

FERNBACH-Software implements dynamic strategies to achieve higher margins

Why Norddeutsche Landesbank Girozentrale (NORD/LB) chose FERNBACH's FlexFinance® Margin Optimiser

NORD/LB increased the income potential for its interest-based savings products by implementing FERNBACH's Margin Optimiser.

"FERNBACH's Margin Optimiser helps us map and monitor our core deposits more efficiently," said Dr Michael Akmann, Head of Asset Liability Management at NORD/LB. ***"We found the solution convincing right from the start, because it offers a unique combination of innovative financial market analysis, in-depth research carried out by the University of St. Gallen, and FERNBACH's technical expertise on the software side."***

Managing risk: the challenge for NORD/LB

Interest-based products provide one of the most important sources of income for NORD/LB. The uncertainty of future interest rates and cash flows in retail business presents a major challenge to NORD/LB for asset and liability management (ALM). The difficulties of dealing with such risks are compounded by customers' withdrawal and cancellation rights, making risk management extremely difficult to calculate.

FERNBACH as first choice

NORD/LB decided to move from looking to the past when deciding what to do in the future and to switch instead to using FERNBACH's stochastic approach to ALM. This approach implements the latest academic research concerning optimal decision making in cases of uncertainty.

FERNBACH's FlexFinance® Margin Optimiser calculates the most profitable allocation of money for the present time and transparently evaluates the available alternatives by integrating future developments into the current strategy.

At a series of workshops FERNBACH hosted in Hanover, Dr Akmann was shown how FERNBACH's FlexFinance® Margin Optimiser analyses three key inputs: the volume of a bank's savings, the current market interest curves and the actual rate of interest the bank pays to its customers. The software then uses stochastic optimisation to model an optimal replication portfolio.

Benchmark study: do your homework first

To provide NORD/LB with a detailed insight into the Margin Optimiser's key benefits a benchmark study was conducted at the bank.

The Institute for Operations Research and Computational Finance at Switzerland's prestigious University of St. Gallen was enlisted to examine 10 years' worth of NORD/LB's historical data. The centre is renowned for its competence in the field of stochastic optimisation. The benchmark study simulated month by month figures. After taking risk, liquidity, and profit margin into account the results spoke for themselves. The benchmark study conclusively proved that NORD/LB could generate additional profits by investing the core deposits more efficiently, had the bank been using FERNBACH's FlexFinance® Margin Optimiser.

These results convinced NORD/LB that this new dynamic approach to ALM was preferable to its existing static policy, from the perspective of both risk and income.

About NORD/LB

The NORD/LB Norddeutsche Landesbank Girozentrale, a leading universal bank in Germany, concentrates its business activities in the North and North-Eastern Europe. It was established in 1970 through a merger of several independent financial institutions and is ranked as one of the largest banks in Germany today.

Key data

- Consolidated balance sheet: 201.5 billion EUR
- Headquarters: Hanover, Brunswick and Magdeburg in Germany
- Foreign branches: London, New York, Shanghai and Singapore
- Subsidiaries: London, Luxembourg and Switzerland
- Employees: 5,563
- One of the largest banks in Germany

Solution

FlexFinance® Margin Optimiser

Key benefits

- Customer loyalty and market expansion via competitive interest rate fixing
- Generation of optimum investment strategies
- Accurate quantification and comprehensive simulations increase security
- Long-term stabilisation of interest income using approved methods
- Simulation of several future developments obviates the need for amendments and compensation payments



FlexFinance® Margin Optimiser

FlexFinance® Margin Optimiser enables banks to attain higher income at the same level of volatility or investment rate while also enabling lower funding costs.

FlexFinance® Margin Optimiser ensures that assets or liabilities with indefinite maturities are managed dynamically. The simulation of potential market conditions, customer behaviour and appropriate investment alternatives are calculated iteratively. FlexFinance® Margin Optimiser then presents the 'best' investment strategies through proposing the optimum replicating portfolios for the relevant assets.

• Scenario techniques

FlexFinance® Margin Optimiser calculates the optimum portfolio structure for each set of criteria. Multiple scenarios for future interest rates, customer curves and volumes are analysed. During these scenarios, the best buying and selling decisions are proposed for a particular development.

• Multiple-period, dynamic optimisation

When preparing the current portfolio structure, transactions are carefully determined in several steps for each scenario. This 'dynamisation' of investment and funding strategies, in comparison with a static replicating portfolio, leads to more increased and more stable margins.

• Dynamic investment and funding strategies

The resultant decision adheres to the optimum risk profile and is more efficient due to multi-step dynamic optimisation of the portfolio which anticipates future reinvestment risk.

About the Institute for Operations Research and Computational Finance at the University of St. Gallen

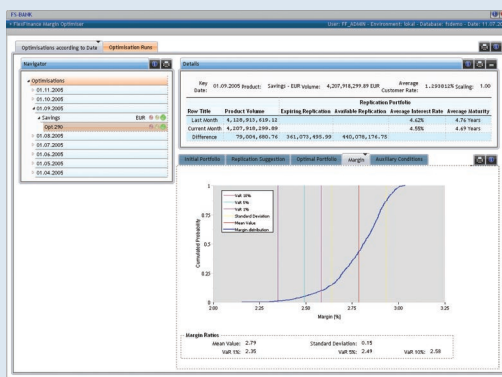
The Institute for Operations Research and Computational Finance at the University of St. Gallen was founded in 1981. Its core competence is in fundamental and applied research into stochastic optimisation and simulation. Modern, quantitative models and methods are designed, developed and implemented in research and consultation projects with companies mainly from the finance and energy industries.

About FERNBACH Luxembourg | Frankfurt | London | Zurich | Hong Kong | Vienna

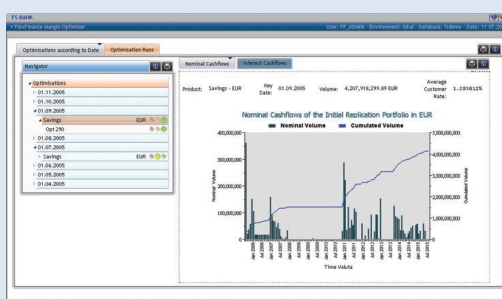
FERNBACH is a global leader in the provision of comprehensive solutions for the finance industry. Modular service bundles for Multi-GAAP accounting, risk, compliance and loan enable our customers to optimise business processes.

| International Headquarters Luxembourg
FERNBACH-Software S.A.
1a, Parc d'activité Syrdall, L-5365 Munsbach
Tel.: +352 402244-1, Fax: +352 402244-310

| International Free Call 00800 33762224 | Email info@fernbach.com | Web www.fernbach.com



Optimum risk quantification and control



Replicating portfolio: development of cash flows over time

The FlexFinance® Margin Optimiser offers:**• Dynamic replication ensures competitive interest rate fixing policies**

By analysing thousands of scenarios of yield curves, customer rates and volumes FlexFinance® Margin Optimiser presents efficient investment and funding strategies which consider the relevant risks thus enabling financial institutions to stabilise and increase interest income for the long term.

• Optimum investment decision

Owing to the estimation process used, investment decisions are clearly more resistant to changes in distribution parameters for scenario generation than those estimated by static methods such as moving averages.

• Sound risk ratios

From the scenarios as well as the temporal development of transactions and the portfolio structure, the distribution of income can be projected into the future. From this, other risk ratios such as the value at risk can be derived and the effects on the risk profile from different restrictions or assumptions regarding trends can be analysed.

• Quality based on expertise

The methodical fundamentals of the Margin Optimiser are due to many years of research projects by the Institute for Operations Research and Computational Finance at the University of St. Gallen, a centre recognised for its competence in the field of stochastic optimisation (decision making in cases of uncertainty).

• Avoiding compensation payments

FlexFinance® Margin Optimiser calculates the weights in the individual maturity bands so that no compensation payments have to be made for changes in the replicating portfolio.