

WHITE PAPER

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Implementing Basel III: Challenges, Options & Opportunities

Highlights

» This Whitepaper explores the most significant challenge facing banks when they are implementing Basel III—the need to balance the interests of the business against the needs of the regulator. This Whitepaper explores the management impact on risk and finance; the implications of different countries taking different approaches to Basel III; the issues surrounding managing data quality and stress testing; the issue of auditing the regulatory data; the complexities of managing Basel I, II and III side-by-side, and the challenges of integrating disparate back-office banking systems into a cohesive Basel III management framework.

This Whitepaper explores the approaches that a bank might want to consider in implementing Basel III, and it outlines a solution that accommodates all the issues highlighted, allowing a bank to implement Basel III on time and on budget. It also highlights some of the commercial advantages that going through the Basel III compliance process can deliver to a bank.

This Whitepaper is aimed at those involved in implementing Basel III in banking organizations across the world. Risk managers, finance managers, and Basel III program managers are under pressure to meet Basel III starting in 2013. The key challenge for these managers will be deciding how to best implement a solution that allows them to comply with Basel III, how to streamline systems and processes for improved operational effectiveness, and how to understand and ultimately reduce their capital requirements.

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Introduction

Basel III is an evolution rather than a revolution for many banks. It was developed from the existing Basel II framework, and the most significant differences for banks are the introduction of liquidity and leverage ratios, and enhanced minimum capital requirements.

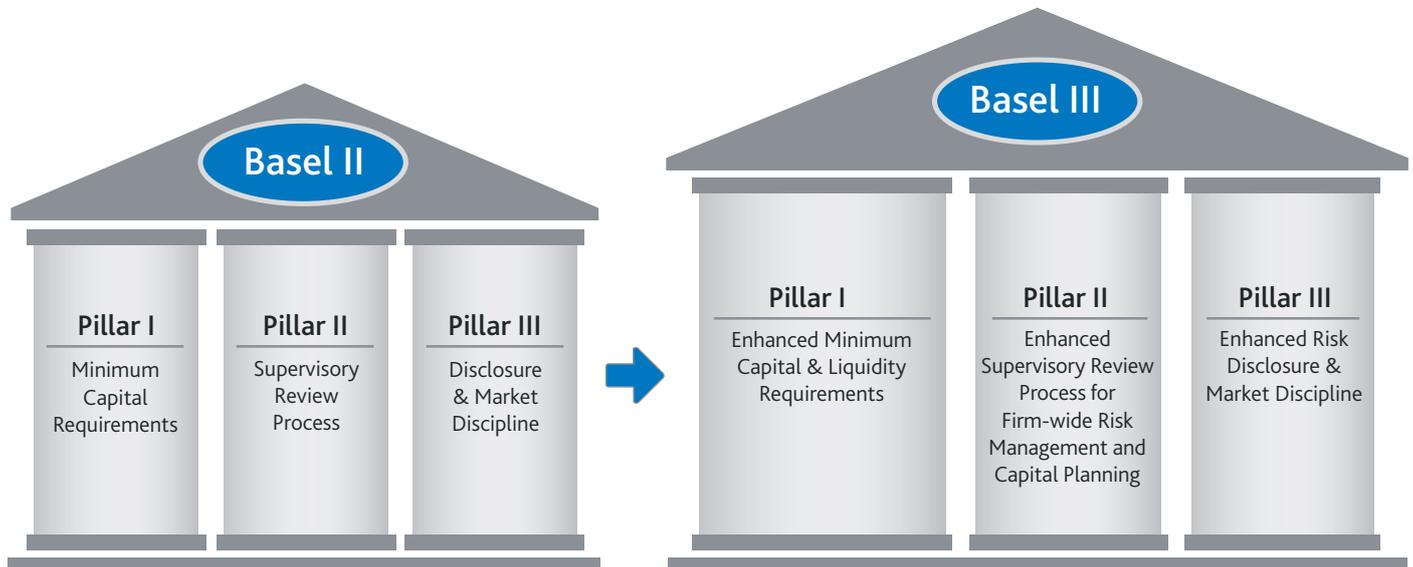


Figure 1 Basel III: An Enhancement of Basel II

An effective implementation of Basel III will demonstrate to regulators, customers, and shareholders that the bank is recovering well from the global banking crisis of 2008. A speedy implementation will also contribute to a bank's competitiveness by delivering better management insight into the business, allowing it to take advantage of future opportunities.

Although implementing Basel III will only be an evolutionary step for many organizations, the impact of Basel III on banks and the banking sector should not be underestimated, because it will drive significant challenges that need to be understood and addressed. For every bank, working out the most cost-effective model for implementing Basel III will be a critical issue.

The Main Challenges of Basel III

1. A New Risk and Finance Management Culture

Basel III is changing the way that banks address the management of risk and finance. The new regime seeks much greater integration of the finance and risk management functions. This will probably drive the convergence of the responsibilities of CFOs and CROs in delivering the strategic objectives of the business. However, the adoption of a more rigorous regulatory stance might be hampered by a reliance on multiple data silos and by a separation of powers between those who are responsible for finance and those who manage risk. The new emphasis on risk management that is inherent in Basel III requires the introduction or evolution of a risk management framework that is as robust as the existing finance management infrastructures. As well as being a regulatory regime, Basel III in many ways provides a framework for true enterprise risk management, which involves covering all risks to the business.

2. Managing Basel III: Different Geographies, Different Issues

Different regions and countries face different challenges in applying Basel III. The EU has been consistent in its adoption of past Bank of International Settlements (BIS) regulations and therefore will hope to seamlessly migrate from Basel II to Basel III. The EU plans to deliver a unified set of rules across Europe, to discourage 'gold plating', and ensure that there is a level playing field, removing scope for regulatory arbitrage. The US effectively skipped Basel II, so it will be making a fresh start, building on the foundations of Basel I, facilitated by the Dodd-Frank Act. The extent to which other countries in the world have adopted one iteration or another varies considerably: Japan, Hong Kong, Singapore, and Australia are well advanced, on a par with the EU. The picture in Russia and countries in Eastern Europe, the Middle East, Africa, and Asia Pacific is less clear. Some might choose to start with a clean sheet and implement the full set of rules. Others might opt to use Basel III merely as a direction of travel, without embracing the full package. For example, Russia recently announced that it will move from the standardised approach to calculating credit risk, to the internal ratings based (IRB) approach by 2015. Some Middle Eastern countries are currently in the process of moving towards the IRB model.

Some countries might also have other regulatory legacies, which in some cases might mean that some national regulations will be superseded by Basel III but might need to be maintained in parallel. Some might choose to adopt the Basel III requirements in their own way, gold-plating the requirements if they feel that Basel III does not meet a particular country's requirement. This could create idiosyncratic requirements and processes that need to be addressed during implementation.

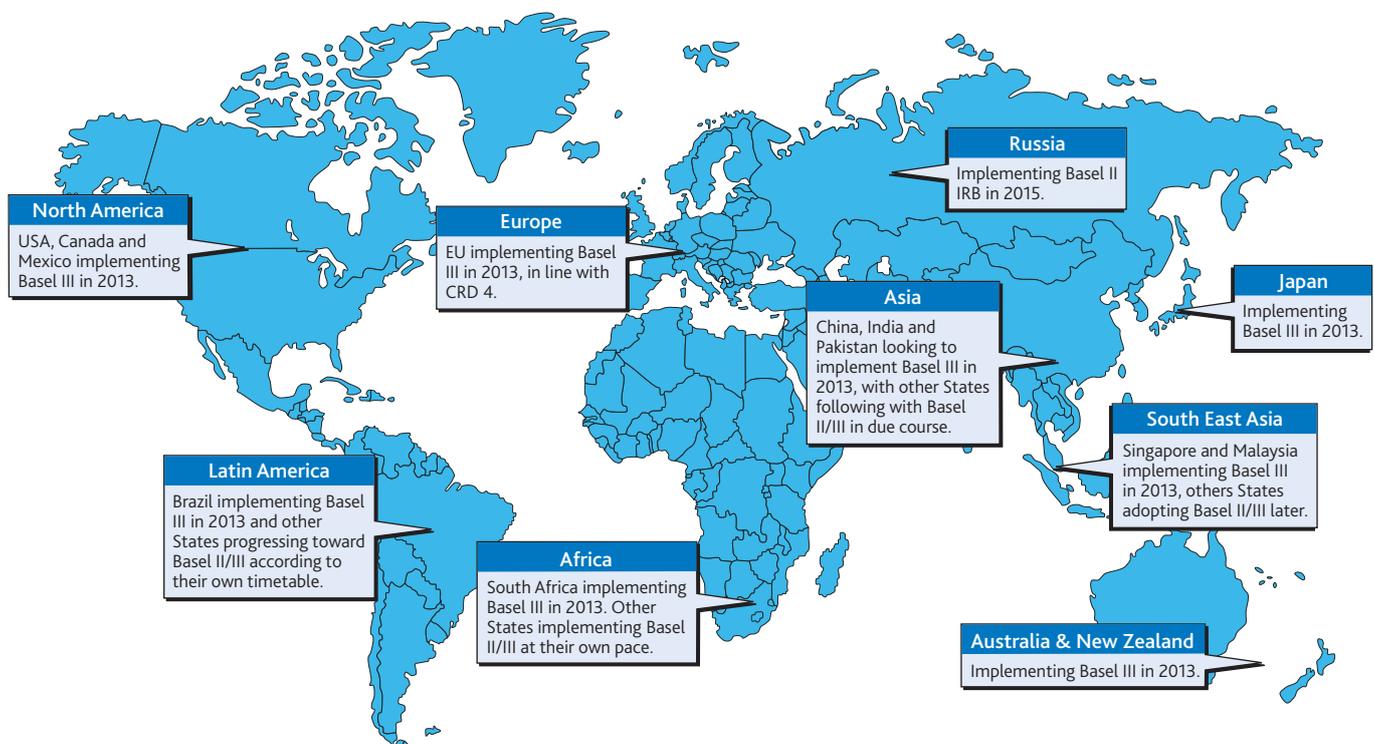


Figure 2 Different countries are at different stages in banking regulations. Information correct September 2011.

This global complexity adds further complication because banks might need to manage different regulations in different jurisdictions; and a bank might be obliged to report under Basel II in one country and Basel III in another, depending on where the bank is domiciled.

Adding further multi-national complexity, many regulators also demand banks continue to submit reports under the Basel I framework, using the standardized model for calculating credit risk. This allows regulators to have a consistent framework to compare all the banks they regulate, regardless of whether the banks themselves use the IRB or standardized models. In Europe, for banks using IRB, regulators stipulate that this Basel I 'floor' must be in the region of 80-90% of the calculation using the more costly standardized approach. In the US, the floor is 100%.

This may actually mean that banks have to handle compliance across a mix of Basel I, II and III, depending on where they do business and the demands of the local regulators. The reports will need to convey a consistent message so as not to mislead the regulator and the market.

Organizations with a fragmented data model will be burdened with additional cost and overhead compared to those with a more centralized approach to collecting, consolidating and submitting reports under Basel I, II and III.

This diverse picture needs to be considered carefully when applying the principles of Basel III to a bank and implementing a solution.

3. Managing the Data

To deliver compliance against Basel III, all banks must now ensure that risk and finance teams have quick and easy access to centralized, clean, and accurate data. This data must reflect their bank's credit, market, concentration, operational, impairment, and liquidity risk. All banks will also need to calculate the enhanced capital, new liquidity ratios, and new leverage ratios to be in a position to start reporting to local supervisors—in the multiple formats that the various national regulators require—starting as early as 2013.

The data management requirements of Basel III are significant. For the bank, the regulator, and the wider market to get an accurate picture of the bank's position, the data must be accurate, up to date, and consistent. Delivering this cost effectively is difficult if the data is dispersed across different silos. Furthermore, the data must be carefully defined and managed to ensure that it delivers the correct ratio calculations for capital adequacy, leverage, and liquidity every time. This requirement, combined with the significantly greater reporting requirements of Basel III—in terms of granularity and frequency—means that the effort required to manage data within Basel III is greater than ever.

Ensuring that a bank's regulatory data is of the right quality and in the right place at the right time is probably the single most important criterion in deciding whether a bank's Basel III project meets its objectives or not.

4. Auditing the Data

Once a regulatory report has been submitted, it is highly likely that a regulator will follow up with the bank to clarify critical issues about how the results were calculated and how the rules were applied. This will require the bank to identify, check, approve and submit the data, quickly and accurately.

These extra submissions need to be consistent with the rest of the report, be delivered in the same format and must be completed as cost effectively as possible, without impacting other business activities.

This audit process will be especially difficult for banks whose data is dispersed across multiple silos and systems, as it will take longer to search for the relevant information. Banks with a centralized data model will be able to respond faster and more efficiently to these enquiries, further streamlining their compliance and reporting processes.

5. Stress Testing

Stress testing—the ability to understand the impact of significant market events on the key ratios—receives greater significance under Basel III.

Stress testing will be required more often, performed across more data, and delivered in more depth. This will be difficult to deliver if organizations have their data distributed across multiple silos. It will take longer, it will require more effort, and it will deliver less accurate results, compared with having a data model where all the critical information is held in a central repository.

Placing all the data in a central repository will allow banks to run a wide array of complex stress tests that meet the needs of the business - to deliver insight and also meet the needs of the regulator - to deliver compliance.

6. Taking an Integrated Approach

The Basel III regulations reflect the integrated nature of banks and banking. A Basel III management solution must enable the demands of integration; otherwise, compliance will create significantly greater overhead than necessary.

Given the way that banks have grown, developed new services (and the systems to support them), and merged activities, it will be challenging to deliver a truly integrated system without disrupting the business of the bank. The ideal management solution would consolidate, calculate, and report the organization's capital, liquidity, and leverage ratios from a single, centralized reporting platform. It would seamlessly integrate with other source systems and have strong data quality checking and storage capabilities.

This approach would streamline the process, allowing risk managers to focus their attention toward primary risk management activities rather than the time-consuming data extraction, quality, and reporting issues. Fast calculation engines would facilitate weekly and even daily calculations and would feed integrated and comprehensive regulatory reporting that is mapped to the local supervisors' exact requirements, and provide additional business insight for the bank.

Delivering against this ideal would be demanding for any bank. When this issue is understood in the context of the other issues highlighted above, it is clear why it is all too easy to underestimate the challenges of implementing Basel III.

Nevertheless, when these issues are understood in the context of the way a bank is organized, it is possible to conceive a solution that allows a bank to implement the regulations on time and on budget, given the right approach and toolset.

Implementing Basel III

Multiple Approaches—One Destination

Implementing Basel III creates a unique set of challenges for every organization, regardless of the organization's starting point. Because Basel III is more a set of principles than a minutely detailed set of rules, there is no cut-and-dried solution when implementing it. This flexibility allows banks a great deal of latitude in how they adopt the requirements.

Two basic approaches are open to banks that are implementing the regulations. Which approach is the most suitable for each organization will depend on the stability and performance of the organization's current environment and the speed at which the organization wishes to implement the regulations, as well as what resources are available.

I. Enhancing the Current Environment

In some cases, the best option will be to upgrade the existing environment to the necessary standard by adding additional modules to handle additional requirements, whether it be leverage and liquidity management, stress testing, data warehousing, or reporting.

Enhancing or upgrading the current environment allows an organization to adopt the regulations at a pace that the organization can tolerate and that is less disruptive to business operations. This means that the implementation could be less costly to the business, because in many ways it is easier to map the regulatory environment to the business than to shape the business around the regulations. This approach allows banks to capitalize on their existing investment, and for some organizations it might be the least costly and least disruptive approach to complying.

The key issue here is that a bank *must* have a very clear idea of how its environment is configured. This can be a significantly greater challenge than one might realize, especially if a regulatory system has been in place for some time and where there have been significant changes in the business.

After the current environment is defined, a gap analysis will identify where the main compliance effort needs to be focused.

II. Deploying a New Regulatory Environment

For other organizations, the most cost-effective option will be to replace their existing regulatory model with a new, purpose-built solution that delivers Basel III "out of the box"—without needing extensive customization.

Although this might appear to be the most costly and disruptive solution, in some ways it might be the most cost effective, because it allows the organization to map itself onto the regulations, embedding Basel III within its processes. This approach could conceivably lower the lifetime costs of Basel III to a bank, if the regulations form part of the bank's corporate *modus operandi*.

The key to a successful deployment is defining the optimal architecture for managing Basel III, and then defining the co-existence and migration strategy from the existing environment. It might be possible to take a modular approach to migration—moving specific systems to the new environment one by one—which would reduce the risks that are involved in taking this approach.

Use of Automation

An additional consideration—whichever of the preceding options a bank selects—is the extent to which the new environment should encompass the use of automation. Many banks still make use of manual processes, to a lesser or greater extent, in managing their regulatory compliance.

The greater workload of Basel III will make it difficult, if not impossible, for a bank to justify the greater overhead of manual processes, compared to that of automation. The increased regulatory overhead, together with the greater scale and scope of banking operations, will make it harder to justify the continued use of manual processes, which can be time consuming, expensive, and prone to human error.

Approach	Advantages	Considerations
Enhancing the Current Infrastructure	<ul style="list-style-type: none"> • Less disruption • Quick to value • Deliver Basel III at your own pace • Map Basel III directly onto your organization 	<ul style="list-style-type: none"> • Ensure that there are no functional gaps in the platform • Ensure that the integration between applications is seamless • Clearly understand the regulations and how closely your environment meets them
Deploying a New Regulatory Infrastructure	<ul style="list-style-type: none"> • Clean slate – get the right solution from the beginning • Deliver a platform for future growth • Map your organization directly onto Basel III 	<ul style="list-style-type: none"> • How do you implement the new environment in parallel to the existing environment? Significant scope for error. • Ensure that the right data is migrated at the right time • Understand and define training requirements clearly

Figure 3 Options and considerations when implementing Basel III.

However banks choose to implement the regulations, some banks will pursue implementation aggressively. They will see rapid implementation and adoption as providing customers, shareholders, and regulators with the reassurance that they are taking positive steps to put capital in place, to improve their liquidity positions, and to manage risk better.

Early adopters will be able to use their stance to differentiate themselves from competitors. Others might take a more measured approach, aware that the deadline for full implementation is a (seemingly) distant 2019.

A further consideration about choosing the right model is what will happen after Basel III is widely implemented. At best, Basel III will require adjustments so that over time it evolves into Basel IV, Basel V, and so on, as the BIS seeks to resolve the theory of Basel III and its real-world use (as happened under Basel I and Basel II). Regulators are already thinking about a fundamental review of market risk and trading book rules that could be the starting point for Basel IV.

An Integrated Approach

Regardless of the approach that organizations take, the solution that they deliver needs to be completely integrated, so that it fully reflects the structure of the regulations themselves.

The ideal solution would consolidate, calculate, test, and report an organization's capital and liquidity risk from a single platform. It would seamlessly integrate with other source systems, and it would have strong data quality checking and storage capabilities. Fast calculation engines would facilitate weekly and even daily calculations and would feed integrated and comprehensive regulatory reporting that is mapped to the local supervisors' exact requirements. Implementing all this would streamline the process, allowing risk managers to focus their attention toward primary risk management activities rather than the time-consuming data extraction, quality, and reporting. This approach is illustrated in Figure 4.

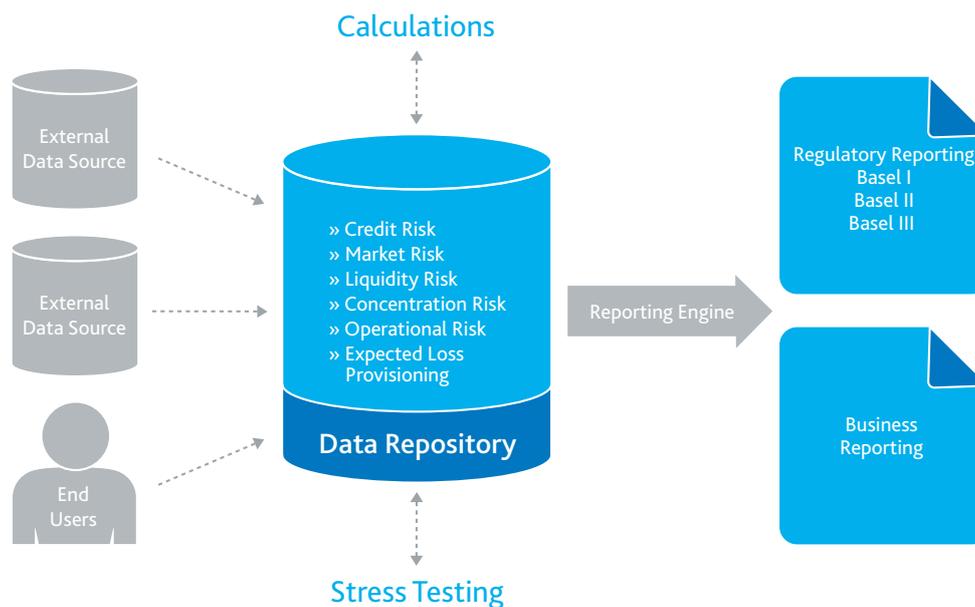


Figure 4 Basel III: A Flexible Management Framework

The central data repository houses the critical risk data that is required for Basel III compliance. It should be able to collect data, providing the complete enterprise-wide regulatory risk picture. End users—including line of business and corporate risk managers, finance teams, compliance staff, and analysts—also need to leverage the system.

This consolidated approach means that it is much easier to calculate and store the critical capital adequacy, liquidity, and leverage ratios that underpin the Basel III framework. It also means that stress testing can be delivered using the same coherent, integrated dataset.

The final stage is to deliver the critical reports both to the business and to the regulator. This task will be significantly more onerous under Basel III. Pillar 1 reports, which cover capital adequacy, need to be delivered in the right format to the relevant national regulators. Pillar 3 reports, which cover similar but not identical ground, need to be created for the regulator and for the wider market stakeholders in the interests of market transparency and confidence. Any subsequent requests for additional information from the regulator can easily be accommodated using this consolidated approach.

The business also needs to receive management reports, often daily, to understand how the business is performing against its commercial objectives and to provide the essential business insight that makes Basel III an opportunity as much as an overhead.

Achieving this with data that is distributed across multiple silos is much more difficult, more prone to error, and more time consuming. A consolidated, integrated, yet open data repository is the only way to deliver true enterprise risk management.

Buy or Build?

Another aspect of deploying a system for Basel III is the choice of whether to develop a system in house or to buy from a vendor.

Beyond perhaps yielding greater insight into the business, developing an in-house solution delivers little competitive advantage. The regulatory requirements are fundamentally the same for all banks. Moreover, the regulations are subject to change on a regular basis all over the world. Managing this change is an essential but onerous task. Software vendors maintain teams to analyze and accommodate these changes, which is uneconomic for banks to do themselves. The cost of maintaining this regulatory currency is easier for vendors to bear, especially considering the cost of a bank not understanding the changes to regulations.

Leveraging Basel III Beyond Regulatory Capital

While banks have no choice in complying with Basel III, how they choose to implement it can offer scope for competitive advantage. Those banks that implement Basel III with a view to improving their business processes as well as their regulatory processes stand to reap further rewards compared to those banks that see Basel III compliance as an end in itself.

While having a consolidated data set will help streamline the regulatory process, it also allows, potentially for the first time, business managers to have a complete, seamless and consolidated picture of the business. The ability to see the consolidated high-level picture and at the same time drill down into the detail will allow business managers to make timely and informed decisions, based on stronger insight.

In addition, having a centralized data model can allow senior management to exert greater management control over their business. For example it can help enforce more effective limit setting, ensuring that when originating new loans, the bank is not exposed to excessive risks from one customer. Alternatively the centralized data model can help a bank improve the way it manages its asset liability management by providing a complete, flawless picture of a bank's assets and liabilities, allowing it to manage its risks more effectively and profitably.

Re-using the regulatory data, in different contexts, allows the bank to improve the way it manages the business, helping to improve its overall enterprise risk management, growth and profitability.

Conclusion

Basel III is an opportunity as well as a challenge for banks. It can provide a solid foundation for the next developments in the banking sector, and it can ensure that past excesses are avoided.

The key to ensuring that Basel III is an opportunity for banks is the selection of the technology architecture that is used to deliver the framework. This technology architecture needs to accommodate the scale and structure, the processes, and the geographic spread of the bank and blend all these seamlessly into the scale and scope of the regulations.

The solution needs to be flexible, to fit the needs of the bank, and sufficiently open to accommodate changes to the business and the regulations.

The complexity and demands of Basel III and the commercial demands of the banking world will require a flexible Basel III management solution that delivers speed, accuracy, and performance to deliver competitive advantage. And those banks that implement the optimal solution will not only have an ideal platform for delivering Basel III, they will also have a solid platform for their future commercial development.

About Moody's Analytics RiskAuthority

RiskAuthority calculates, consolidates, and reports your organization's Basel III regulatory credit risk, market risk, operational risk, concentration risk, and liquidity risk. RiskAuthority offers a truly integrated and comprehensive solution that includes centralized data management; fast and accurate capital, liquidity, and leverage ratio calculations; holistic stress testing; and integrated regulatory and management reporting. RiskAuthority provides the strongest solution available to manage your organization's local and global Basel I, Basel II, and Basel III requirements.

Pillar 1: Calculate New Basel III Capital, Liquidity, and Leverage Ratios

- » Consolidate and store all Basel I, II, and/or III required data—including assets, liabilities, off-balance sheet exposures, counterparties, ratings, risk drivers, and market data—on one central platform.
- » Calculate the new Basel III credit risk capital requirements in the standardized or Internal Ratings Based (IRB) approaches, including the new capital charge for Credit Valuation Adjustments (CVA).
- » Compute market risk and operational capital charge using standardized approaches.
- » Calculate all required information for the new Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), including liquidity buffer eligibility rules and haircuts.
- » Consolidate leverage, capital (including the new conservation and countercyclical buffers), and liquidity ratios per booking entity or currency.
- » Monitor large exposures, concentration risk, and funding concentration per customer, products, country, and currency.
- » Leverage an EL-based approach to assess provisions, complying with IFRS 9 impairments rules.
- » Manage diverse national discretions and local regulatory reporting requirements.

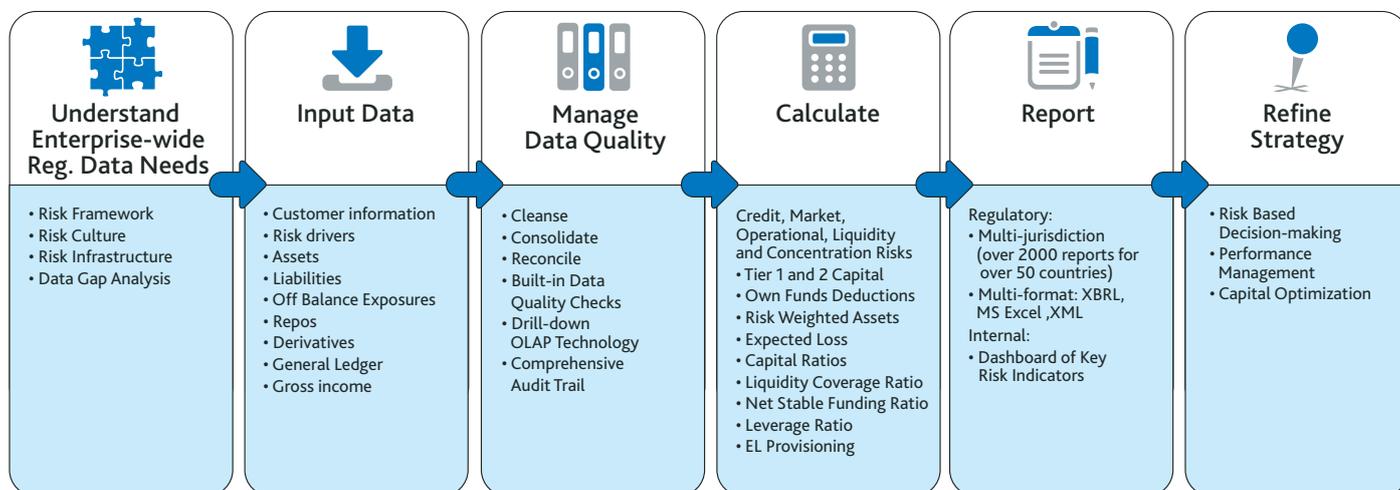
Pillar 2: Improve Risk Management Processes

- » Perform liquidity stress testing for internal funding needs assessment for ILAAP.
- » Assess economic capital for ICAAP using Moody's Analytics RiskFrontier™.
- » Run holistic scenarios, including rating downgrades and security value decrease, impacting all Basel III ratios.
- » Stress risk drivers and market data, including ratings, PD, LGD, CCFs, haircuts, run-off, sell-off, FX rates, and yield curves.
- » Define forward-looking scenarios that are based on business forecast assumptions and macro economic factors.
- » Simulate forthcoming regulatory changes to ease impact assessments.

Pillar 3: Improve Risk Disclosure

- » Streamline and automate the production of Pillar 1 regulatory capital, concentration risk, and liquidity reports, and submit in local supervisor's preferred languages and formats (MS Excel, XBRL, and/or XML).
- » Generate customized Pillar 3 market and stakeholder reports.
- » Manage ongoing regulatory updates.
- » Enhance board and executive management reporting with customizable and user-friendly dashboard reporting tools.

RiskAuthority: Delivering Comprehensive Regulatory Compliance Reporting



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