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Solution primer

# OneSumX Asset & Liability Management (ALM)

ALM is as much an art as a science. As a consequence, an ALM solution should not only provide all the analytical tools to support the quantitative elements but also deliver flexibility both in setting up analytics and reporting, to allow expert interpretation of the analytical results. Where ALM was focused on interest rate risk in the past, a more holistic view of balance sheet risks is required today. Interest rate risk, both in the banking and the trading book cannot be viewed in isolation from liquidity and credit risk, funds transfer pricing, or capital management.



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## Asset & Liability Management (ALM)

Balance sheets have become more volatile – a result of changing term structures, optionality, better informed customers, and the use of derivatives. To manage the situation effectively, financial institutions need a solution that allows continuous risk assessment while supporting exploration of multiple scenarios and simulations, both strategically and on an ad-hoc basis.

This will enable banks to take a pro-active approach towards risk management, developing and improving their strategy to avoid losses and maximize profitability.

Large financial institutions ideally deploy a centralized ALM solution that offers a comprehensive view of their risks, both locally and globally. This solution should integrate the regulatory perspective with the internal perspective, aligning with strategic goals and the organization's risk appetite. Furthermore, the solution should be fully embedded within the organization, supporting and facilitating senior management oversight, risk management policies, and procedures.

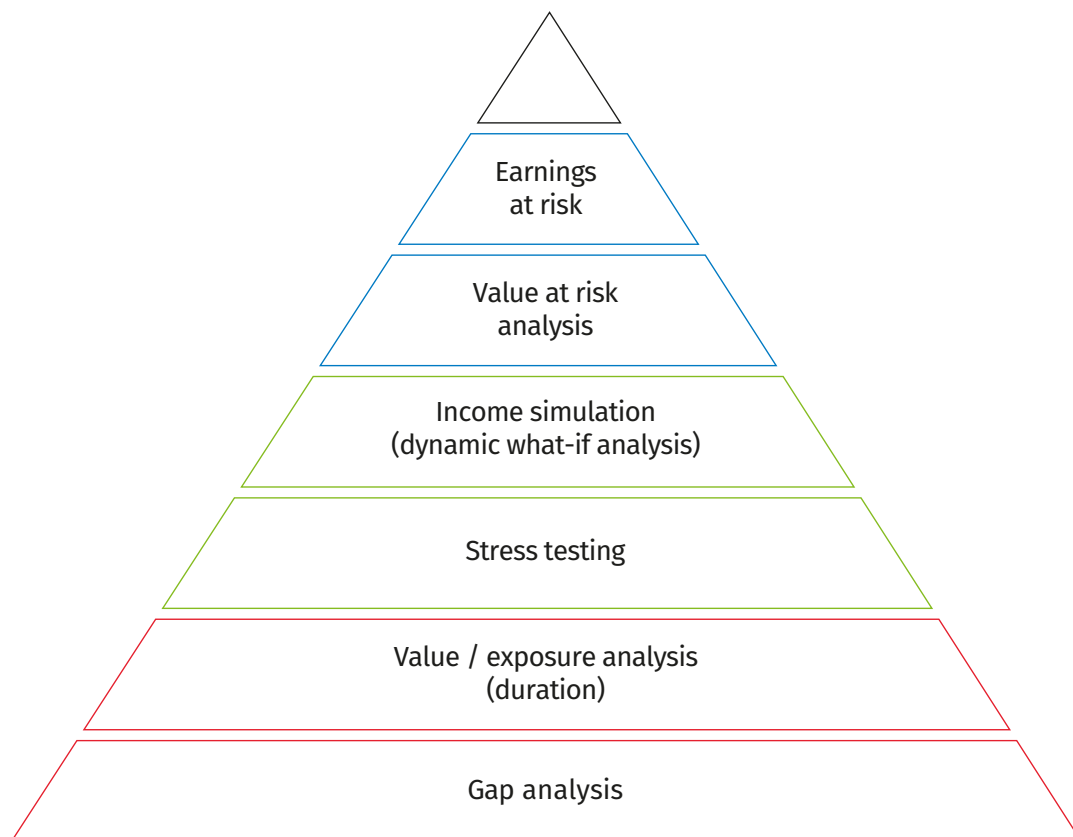
OneSumX is a best-in-class solution that addresses the diverse needs of the integrated balance sheet management process of banks from ALM, FTP, Liquidity, Credit Risk, Market Risk to Economic Capital, and Regulatory Capital, with the ability to provide all needed analytics.

- Capability to map a wide variety of financial instruments from basic loans/deposits to complex exotic options, including pricing models.
- Is contract-centric and provides financial events generation based on contractual attributes.
- Offers comprehensive modeling capabilities including Static (run-off view), Dynamic (constant balance sheet and growth assumptions), Behavioral Modelling covering banks' customers' all possible interactions (early withdrawals, prepayment, credit facilities drawings, renegotiation, etc.)
- Stressed events are generated based on scenarios (individual stress and complex combinations) supporting both static and dynamic approaches.

- Integration of latest regulatory requirements such as LCR/NSFR/ALMM, RWA, SA-CCR, Securitization, FRTB, Capital ratios
- Lineage and audit capabilities provide access to all formulas, lineage, drill-down, audit trail, and detailed documentation to support the validation and acceptance processes.

Further, as regulators are increasingly focused on ALM, regulatory metrics should be analyzed together with internal measures, preferably using the same solution, calculated on the same sets of high quality data and bank-specific modeling assumptions as the internal calculations.

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# Balance sheet modeling

OneSumX ALM offers flexible balance sheet modeling and accommodates multiple structures on unified, standardized data used across different mapping and analysis structures to allow multi-entity implementations and accommodate different user types, each having their view on the balance sheet. The full balance sheet can be modeled, including equity, off-balance, and balancing accounts for cash flows as well as accruals.

Our solution incorporates a broad range of pricing models including:

- Discounted cash flow model
- Capital asset pricing model
- Black-Scholes (generic)
- Bouaziz-Briys & Crouhy
- Hull-White
- Ikeda & Kunitomo
- Reiner & Rubinstein
- Turnbull & Wakeman
- Margrabe
- Trinomial Trees
- Libor Market Model

The pricing model allocation takes place by instrument type as a default, but can be modified according to the needs of the customer. Embedded options considered to be executed efficiently are supported through our set of contract types such as put-able/call-able contracts and cap floor contracts with various exercise features (European, American, Bermudian).

Embedded options considered to be exercised inefficiently can be modeled through the prepayment functionality where users can define deterministic and contingent prepayment speed models.

Yield curves can be interfaced directly, derived from other curves such as spread added/subtracted or sum, based on discount factors or a product/ratio of discount factors and even modeled by a user-defined code if the standard options do not suit the user's needs. All standard business day conventions are available within the product.



Behavioral modeling can be applied via standard templates for prepayment, sale of A/L, replication, credit line drawings and many more. If standard templates are not sufficient, user-configured models can be entered directly in the user interface.

New production scenario templates are also foreseen for forecasting, where a user can easily configure volumes by product type with the new production characteristics different or equal to current production, reinvestment and rollover properties and even non-financial cash flows.

#### **Risk measurement**

Collecting the financial events e.g. interest or capital payments, capitalizations, pre-payments, withdrawals or option payments allows OneSumX to measure value, income and liquidity under current and stressed conditions of the underlying risk factors. Thus, the financial institution can stress ratings, default probabilities or interest rates – individually and/or jointly.

We provide firms with a consistent view on earnings/income, liquidity, and economic value including the variation of earnings and economic value under defined business strategies and risk factor scenarios (deterministic, probabilistic). Additionally, our solution provides extensive ALM functionality that allows easy modeling of the evolution of future balance sheets with regards to business strategies and customer behavior and the impact on value and income.

We incorporate a broad range of measures including:

- Nominal value
- Book value
- Fair value
- Sensitivity gap
- Tenor gap
- \$-exposure
- \$-duration
- \$-convexity
- \$-Greeks
- CE, EE, PFE, expected loss, etc.

Apart from the various value and exposure measures, our solution incorporates income and economic value measures like NII, EVE FXI, BI etc. It also includes extensive FTP functionality such as: rate assignment, accrual method, replication of non-maturing contracts, prepayments and cost elements.

The OneSumX ALM solution allows financial institutions to assess and measure market risk (currency risk, interest rate risk, equity risk, property risk, spread risk, volatility risk) using standard and advanced analytics (VaR, EaR) in respect to value and income in static and dynamic analysis.

With the robust dynamic simulation functionality, the bank combines risk and profitability over time resulting in an optimal balance sheet structure and performance.

#### **Risk management**

To support effective risk measurement the solution has an intuitive user interface, allowing end users to quickly run ad-hoc scenarios based on changed assumptions, market risk factors or growth assumptions, as well as stress test various scenarios.

The in-built reporting tools provide rapid visualization of results for ad-hoc reporting, broken down by a combination of dimensions defined by the user. Standard reports are also provided to deliver an easy start for producing standard asset-liability committee reports.

#### **Regulatory compliance**

Our solution incorporates predefined templates for regulatory compliance such as interest rate risk in the banking book (IRRBB), liquidity coverage ratios (LCRs) and net stable funding ratios (NSFRs). We also support public disclosure reporting requirements on interest rate risk and liquidity risk set forth by the Basel Committee on Banking Supervision (BCBS).

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## OneSumX ALM

Within OneSumX ALM, every available product type on a financial institution's balance sheet can be modeled and valued, with cash flows generated on a financial events timeline for further analysis.

OneSumX ALM is based on our integrated data architecture and easily extensible into risk and finance areas. OneSumX allows senior management to monitor and control risk via our dashboard and ERM workflow capabilities.

The built-in workflow functionality in the OneSumX suite tailors the behavior according to the various users to help firms define the units responsible for the design and administration of a firm's risk measurement, monitoring and control functions.

In short, we offer:

- A clean, comprehensive view of risk, facilitating decision taking based on the right information
- Pre-built templates allowing users to take advantage of our wealth of knowledge and expertise
- A single source of data to ensure consistency, availability, reconciliation and accuracy across departments
- An enterprise-wide risk and profitability management picture
- Continuity between ALM and regulatory reporting submissions
- A dynamic balance sheet optimization



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## Related products

### **OneSumX for Regulatory Reporting**

OneSumX for Regulatory Reporting has been recognized in the industry as a leading solution over many years, receiving top places in Chartis Research Risk Tech 100 rankings for regulatory reporting, and awards from Banking Technology, Finance Monthly and Wealth & Finance International, among others.

### **OneSumX for Financial Risk Management**

As a contract centric integrated financial risk management solution, OneSumX for Financial Risk Management generates expected and unexpected cash flows based on anticipated events over the lifetime of the contract. These events reflect the outlook for the macro economy, market risk factors, the strategy of the firm, and the expected behaviour of its counterparties.

### **OneSumX for Business Analytics**

OneSumX for Business Analytics provides a quick yet powerful way to leverage the data and results held in the OneSumX platform and other external data sources, reaping the full benefit from the information generation efforts, and thereby improving ROI on existing infrastructure, complying with the supervisory demands for use of such data in decision-making and delivering the ability to operate in a more agile, responsive and forward-looking way for all levels of the financial organization.

### About Wolters Kluwer

Wolters Kluwer (EURONEXT: WKL) is a global leader in information, software solutions and services for professionals in healthcare; tax and accounting; financial and corporate compliance; legal and regulatory; corporate performance and ESG. We help our customers make critical decisions every day by providing expert solutions that combine deep domain knowledge with technology and services.

Wolters Kluwer reported 2023 annual revenues of €5.6 billion. The group serves customers in over 180 countries, maintains operations in over 40 countries, and employs approximately 21,400 people worldwide. The company is headquartered in Alphen aan den Rijn, the Netherlands.

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Learn more about the OneSumX for Finance, Risk and Regulatory Reporting solutions. [Click here.](#)

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