RISK MANAGEMENT

LIQUIDITY RISK

Empowering the Financial World

FISGLOBAL.COM

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LIQUIDITY RISK

Achieve Higher Profitability by Modeling Liquidity on the Balance Sheet.

FIS' Ambit Liquidity Risk Management empowers banks to make liquidity risk management work for their business, and focus on performance while remaining compliant, by factoring regulatory requirements into funding and asset allocation plans under potential risk scenarios.

Business overview

Banks today are facing a myriad of challenges; most of them triggered by new regulatory requirements. To maintain a profitable business, however, it is not enough for a bank to simply comply with new regulatory requirements: it must also optimize its business model within regulatory constraints.

To do so, the bank must implement the newly introduced regulatory ratios, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), top-down from the highest strategic level: its business model. This will make sure that the ratios are correctly factored into both its risk appetite framework and its operating plan – and that the whole organization is incentivized to execute its strategy.

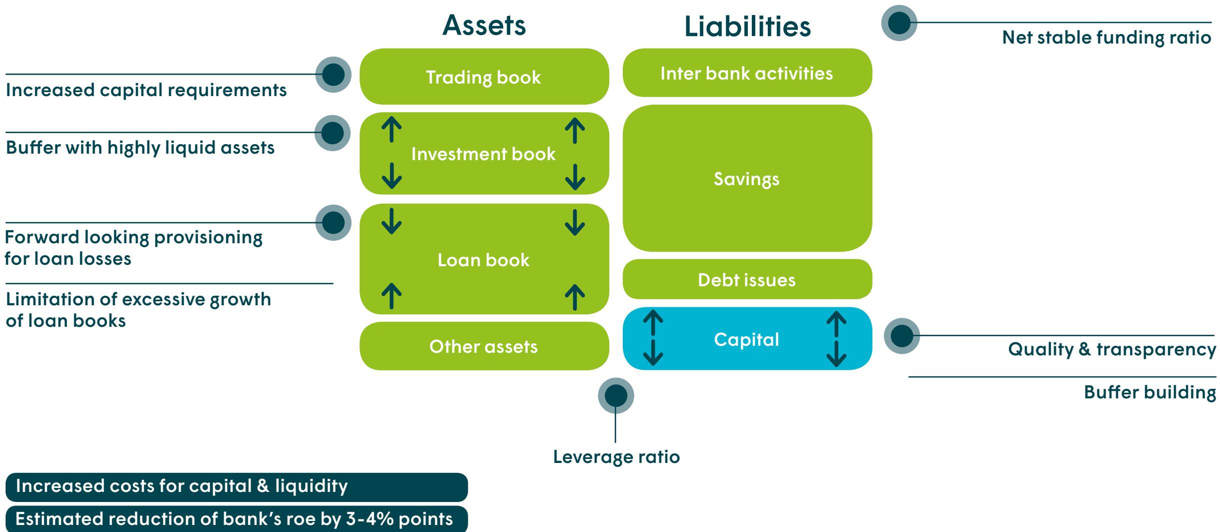
With proper planning, banks can pre-assess the impact on their LCR of multiple contemporaneous events and their complex interactions, such as a steepening of the yield curve, volatility at the short end of the curve, business model changes and margin calls on derivatives. This will allow them to steer their balance sheet from an asset liability management as well as a liquidity perspective, and therefore position their balance sheets to both ensure compliance and avoid excessive costs.

Seen from this perspective, the latest changes are more of a call-to-view the LCR not simply as a reporting matter but also as a rigorous risk management exercise.

DID YOU KNOW

Liquidity risk management is the top risk management priority for financial institutions in Europe and Asia.

Basel III impact on bank's balance sheets



FIS can help

FIS' Ambit Liquidity Risk Management empowers Financial Institutions to make liquidity risk management work for their business, and focus on performance while remaining compliant, by factoring regulatory requirements into funding and asset allocation plans under potential risk scenarios.

Through the solution suite, banks can find strategies to profit within constraints, forecast the impact of their plans on risk and performance – and steer their organization accordingly.

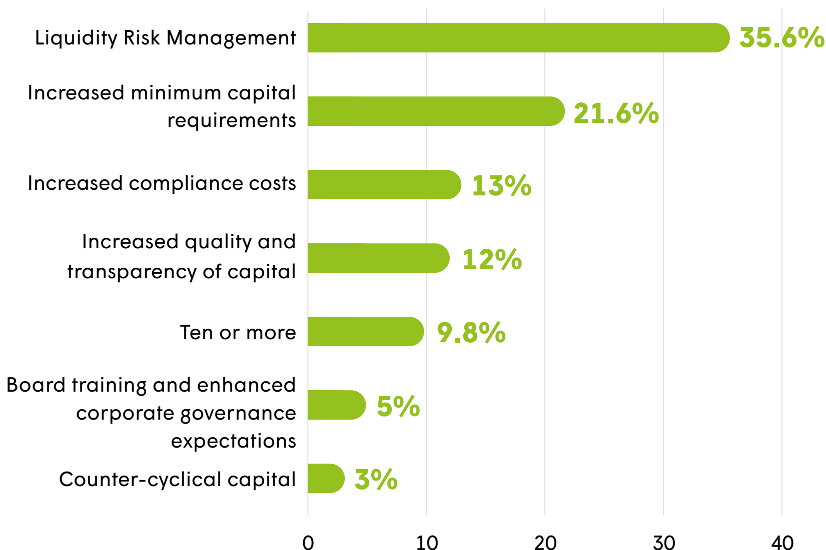
Profit within constraints – Factor regulatory requirements into the balance sheet and validate a compliant yet profitable business strategy.

FIS' Solution: LCR Forecast risk and performance – Ensure consistent risk data and models to simulate the impact of the strategy on future income and compliance.

FIS' Solution: Combined Income & LCR Steer the strategy – Make regulatory ratios an integral part of the steering framework, to set the right incentives and put the strategy into practice.

FIS' Solution: Liquidity transfer pricing

FIS' customer survey on Risk Challenges 2013-14



Profit within Constraints

Integrate upcoming regulatory changes into the balance sheet planning and validate business strategy

Compliance is both mandatory and costly for banks, as increasing the liquidity buffer in line with the ratios can reduce profitability. To ensure profitability while meeting regulatory requirements, a bank's chief financial officer (CFO) and chief risk officer (CRO) must work together with the treasury to:

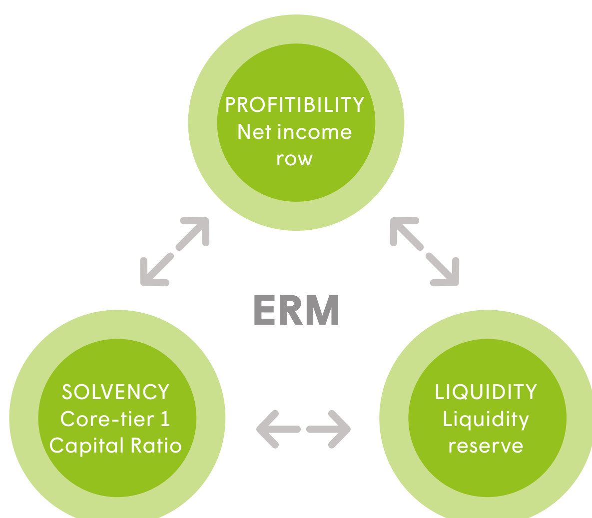
Factor regulation into the balance sheet
Every line of business and business activity will have an impact on the LCR, making it a critical consideration in balance sheet management. To achieve compliance on the one hand and profitability on the other, the challenge for the CFO and CRO is to determine the exact nature of that impact and whether a product remains profitable as a result. They therefore need a comprehensive, integrated, 360-degree view of the balance sheet, with a clear indication of how each product line affects the liquidity ratios and therefore profitability, before extending or reducing it accordingly.

All of which makes balance sheet management in the new regulatory era something of a balancing act for the bank. To ensure profitability, it needs to optimize the structure of the balance sheet within regulatory constraints. And for that to be possible, the organization must start considering regulatory constraints at a strategic level, and make it an integral part of its business model, risk appetite framework and operating plan.

Stakeholders
FIS' Hedge360 delivery platform includes solutions for:

- Investors
- Employees
- Bond holders
- Regulatory authorities
- Deposit holder
- Rating agencies

The trinity risk management



Validate business strategy

By making liquidity risk management an integral part of balance sheet management, a bank's executive committee is in a stronger position to develop a compliant, yet profitable, business strategy. Today, the CRO and risk department as a whole must play a greater role than ever before not only in defining that strategy but also validating it, along with assuring the compliance of the bank's risk appetite and operating plan.

In this sense, the risk function becomes less about monitoring and more about advice, and validation: finding ways to operate most effectively as a business within the regulatory framework. As the bank's strategic gatekeeper, the CRO must make sure the business strategy succeeds within the bounds of regulation, and give proactive feedback in order to steer the organization away from potential breaches. Again, this requires a complete view of a highly transparent balance sheet.

Monitor your liquidity

Solution response

FIS' Ambit Liquidity Risk Management provides banks with an integrated, 360-degree view of their balance sheet, enabling them to factor the constraints and costs of liquidity regulation into every aspect of balance sheet management, in both the short and long term.

Ambit Liquidity Risk Management helps banks build up a liquidity risk management infrastructure on an operative as well as a strategic level, going beyond "minimum" regulatory requirements. Helping optimize operations to reduce costs, it provides a comprehensive solution to recently published regulatory requirements including the liquidity ratios mandated by Basel III as well as the additional monitoring tools required by the regulator. Through the solution, banks can demonstrate they meet regulatory liquidity requirements by making sure they hold a sufficient cushion of highly liquid assets across both entities and currencies, and manage sources of collateral in ways that help generate revenue.

The integrated calculation and projection of the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) allows validating both ad-hoc requests as well as longer term business strategies in respect to regulatory compliance.

Ambit Liquidity Risk Management provides an integrated balance sheet risk management solution for full and multidimensional analysis of the balance sheet. It allows banks to easily and accurately model the evolution of the balance sheet by modeling customer behavior, business strategy, interest rate scenarios and a wide range of other variables. Delivering configurable models through scalable processing technology, the solution facilitates risk profile evaluation and proactive strategies, optimizing the bank's risk/return trade-off, while ensuring that regulatory standards are met.

Forecast Risk and Performance

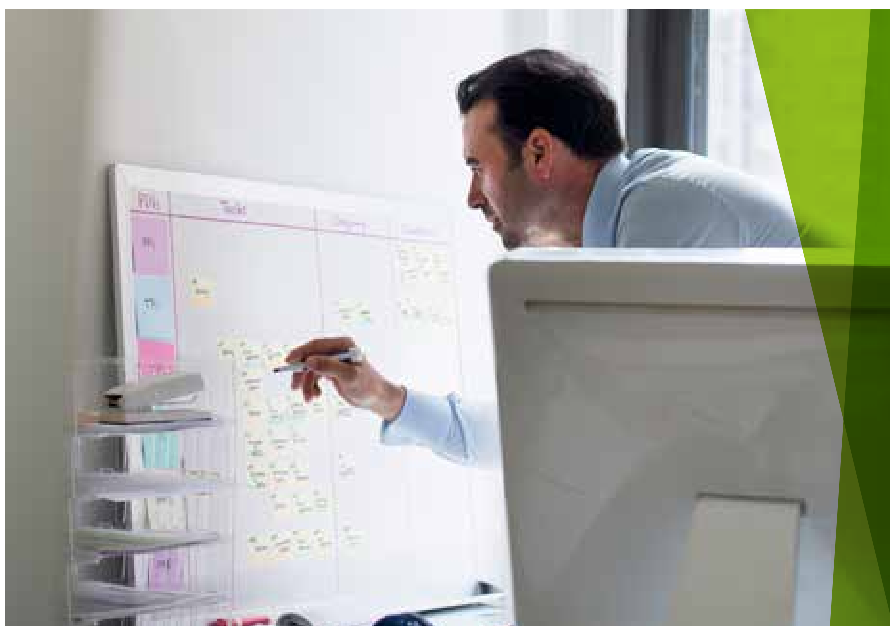
Ensure consistent risk data and models to simulate income and regulatory impact

To strike the necessary balance between compliance and performance, banks need a view of the balance sheet that is both holistic and forward looking. For a truly top-down, strategic approach to liquidity risk management, organizations must therefore:

Ensure consistent risk data and models

Today, the initial goal of a bank is to provide a common view of the balance sheet from a risk as well as a performance perspective. The next, critical step is to create one or more forward-looking consensus scenarios against which to test the bank's business strategy and operating plan. A profit and-loss forecast for each scenario will indicate the strength of the strategy in terms of performance. From the risk management perspective, the organization can also ensure that the planned evolution of the balance sheet is in line with its risk appetite framework and both internal and external compliance requirements.

Continuing to take a consistently scenario-based approach, individual departments can then apply stress scenarios that are most relevant to them, such as interest rate risk events for ALM or liquidity risk events for liquidity management. When all such scenarios are derived from the same data platform, different types of risk can be taken into account and combined – for a complete picture of their potential impact on both compliance and performance.



Simulate income and regulatory impact
To optimize balance sheet management under Basel III, a bank needs to ensure its survival in both the short term, through liquidity, and the long term, through profitability.

When it comes to planning budgets and income, the ultimate goal for the bank is to forecast its profit and loss dynamically over a set period. For a valid forecast, it must also ensure that the regulatory ratios remain above a certain threshold throughout the planning period.

While it is the projected volumes, margins and interest rate levels that will affect profitability over this horizon, impact on the regulatory ratios will be determined by the consistency of the balance sheet at each point in time. This makes an integrated view of liquidity, risk and profitability an urgent priority for today's banks.

Solution response

FIS' Ambit Liquidity Risk Management gives banks the tools they need to model their whole balance sheet into the future, in terms of both risk and performance.

Ambit Liquidity Risk Management provides an integrated view across the major risk types. Ensuring that banks use consistent data across all control, risk management, compliance, regulatory reporting and supervisory functions, it helps them align all risk-related processes with their defined risk appetite.

The simulation engine with its strong scenario definition capabilities across an infinite number of stress scenarios and risk factors enables banks to build complex balance sheet models to accurately forecast the net interest income over various periods in the future. Providing an enterprise-wide interest rate and liquidity risk management platform, and allowing earnings simulation and valuation routines to produce accurate results for positions, the solution helps model and reconcile the complex interdependent relationships between various kinds of risks and the P&L of a bank that typically make up the balance sheet.

Monitor your net income forecast

Steer the Strategy

Set the right incentives and put compliance into practice

Having incorporated the requirements of Basel III into its strategic plans, a bank must also make the regulatory ratios an integral part of its steering framework. This will enable it to:

Set the right incentives
Typically, the foundation of a bank's steering system framework has historically been its funds transfer pricing (FTP) framework. Since FTP has proved to be an important management tool for measuring risk-adjusted profitability the concept of transfer pricing needs to be further developed in order to incorporate the direct and indirect costs of liquidity in a liquidity transfer pricing system (LTP).

By setting incentives and attributing the costs, benefits and risk of liquidity to business lines within a financial institution, LTP processes can strongly influence the volumes and terms of their trading with the market. In fact, failure to use LTP tools can make a bank considerably less able to incentivize risk taking behavior correctly – and may result in the misallocation of scarce financial resources such as liquidity or capital across the firm as a whole. This could further lead the bank conducting higher levels of business than what's profitable, or where the rewards are disproportionate to the risk taken – and ultimately make its business model unsustainable.

Put strategy into practice

Regulation requires banks to accurately quantify their liquidity costs, benefits and risks in relation to all significant business activities without providing them a clearly defined blue-print on how to do so. So, direct and indirect liquidity costs must be incorporated into: product pricing; performance measurement; and approval processes for new products.

This regulatory framework aims to motivate banks to reduce the risk they pose to the financial ecosystem, by encouraging more resilient, sustainable business models through adequately pricing the risk into the customer rate.

In a pre-Basel III world, the internal (liquidity) risk management framework of a bank had to fit perfectly to its LTP framework, because the current liquidity situation plus the consistency of the funding side affected the transfer pricing and vice versa. Now, to induce the right steering signals, banks need to factor the regulatory cost of liquidity, and its allocation, into their LTP framework.

In other words, today's LTP frameworks need to be consistent with banks' risk and planning functions in terms of data, models and results. This will help organizations send out the right steering signals on an intraday basis as well as in the longer term, in line with their liquidity, funding and buffer policies. Business that is classified as high risk, either due to internal limits or regulatory requirements, and therefore requires a higher liquidity buffer needs to be priced and incentivized according to the risk it represents.

Manage your customer yield vs funding contribution

Solution response

FIS' Ambit Liquidity Risk Management allows banks to put their liquidity risk management strategies into practice across their operations, to both meet regulatory requirements and optimize liquidity. The solution provides liquidity pricing and redistribution of direct and indirect liquidity costs across an organization, by setting incentives for the proper usage of liquidity. By collecting spreads from liquidity-consuming operations and distributing them to liquidity-providing operations and the liquidity buffer at a position level, organizations can steer their balance sheet towards a prudent funding structure and correctly price undue liquidity risks.

To improve risk-adjusted performance management, Liquidity Transfer Pricing also helps separate the effects of interest rate risk from business performance, for a better understanding of which lines of business are most profitable. Through the solution, banks can also analyze the income effects of different strategies, projecting profit and loss and income redistributions into the future.

Solution response

Ambit Liquidity Risk Management enables banks to incorporate Liquidity Risk Management into a holistic balance sheet management framework by offering a strategic risk management framework that allows modeling all aspects relevant to Liquidity Risk Management in a conjunct and consistent manner.

Ambit Liquidity Risk Management covers a wide range of effects indispensable to strategic Liquidity Risk Management such as the Liquidity-Effect, the Risk- and Sensitivity-Effect and the Income- and Pricing Effect on the balance sheet. The means by which these different effects can be quantified are rooted in the solution's core components such as its cash flow engine, its valuation and pricing Engine and its simulation engine.

Liquidity effect
Analyzing the effects of in- and outflows on a banks liquidity situation, taking not only into account pure contractual cash flows but also stochastically determined and assumption based behavioral cash flows. Scenario dependent in- and outflows triggered by the new business that is required to maintain a certain forward looking business strategy (i.e. a "going concern" scenario or a "base case" budget scenario) – are also being taken into account for analyzing the banks liquidity situation under these forward looking scenarios.

Risk and sensitivity effect
Determining an appropriate liquidity buffer based on both a bank's contingent liquidity needs and regulatory requirements. This is achieved in the first instance via a thorough, forward-looking simulation of the bank's liquidity position against idiosyncratic, systemic and combined stress scenarios in conjunction with the traditional balance sheet analysis (such as fair values and durations). Secondly, the integrated calculation and projection of the LCR and NSFR helps banks to not only achieve Basel III compliance by determining an appropriate buffer of high quality liquid assets (HQLAs), but also to actively test their budget and income plans against regulatory constraints.

Income and pricing effect
Analyzing the income and pricing effects by separating the treasury's contribution to net interest income from front-office revenue and by redistribution the cost of liquidity, from liquidity-consuming operations to liquidity providers. Correctly transfer-pricing liquidity compensates the treasurer for holding the liquidity buffer – crediting treasuries with the spread between relevant market benchmarks and the buffer's actual yield. Applying net interest income simulation to analyze the income effect of a business strategy, transfer prices and benchmarks may also be predicted into the future, helping banks better manage the volatility of tenor mismatch and to optimize the funding structure of the required high quality liquid assets buffer.

About FIS' solutions for Risk Management

FIS' solutions for risk management cover pre- and post-trade risk management; integrated, enterprise-wide market, liquidity, credit and operational risk management; asset liability management; and trade surveillance. These solutions can be used across trading and clearing platforms and around multiple asset classes to help organizations better understand their exposure, improve the visibility and understanding of risk across the enterprise, and comply with regulations globally. FIS' customers include banks, broker-dealers, securities firms, clearing-houses, hedge funds, pension funds, asset managers, insurance companies, corporations and government entities of varying sizes, geographical locations and organizational complexities.

About FIS

FIS is a global leader in financial services technology, with a focus on retail and institutional banking, payments, asset and wealth management, risk and compliance, consulting and outsourcing solutions. Through the depth and breadth of our solutions portfolio, global capabilities and domain expertise, FIS serves more than 20,000 clients in over 130 countries. Headquartered in Jacksonville, Florida, FIS employs more than 55,000 people worldwide and holds leadership positions in payment processing, financial software and banking solutions. Providing software, services and outsourcing of the technology that empowers the financial world, FIS is a Fortune 500 company and is a member of Standard & Poor's 500® Index. For more information about FIS, visit **www.fisglobal.com**

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