

Basel IV is a regulatory framework that helps banks meet goals beyond regulatory compliance. By calling on banks to examine risk in creative and demanding ways, it forces them to rethink their strategies and business models, ultimately allowing them to enhance growth, competitiveness and profitability – if they manage their organizations and their data well.

OneSumX for Basel 3

The latest Basel reforms will introduce challenges throughout your institution. The Compliance department will need to collect more and different pieces of data to apply required calculations, taking into account interdependencies among risk types. The Risk department will need to factor the constraints imposed by Basel IV into the risk and business optimization process to examine operations under normal conditions and to create simulations at a moment's notice during a crisis. Capital and balance sheet optimization for complex entity structures will be critical for proper capital adequacy monitoring and management.

Once your teams have attained the means to manage more data and integrate key functions to produce a clearer picture of complex risk relationships, you can employ these capabilities to address commercial needs, such as optimizing the balance sheet to fit a given risk appetite and financial performance goals, while staying within regulatory constraints. But first there needs to be a will and a way.

Compliance with Basel IV is not an option, but you do have choices when it comes to leveraging the framework and its practices for business. Supported by the right data management architecture, an opportunity exists to gain an edge over the competition, something that is especially critical in today's market. Given the heightened macroeconomic and geopolitical risks, your institution is being challenged to urgently improve its systems. What you may need most is greater flexibility and speed to continue to grow revenues amid the more rigorous regulatory backdrop. If you get this right, your business will grow stronger as you become a more competitive player with sustainable growth.

OneSumX for Basel

With OneSumX for Basel you receive a full, end-to-end Basel IV process from data integrity and lineage, through to finance and risk management, and into regulatory calculators and reporting.



Lineage explained

Balance and integration

The need to balance critical factors under Basel IV can be seen most clearly when it comes to capital requirements, especially for larger, more complex institutions. If you use an internal-ratings-based model, it must maintain a ratio of capital to risk-weighted assets that is at least 72.5% of the requirement calculated using a standardized approach. Having to meet a more stringent output floor than under earlier Basel guidelines, your organization may have to rethink its strategy to focus more intently on forward-looking capital projections and scenario analysis to optimize the cost of doing business – helping to retain competitiveness and maintain profitable business growth. These new complexities put additional stress on your regulatory reporting teams and existing risk infrastructures, as will other burdens, including sourcing of more granular data, and dealing with more calculation trials and increased demands on external and internal reporting.

A strong focus on data integrity will be needed to deliver the traceability, transparency, lineage and clarity that yields business-relevant information. Investing in data accuracy and sophisticated analytics – built into architecture that facilitates the integration of risk, finance and compliance functions – will allow your teams to make timely, well informed decisions to help manage risk more effectively, and

optimize revenues while meeting compliance and reporting obligations. Amid the more onerous demands of Basel IV, taking an integrated approach to implementing the new regulations, covering enhanced data management, high-frequency calculations and stress testing, as well as reporting accuracy, can help your organization apply its regulatory work to gain a business edge.

The data dilemma and the solution

Basel IV, first and foremost, is a set of prudential regulations, so financial institutions' primary duty is to achieve compliance. The framework's rigorous prescriptions - daily monitoring, enforcing of requirements throughout the process flow, not just at the end - demand that the same data be used across risk types, especially given the many interdependencies (see Figure 1 below). Another critical data management element is a robust finance and risk platform in which prudential risk calculations are fed into the relevant disclosures and regulatory reports. Institutions also must be able to monitor changes to the regulations and keep track of their impact through auditability and data lineage functions. With OneSumX for Basel you receive a full, end-to-end Basel IV process from data integrity and lineage, through to finance and risk management, and into regulatory calculators and reporting.

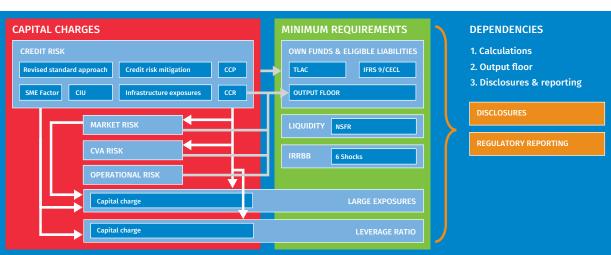


Figure 1.

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Stress testing regimes require banks to execute multiple calculations automatically and immediately. It has become customary to create multiple scenarios and conduct sensitivity analyses on a single indicator. OneSumX for Basel simulates risk-weighted assets based on several scenarios and, through advanced analytics, helps senior management understand the nature of the capital charge more effectively, including how it behaves under stress and how it affects a business segment's profitability.

The results are shown in a way that makes intuitive sense so that information produced for regulatory compliance may be used with ease to improve business decisions. The solution can handle regulatory calculations from different perspectives to optimize the process for compliance, finance and risk users alike, affording the ability to do stress testing and dynamic simulations to furnish more insight into key performance indicators for finance and risk.

Taking an integrated approach across multiple disciplines, OneSumX for Basel facilitates the balancing act of managing risk, meeting regulatory requirements and optimizing profitability. It is designed to be the solution that meets the vital twin objectives of making a bank a better business and a more compliant one (see Figure 2 below).

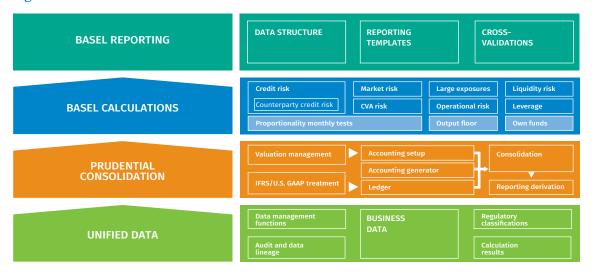
OneSumX for Basel can integrate finance and risk applications to combine prudential consolidation with risk metrics and regulatory content.

A solution for easing a complex, expanding set of burdens

Financial institutions of all sorts share characteristics that a data solution will have to address to meet Basel IV compliance demands and make the most of the opportunities for enhancing business. The precise system requirements for a given bank will depend on its unique circumstances: how big it is, what kind of business it does, where it operates and so forth.

Some rules will only apply to organizations of certain asset sizes. Under the prudential consolidation rules, larger organizations may have to file reports covering some or all of their operations to several national or regional authorities. An easy, transparent view on prudential consolidation, in combination with prudential risk calculations for consolidated financial statements, will be needed to offer the necessary structure and transparency.

Figure 2.



How to tackle Basel IV step by step

Here are some of the features of OneSumX for Basel that will help your teams manage the massive regulatory initiative. With its speed, flexibility and comprehensiveness, the modular solution is designed to allow institutions to meet the

demands of regulators and give them an edge against competitors, too.

Data management

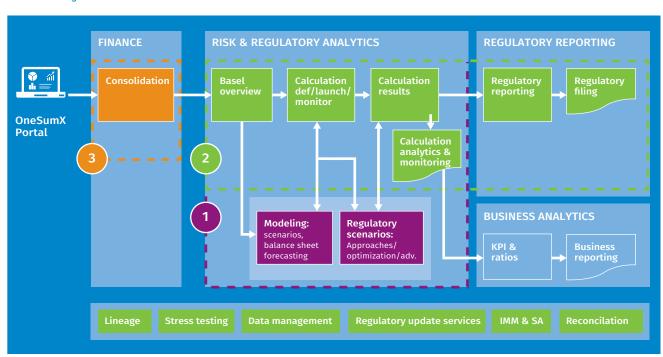
An essential element of meeting Basel IV objectives is to ensure that data is validated, consistent and complete across all risk types. Our solution enables your teams to transform data from business vocabulary into the different finance, risk and regulatory vocabularies used within your firm. Having all your risk data in one place is crucial for a smooth Basel process and risk reporting.

Data of unassailable quality eliminates the need for manual adjustments and reconciliation. Those are cumbersome, time-consuming tasks that distract key people from their vital risk management work, especially at large, complex institutions that must calculate and report vast sets of Basel IV figures to different authorities and at different levels of their legal entity hierarchy.

Cash flow and exposure analysis

OneSumX for Basel allows you to calculate contractual and stressed cash flows on a granular level for use in conventional analysis and in simulations – adjusted for credit, market, behavioral and idiosyncratic assumptions. Embedded within the enterprise-wide risk application is a feature for exposure analysis for internal use to manage the risk portfolio. Measures like repricing gap, fire-sale exposures, volatility exposure and duration, among others, are part of the wider analysis.

OneSumX for Basel





- measures, can be used to manage overall market risk within a portfolio.
- · Credit valuation adjustment (CVA): How we do this calculation is based on approaches proposed by the Basel framework. CVA reflects the adjustment of default risk-free prices of derivatives, as well as securities financing transactions. It includes the basic approach and the more advanced approach taking into account hedge effects.
- VaR: The market VaR calculation can be accomplished using three methodologies: parametric, also known as variancecovariance; non-parametric through historical simulation; or Monte Carlo simulation.
- Asset and liability management (ALM): The solution provides easy-to-use modeling of the future balance sheet with respect to business strategies and the impact of customer behavior on value and income.

RELATED PRODUCTS

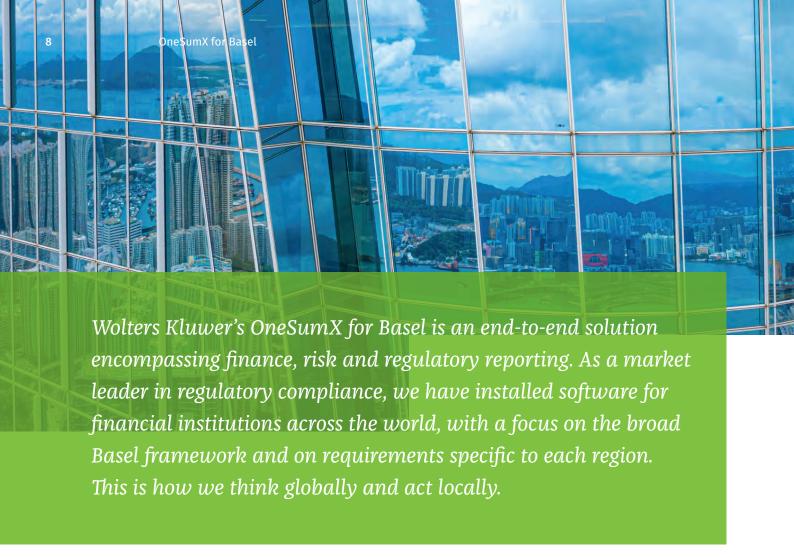
OneSumX for Regulatory Reporting

23 supervisory agencies.

Delivered both on-cloud and on-premise, OneSumX for Regulatory Reporting covers various types of reporting, including Financial (e.g. FINREP), Prudential (e.g. COREP, BCAR), Transactional (e.g. MiFID II), Granular (e.g. AnaCredit) and Multi-dimensional

OneSumX for Finance

to address IFRS and U.S. GAAP accounting for financial instruments. It also helps with consolidation and



Regulatory calculators

- Credit risk: Our solution covers the capital charge calculation under the standardized (SA), foundation internal-ratings-based (F-IRB) and advanced internal-ratings-based approaches (A-IRB). It includes standard risk parameters, such as probability of default, loss given default, and risk weight functions, letting you switch between internal ratings and the estimated probability of default when downturn conditions are simulated. OneSumX for Basel has an intelligent mitigant optimization engine for maximizing collateral usage.
- Counterparty credit risk (CCR): This is captured in the framework for derivatives, security financing transactions and long settlement transactions for which a capital charge will need to be calculated. CCR also captures the rollover risks and specific and general wrong-way-risk measures within the solution to give a holistic overview of CCR measures.
- Market risk: One of the biggest changes
 within the Basel reforms was the adaptation
 of market risk assessment contained in the
 fundamental review of the trading book
 (FRTB). Larger organizations that use internal
 models will use FRTB for the output floor. The
 solution ensures that FRTB calculations are in
 line with Basel requirements; it also offers the
 ability to compare these outcomes with your
 organization's own market risk measures and
 to stress test them.
- Liquidity risk: The solution covers Basel IV liquidity requirements, such as the liquidity coverage ratio and net stable funding ratio, and also local liquidity risk requirements, such as net cumulative cash flow and liquidity stress testing. It goes further by supporting other liquidity risk management and ALM features, including static liquidity modeling, dynamic liquidity gap analysis and market value analysis.

OneSumX for Basel

- Interest rate risk: OneSumX for Basel contains extended analysis into gap risk, basis risk and option risk, which can be examined as part of the principles of the interest rate risk in the banking book (IRRBB) framework. Banks can manage the complete interest rate risk picture, including analysis of rate profile sensitivities of the portfolio and a full static and dynamic revaluation of the portfolio and total (interest rate) profit and loss (P&L).
- Concentration risk (large exposures):
 Concentration risk calculation is mandatory under Basel IV credit risk rules. Our solution monitors concentration risk and allows the study of possible scenarios. Also, this component is available for various regulators, such as the single counterparty credit limits requirements issued by the Federal Reserve Board.
- Collateral management: OneSumX for Basel covers collateral posting, margining (for exchange-traded securities and where margin calls are accumulated), balancing of collaterals and the reporting of unencumbered securities.
- Output floor: Regulatory requirements are captured in the solution, but your organization can plug in its own variables and floors to make simulations or impose stricter requirements.
- Pillar III disclosures: Our solution helps you prepare required public reports, covering risk management procedures, capital adequacy, market discipline and so forth, in various formats mandated by authorities in different jurisdictions.
- Finance and consolidation: The solution contains a consolidation module that takes into account financial and prudential consolidation processes. It can be integrated into the full finance framework to derive capital elements, as well as into the full balance sheet, to guarantee reconciliation at all times between the financial statement and risk management reporting.

- Stress testing: The solution provides maximum flexibility in setting inputs for all stress testing frameworks, including reverse stress testing. This helps organizations to optimize their balance sheet and get compliance costs under control.
- Non-functionals, such as lineage: As crucial as accurate calculations are, so is the ability to address questions from regulators and senior management. The solution offers additional management reports and a lineage framework to make calculations transparent to auditors and other stakeholders. Similarly, the use of simulation and scenario analysis helps to present a clear picture of the impact of a crisis as it unfolds.
- Risk and finance integration: Our reporting platform is designed to support true risk and finance integration. With CROs and CFOs accountable for different facets of reporting, the solution meets the needs of both, and those of the broader business, with integrated and auditable data stored and processed in the data layer. With our approach, risk management and reporting will not be limited to specialists and the CFO, but available to the entire business.
- Regulatory reporting: OneSumX for Basel forms part of our OneSumX for Finance, Risk and Regulatory Reporting solution suite, which enables your firm to benefit from user-configurable controls and restrictions to the reporting process. Reporting coverage includes prudential capital, credit risk, liquidity, balance sheet and P&L reporting. The solution suite also provides statistical reporting for submission to central banks and other authorities. It covers all Basel IV reporting sets, including COREP, FINREP, BCAR, FFIEC 101, FR Y-9C, IRR, CAR and all call reports, as well as the XBRL submission format.

OneSumX for Finance, Risk and Regulatory Reporting is also designed to minimize needed reconciliation, automated from input through to production and submission.



Wolters Kluwer solutions are devised with input from experts with a diverse range of financial industry knowledge and insight to ensure that teams throughout an organization can perform their duties more effectively and effortlessly. A risk professional will have an arsenal of stress testing capabilities and business automation processes. A compliance officer will experience transparency of data flow and the ability to explain all data processes through to disclosure within regulatory submissions.

OneSumX for Basel, backed by 150-plus years of technological excellence, can be linked with multiple platforms. We provide a unique emphasis on developing systems that integrate finance, risk and regulatory reporting functions to provide a seamless experience for all users. This ensures not only a reduced compliance burden, but the ability to streamline and enhance competitiveness, growth and profitability.



Wolters Kluwer has been designing Basel solutions for more than 20 years, meeting our clients' growing needs in an ever changing business environment. We combine regulatory content and industry expertise with advanced technology to adapt Basel IV compliance procedures for use in visualizing and optimizing different facets of a financial institution's business – changing what you have to do into what you want to do.











About Wolters Kluwer

Wolters Kluwer (WKL) is a global leader in professional information, software solutions, and services for the healthcare; tax and accounting; governance, risk and compliance; and legal and regulatory sectors. We help our customers make critical decisions every day by providing expert solutions that combine deep domain knowledge with specialized technologies and services. Wolters Kluwer reported 2019 annual revenues of €4.6 billion.

The group serves customers in over 180 countries, maintains operations in over 40 countries, and employs approximately 19,000 people worldwide. The company is headquartered in Alphen aan den Rijn, the Netherlands. Wolters Kluwer shares are listed on Euronext Amsterdam (WKL) and are included in the AEX and Euronext 100 indices. Wolters Kluwer has a sponsored Level 1 American Depositary Receipt (ADR) program. The ADRs are traded on the over-the-counter market in the U.S. (WTKWY).

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