds, and the ability to perform scenario analysis. From a usability standpoint, Arca Vita wanted the solution to be easy to work with, highly reliable, and capable of integrating with Excel.

As such, management at the firm moved forward with evaluating various vendors in the marketplace. Arca Vita did consider a popular terminal platform, but ultimately found that the solution lacked the sophisticated analytics libraries that it needed. The firm found this level of sophistication in FINCAD.

## FINCAD's Solution

Arca Vita selected FINCAD Analytics Suite for Excel, a user-friendly risk management and derivatives valuation solution. Offering extensive cross-asset coverage of derivatives and fixed income instruments, FINCAD Analytics Suite is the industry's easiest to use valuation tool.

Alberto Tortilla, of Arca Vita's Finance department, handles asset and liability management (ALM) analysis, financial reporting and scenarios, and participates in the product development process. Alberto uses FINCAD on a quarterly basis, mainly for bootstrapping curves, including calculating zero coupon curves, pricing structured bonds and calibrating interest rate models and the LIBOR market model (LMM).

Once Alberto builds curves using FINCAD, the curve data is populated in Excel. Those spreadsheets are then loaded into Matlab where further risk and performance calculations are run.

## About FINCAD

An established leader with more than 20 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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## The Results

Arca Vita has found that FINCAD Analytics Suite provides a straightforward interface, and the right level of functionality for their needs. "FINCAD software is both practical and highly evolved. The solution makes it easy to choose the right instrument and the right function, which proves a big time-saver in my job," commented Alberto. "Additionally, I've found FINCAD's support team to be very efficient and helpful in assisting me with any technical questions," he added.

Arca Vita relies on FINCAD for support in the following specific areas:

**Bond Valuation:** Arca Vita typically runs ALM analysis on their insurance portfolios, and therefore needs to price vanilla and structured bonds. To do this, Alberto uses another system to download the volatility of EUR, USD and GBP swaptions, and EUR, USD and GBP caps and floors for different strike prices and different maturities.

Using FINCAD libraries, Alberto is then able to obtain a series of matrices with strike prices and maturities. This data is then inputted into Arca Vita's ALM software. "FINCAD enables us to constantly monitor our portfolios, and conduct detailed ALM analysis, helping us meet requirements of Solvency II," said Alberto.

**Term Structure of Interest Rates:** In his role, Alberto is tasked with determining the optimum time horizon and the degree of risk for Arca Vita's insurance products.

Alberto utilizes FINCAD libraries to build the term structure of interest rates under the Hull and White model. With this structure, Alberto is then able to calculate the evolution of the initial cash deposit, and run Monte Carlo simulations to obtain the percentiles on different time horizons.

From there, Alberto uses the cash deposit evolution and the percentiles previously obtained in Matlab libraries to successfully determine the optimum time horizon and the degree of risk. Alberto commented, "FINCAD helps us efficiently get all the information we need to compile and update the contractual documentation of our products."

## Forward-Looking Plans

Looking towards the future, Arca Vita plans to leverage their FINCAD solution to help them develop new insurance products, such as unit-linked contracts. Specifically FINCAD will aid the firm in providing accurate calculations of the indicators they need to offer new products. These include grade of risk, optimal time horizon and performance scenarios.

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Alberto Tortilla, Finance Department, Arca Vita