prometeia

PROMETEIA
SOFTWARE SOLUTIONS

Active Balance Sheet Management

WE ARE A LEADING PROVIDER OF SOFTWARE SOLUTIONS AND CONSULTING SERVICES IN THE RISK, WEALTH AND ASSET MANAGEMENT SPACE

Prometeia is a global firm of quantitative experts and software engineers, dedicated to applying financial modelling, economic research and data science to solve complex business and regulatory challenges. Founded in 1974 as an independent institute for economic research by a group of young university professors, for half a century Prometeia has been developing innovative software solutions, studies, and reports for banking and insurance groups, institutional investors and public organizations. Our mission is to combine academic excellence with industry experience, integrating macro-economic research, quantitative analysis, business consulting and software development. This distinctive mix of competences has made Prometeia a leading European company in risk, asset and wealth management solutions. Prometeia's technology and specialized advisory are chosen by 300 customers in over 20 countries around the world.

OUR COMBINATION OF RISKTECH PROPOSITION, QUANTITATIVE ADVISORY, AND FINANCIAL AND ECONOMIC RESEARCH MAKES OUR BUSINESS MODEL UNPARALLELED IN TODAY'S MARKET

Prometeia's approach to Enterprise Risk Management is based on the development of quantitative models and advanced analytics. The design of highly specialized software solutions combines cutting-edge technologies and data science techniques with the knowledge of our subject matter experts and our ability to successfully respond to the growing demands of international regulation. Our deep understanding of financial markets, derived from proprietary economic research, adds a unique element to Prometeia's business model and value proposition.

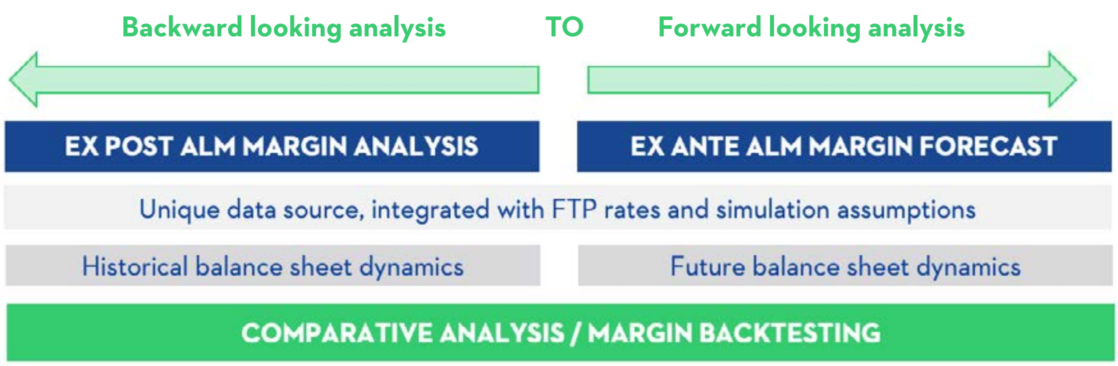
OUR FLAGSHIP RISK & PERFORMANCE MANAGEMENT SOLUTIONS

Award-winning analytics and leading-edge technologies join forces in the integrated, highly scalable software solutions developed by Prometeia. Prometeia's solutions are based on industry best practice technology such as Microsoft framework, Hadoop, and APS for unparalleled performance. Implemented and supported by a global team of functional consultants and technology experts, our innovative software solutions anticipate needs and trends across the full spectrum of Risk and Finance industry, while excelling in reporting, data management, security, auditability, and automation.

By unifying liquidity, credit and interest rate risk into a methodologically consistent framework, ERMAS supports the Treasury department in the definition of hedging strategies and operational A/L management.

ASSET & LIABILITY MANAGEMENT

ERMAS enables your bank to respond quickly to the evolution of its business cycles, investment decisions and organizational structure. Approached in this way, ALM becomes a key strategic process to steer the banking business and foster the financial performance of the bank. Together with an extensive coverage of financial products, ERMAS offers a wide range of modelling capabilities for demand deposits, prepayable loans, mortgage pipelines, revolving facilities and off balance sheet items. Using these facilities, banks can easily integrate their own behavioral assumptions into the system, or benefit from Prometeia's predefined econometric models. Key Risk Indicators are produced according to both earnings and economic value perspectives, backed by the comprehensive treatment of pricing rules, embedded options and complex financial structures. ERMAS simulation and forecasting tools are fully integrated with the backward-looking analysis of ALM & Treasury profitability, based on the allocation rules set in the FTP framework.



Advanced cash-flow modelling techniques for the analysis of funding, credit and interest rate risks.

Multidimensional views of the balance sheet structure, maturity and composition, both for past and future time periods.

Balance Sheet and P&L forecasting, explicitly designed to support strategic planning and portfolio optimization.

Interactive simulation of future business and market scenarios, automatically comparable with realized P&L of past periods.

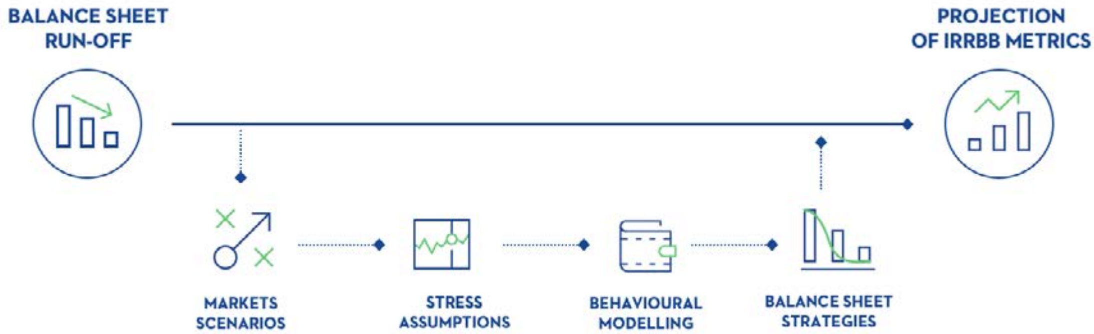
What-if analysis of alternative hedging strategies and assessment of optimal funding / collateral mix.

Flexible system setup supporting group consolidation and complex divisional structures, via Funds Transfer Pricing models.

IRRBB & CSRBB ANALYSIS

The ERMAS module is designed to implement the latest BCBS and EBA methodologies for IRRBB and CSRBB, integrating the functionalities already available in other ALM and Liquidity Risk modules.

The ERMAS IRRBB & CSRBB module allows its users to perform real-time dynamic simulation of the balance sheet, earnings and economic value, using a wide spectrum of methodologies and tools. The balance sheet is projected assuming constant or dynamic simulation hypotheses, which can be defined directly by the user in terms of new business volumes, pricing criteria, and changes in behavioral patterns (e.g. prepayments and non maturity deposits), for easy comparison of outcomes and variance analysis. Simulation and evaluation of hedging strategies is straight-forward through manual and automatic generation of derivatives based upon the dynamics of the hedged portfolios. Ultimately, users can integrate earnings projections with market value and sensitivity analysis at future dates, which is mandatory to implement the latest guidance set by the Basel Committee and by the European Banking Authority, for both AC and FVOCI exposures.

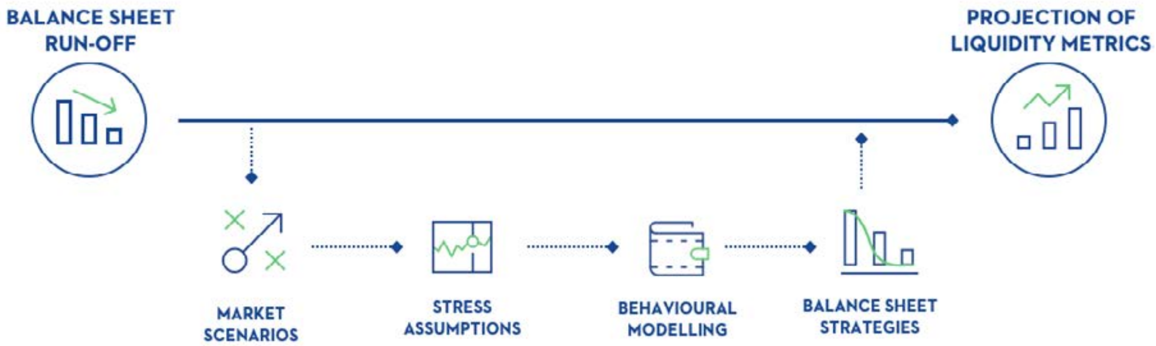


Full coverage of Banking Book products, accounted both as AC and FVOCI items, in terms of Gap, Basis and Option Risk.	**Possibility to adjust IRRBB profile by expected credit losses, by feeding sector-based dynamics of credit risk parameters like PD and LGD.**
Full support to rate-dependent behavioral models, covering prepayments, volume attrition, credit lines, pipelines, NPEs, etc.	**Automatic generation of optimal hedging portfolio, designed to stabilize or maximize a predefined risk indicator under given constraints.**
Static and dynamic sensitivity analysis, performed according to the latest BCBS and EBA guidance on Non Traded Market Risk.	**Predefined and customizable reporting structures for all managerial and regulatory analyses, with alternative formatting options.**
Full management of negative interest rate scenarios through user-defined floor libraries.	**Flexible interest rate scenarios setup, enabling to meet the six prescribed BCBS shock scenarios.**

ERMAS enables banks to take a proactive approach to optimizing liquidity costs under BCBS regulatory constraints, both in the short and medium-long term.

LIQUIDITY RISK MANAGEMENT

Leveraging a powerful cash flow engine, ERMAS quantifies the liquidity profile of the bank for the present and future time periods. ERMAS provides a comprehensive representation of the bank's cash position – including a forward-looking analysis of Counterbalancing Capacity and Liquid Assets Buffer - with a dynamic perspective and under alternative stressed assumptions. Prepayment models, rollover and drawn-down assumptions, and impairment adjustments are fully integrated into the liquidity projection, allowing complete flexibility in the definition of product behavior. Managerial liquidity works alongside regulatory liquidity analysis in a consistent and unified analytical environment, offering the possibility to use the same hierarchical structure and stress conditions or to adapt the reporting view to complementary managerial needs.



Multidimensional views of the liquidity position, for unlimited breakdown dimensions and daily time periods.

Interactive workspace for managing liquidity strategies and metrics, enabling the users to re-run analyses and simulations in real-time.

Automatic production of all regulatory reports, with the possibility to drill-down each result to understand the underlying dynamics.

New business trends defined with alternative techniques such as new volumes, target point/ average amounts, growth percentages, etc.

High flexibility in modelling existing products, customer behaviors, new business strategies and bank's ability to liquidate its HQLAs.

Liquidity risk-adjusted pricing tools, allowing the users to simulate different LTP strategies based on Liquidity Stress Tests results.

INTEGRATED BALANCE SHEET MANAGEMENT

A holistic view of the business and market dynamics affecting the balance sheet has become a strategic need for Risk, Finance and Treasury departments.

- EARNINGS AND MARKET VALUE DYNAMIC PROJECTION
- DYNAMIC PROJECTION OF LIQUIDITY RISK INDICATORS AND SUPPORT TO FUND PLANNING
- DYNAMIC PROJECTION OF CREDIT RISK INDICATORS AND SUPPORT TO PROVISIONS & CAPITAL PLANNING
- SUPPORT TO INTERNAL AND REGULATORY STRESS TESTING

Forecasting the evolution of balance sheet, P&L and capital requirements is a compelling need in any financial organization. In the current market scenario, a robust simulation approach must consider the intrinsic relationship between market, credit and liquidity risk factors in order to identify potential 'spiral' effects and evaluate the possible mitigation actions. The ERMAS Balance Sheet Simulation module complements the silo-based analyses of individual risk drivers with an integrated and interactive forecasting tool, which facilitates the modelling of the interrelation between market scenarios, new business strategies, and credit risk parameters. Prometeia's solution is unique in ensuring a real-time, interactive generation of scenario-based simulations, built on an 'in memory' processing technology.

Interactive interface enabling users to verify in real-time the impact of the simulation assumptions on final P&L and RWA results.

User-friendly tools to model volume and pricing assumptions, aligned with the commercial and trading strategies of the bank.

Integrated financial and credit risk data management capabilities, to improve data quality process and reduce reconciliation effort.

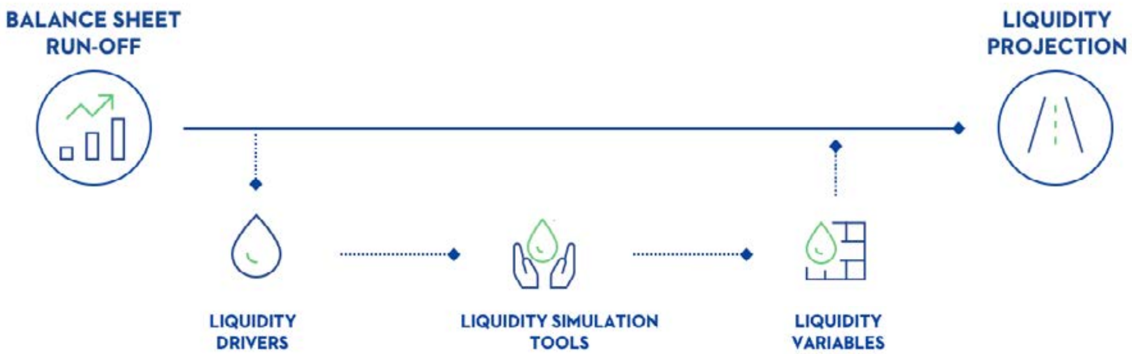
High-performance analysis workflow and optimal computing engine leading to unparalleled performance and scalability.

Product catalogue with multiple planning trees enabling complex waterfall logic to insert strategies for new volumes and spreads.

Embedded pivot reporting with integrated view of P&L projection, Liquidity, Credit and IRRBB indicators, and Capital Adequacy ratios.

DYNAMIC PROJECTION OF LIQUIDITY RISK INDICATORS AND SUPPORT TO FUND PLANNING

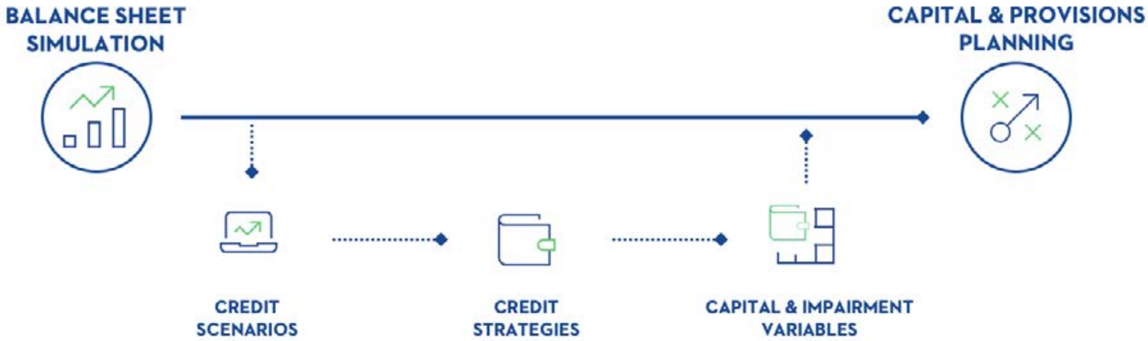
Within our integrated balance sheet simulation, the user can analyze the impact of alternative funding and collateral management strategies on regulatory indicators and internal liquidity metrics, coherently with new business, roll-over and prepayment assumptions. The flexibility of the system allows the combination of high level strategies defined by the Funding Plan of the bank with specific liquidity assumptions, such as securitization issuance programmes or secured funding plans. This integrated framework supports both CRO and CFO departments to steer liquidity strategies in tune with business targets and regulatory compliance, both in the short and medium-long term.



Graphical user interfaces supporting the definition of liquidity assumptions, collateral management and stress scenarios.	**Possibility to interactively change the underlying assumptions from the simulation GUIs and directly preview related impacts.**
Projection of forward-looking LCR and NSFR, starting from a standard regulatory chart of accounts or a user-defined product catalogue.	**Optimization tools to minimize the expected cost of funding for given levels of regulatory ratios and risk appetite.**
Tools to manage the dynamics of existing and new business related to securitizations and Central Bank refinancing programs.	**Cross-border functionalities supporting different consolidation scopes and multi-currency views.**

DYNAMIC PROJECTION OF CREDIT RISK INDICATORS AND SUPPORT TO PROVISIONS AND CAPITAL PLANNING

The credit risk simulator, fully integrated with the other balance sheet management modules of ERMAS suite, enables users to project RWAs, future capital requirements, provisions and other credit risk variables, in line with the latest IFRS9 and BCBS principles. The analysis covers all asset classes, whose elementary components (expected and unexpected credit losses, recoveries, etc.) are projected under base-line and adverse scenarios. Within the dynamic simulation framework, output variables are projected according to the evolution of credit risk factors, which are consequently linked to a set of macro-economic drivers via external assumptions or user-defined satellite models. The simulation can be run using alternative methodological approaches to accommodate the specific purpose of the analysis, such as EBA Stress Test, ICAAP exercises, definition of internal credit strategies or capital budgeting.



Embedded satellite models defining the evolution of PDs, LGDs and EADs under multiple scenarios, linked to macroeconomic drivers or loaded exogenously as input term structures.

User-friendly interface and Equation Editors for the definition of all simulation parameters and the configuration of what-if analysis.

Full integration with other ERMAS Credit Risk modules, such as RWA or IFRS9 impairment calculation, ensuring a full consistency with the staging definition and transition matrixes.

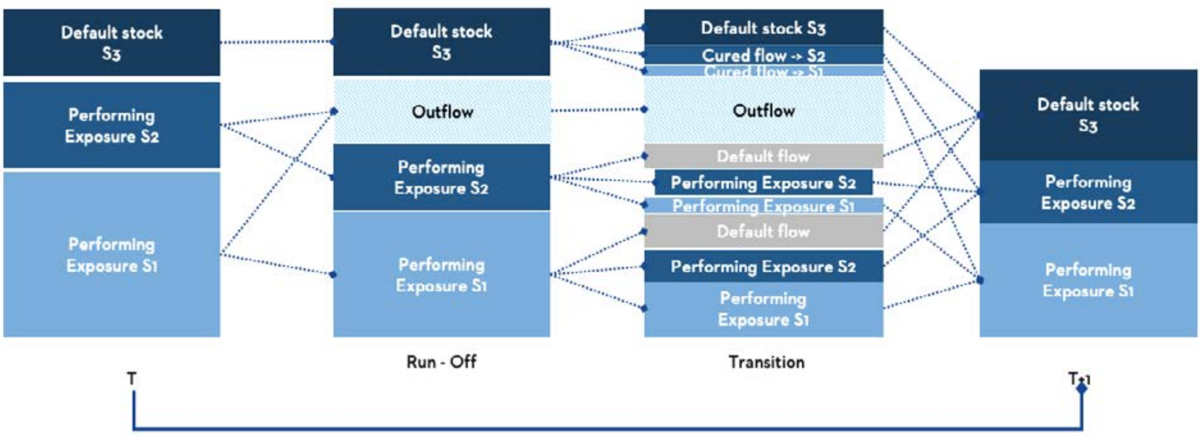
Interconnected and consistent calculation of performing and non-performing volumes, EIR, stock of provisions and EAR using the Standard or the IRB approach.

Support to multiple credit strategies: e.g. matrix driven portfolio recomposition, direct evolution forecasts, constrained evolution, etc.

Possibility to insert custom measures to monitor the evolution of internal KRIs, such as RORAC and other credit risk-adjusted performance ratios.

SUPPORT TO INTERNAL & REGULATORY STRESS TESTING

ERMAS integrates the simulation of future NII and Credit Risk indicators by combining macroeconomic scenarios, credit parameters and satellite models, under the constant balance sheet assumption set by the EBA stress test, or with specific volume strategies defined for the ICAAP exercise. The framework is fully compliant with the reporting requirements set by the international regulators, and offers its powerful drill-down capabilities to rationalize the results and guarantee full auditability of the methodologies used. ERMAS is designed to automate the EBA EU-Wide Stress Test Exercise, specifically focusing on the Net Interest Income and the Credit Risk templates, ensuring consistency in the projection of the relevant metrics and an easy production of the final templates. ERMAS is a one-stop solution also covering the generation of the initial state templates, leveraging the ETL capabilities of the suite for the advanced data collection.



Ease and flexibility to define the chart of accounts according to the regulatory template, as well as stress scenarios for macroeconomic variables, interest rates, and sovereign spreads.

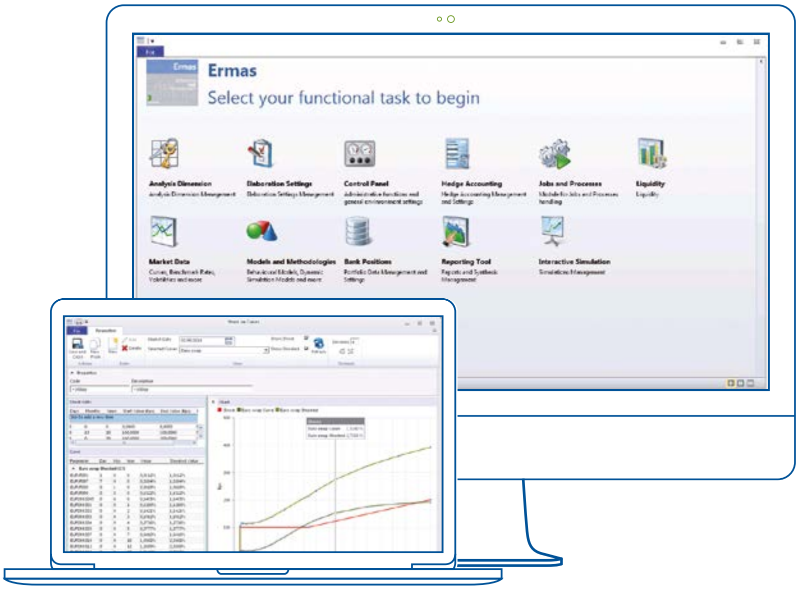
Automated production and full auditability of all EBA templates: historical data, initial state and projections.

Equation Editor to support the setup of multiple pass-through formulas and satellite models, linking stress assumptions with risk factors.

Ability to break down the final results by risk factor or any other user-defined dimension, drilling down to the single transaction.

RISK DATA MANAGEMENT

ERMAS Data Management Module, the foundation of Prometeia suite, provides banks with a highly flexible, comprehensive tool for effective data governance in full compliance with BCBS and GDPR principles.



ERMAS Data Management Module can be easily adapted to the IT infrastructure of each bank through graphical user interfaces, which allow full customization of its relational structure and ETL functionalities. This component offers the bank powerful tools to define, load, verify, archive, and synchronize data, as well as to carry out quality checks and generate reports. The Prometeia proprietary data dictionary can be enhanced and expanded to meet any management information need, for a wide catalogue of financial products and instrument types. Explicitly designed for multi-user and multi-entity connections, rigorous user authorization profiling and comprehensive auditing allow banks to manage data workflows with increased levels of complexity at no sacrifice to security.
All data activity, from simple importing to sophisticated syntax modelling, is streamlined with our advanced ETL application.

Full auditability, with clear visualization and monitoring of all job statuses and log files.

Remediation and normalization features designed to support data integration and cleansing.

Native library of data quality checks, covering all phases of the data workflow.

Customizable procedures for data aggregation, explicitly designed to ensure traceability and drill-down analysis.

Reconciliation facilities for input information with external data and benchmarks, at both aggregated and granular level.

Customizable data entry forms for the manual loading of transactions, supported by a default management tool and automatic editors.

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www.prometeia.com

risk.community@prometeia.com

+44 (0) 207 786 3525