WHITE PAPER

The hidden benefits of intraday liquidity management technology

FINANCIAL SERVICES

Benefits beyond compliance

Banks, financial services firms, and global corporates bound by intraday liquidity regulations have an opportunity to build a stronger competitive position. Though commonly overlooked, intraday liquidity management **offers benefits beyond compliance alone**.[1] There are numerous financial and non-financial benefits to consider, as well as new technological tools that simplify these complex treasury functions. This white paper looks beyond compliance. It explores how intraday liquidity management has progressed over the last decade and examines the benefits proactive organizations are enjoying.

Liquidity management in the financial market

All institutions seek to limit exposure to risk. Liquidity management plays a key role in overseeing an institution's available access to cash to meet debts and collateral obligations without incurring substantial loses. Intraday liquidity management is a necessary and important function within financial markets, as banks, financial services firms, and global corporates must have enough cash to deal with unexpected crises and still make payments in real time. To ensure an organization can meet its financial commitments, intraday liquidity management relates to the measurement of payment, clearing, and settlement activities throughout the business day versus the more traditional end-of-day approach.

Prior to the economic recession and global financial crisis of 2007 to 2009, banks already viewed liquidity management as a navigational variable, but did not perceive the threat that insufficient liquidity buffers allowed. At that time, regulators did not prioritize liquidity risk over other areas of focus like credit and operational risks.

Following the disastrous financial crashes, however, liquidity management **quickly became a topic of great concern for banks**, financial services firms, global corporates, and regulators.[2] Many regulators essentially blamed a lack of financial oversight and lack of liquidity at financial institutions for the crisis.

Emphasis on intraday liquidity should progress

Around the world, the post-crisis response saw the international Basel Committee on Banking Supervision (BCBS) generate the **Basel III** framework in 2009 as a global regulatory accord with reforms targeting risk management and regulations for the banking sector.

Pete McIntyre of Planixs wonders how things have evolved in the years since for financial institutions. He asks: "Surely all FIs [*financial institutions*] have made intraday improvements anyway as it makes great business sense? After all, being able to understand where your cash is across all of your accounts every minute of the day means you can make much better decisions and make/save lots of money."[3]

But that's not necessarily how things played out. McIntyre continues: "However, the reality is that business change for FIs in the area of risk is often linked to regulatory pressure. Sometimes because firms must comply with new regulations, sometimes because firms try to reduce eye-watering costs of regulator-imposed buffers, and in extreme cases where the regulator imposes a finding or matter-requiring-attention. The realpolitik within large FIs often means change-projects only win budget approval if they tick the 'Regulatory Compliance' box, so regulator attention helps gain sign-off for projects that already had very positive standalone business cases and huge financial benefits to the firm."

Intraday regulations have, of course, shifted over the last decade. Those shifts are important to understand since the actions of regulators have a huge impact. These shifts include:

Global standards—The standards of prudential regulation for banks are contained in the 2019 Basel Framework. That absorbed BCBS 248 from 2013, which provided guidance and a singular view of how all institutions should approach intraday liquidity. BCBS 248 level-sets and requires that a firm demonstrate, at minimum, that it understands its business and recognizes maximum intraday usage. To assist regulators, this requires institutional reporting of various metrics, including intraday liquidity usage peaks.[4]

UK perspectives—The Financial Services Authority (FSA), now the Prudential Regulation Authority (PRA), was an early, key thought leader on intraday liquidity; and has evolved over the last ten years. After first creating its own BCBS 248 reporting structure, it then outlined an authoritative explanation of how regulators prefer for institutions to approach intraday usage. McIntyre explains: "The PRA doesn't concentrate on BCBS 248 reporting, but instead makes a firm prove it understands intraday usage to a very detailed level—what drives usage, how it might change in a stress, maximum amounts of liquidity used, etc. Crucially, the PRA also drives the firm to get better at intraday processes, systems, and governance. This is to give confidence that the firm not only understands its intraday usage, but can actively monitor it in real time, can react if stresses blow up, and has adequate buffers to cope in a crisis."

US approach—While there is less US-based, publicly available guidance or material on regulatory expectations, the US does take effective measures to ensure institutions understand the risks associated with intraday liquidity. "Often, resolution planning drives matters," adds McIntyre. "The FDIC [*Federal Deposit Insurance Corporation*] tests that a firm's resolution plan will provide sufficient intraday liquidity to get through the crucial first few days of a resolution when the firm won't be able to access intraday credit. Canada lags the US, but again resolution planning is encouraging banks to test intraday liquidity capabilities and allocate intraday buffers."

Financial benefits

Financial and cost savings from proper intraday insight accrue from a range of areas. These include the following (note: financial and percentage figures are for illustration purposes):

Reduction in intraday liquidity buffers—These savings can be enormous, running into the annual tens of millions for global organizations (e.g., one global organization cut its intraday liquidity buffer by approximately 25%, resulting in annual savings of $50 million).

Funding cost reduction (short position)—A financial institution holds a certain value in overnight balances. Often, these nostro accounts can impact up to 50% of their accounts with balances ranging from $50,000 to $100,000 per account. Depending on the number of total nostro accounts, this combined exposure could be $50 million to $375 million. Given a 1.5% interest cost of borrowing, any reduction in this borrowing can have an impact. Financial observers have seen realized reductions of 20% to 30%, yielding an annual benefit of from $200,000 to $1.7 million.

Funding cost reduction (major restructuring/changes)—Organizations must look at the average amount of funding per day that they need to balance an account over the total number of accounts to fund up from a short position. Often up to half of the organization's accounts need this funding to be balanced. Although there is a smaller interest premium to cover this when multiplied by the large annual funding costs, this benefit can be from $750,000 to $3.4 million.

Reduction in lost opportunity (long position)—Similar to above, organizations must look at the average amount of funding per day that they need to balance an account over the total number of accounts to fund down from a long position. Often up to half of the organization's accounts need this funding to be balanced. The opportunity return value is quite high, ranging from 5.8% to 6.6%. This reduction in lost opportunity can drive annual benefits from $700,000 to $7.5 million.

Reduction in cost of accessing credit—Organizations maintain a number of correspondent relationships (often between 100 to 250). Approximately 70% of those require maintaining a credit line—held open with pre-funded cash, collateral, or a credit line. With a cost of around $100,000 annually for each credit line, a 10% to 15% savings rate could provide an annual benefit of $700,000 to $2.7 million. Additionally, for those relationships that must be pre-funded at a cost of funds from 0.5% to 1%, with a reduced collateral requirement from 20% to 30%, the annual benefit could be in the $2 million to $14 million range.

Non-financial benefits

Managing and demonstrating control over intraday liquidity also leads to many non-financial benefits, such as:

Maintaining regulatory compliance—Compliance is met when management and control over intraday liquidity can be demonstrated. The benefits of gaining the regulator's trust are twofold. Firstly, an improved relationship with the primary and national regulators (meaning an efficient and compliant business) reduces the intensity of future regulatory scrutiny. Secondly, this sends a positive message to the support staff and a strong statement to the business, internal management, and clients. Furthermore, as regulatory requirements and guidelines are updated or expanded, the proper software tools can help automatically update any changes in banking systems.

Developing accurate cash forecasting—Giving the organization's treasury unit increased visibility into when they have money and when they need money for operational requirements allows financial institutions to create added value. **Interest rates have dipped into negative territory** in parts of the Eurozone, Switzerland, and Japan.[5] This has a significant effect, as well as cost implications, requiring treasury units to more closely manage intraday and end of day balances. Proactive intraday control helps the treasury:

- Improve cash forecasting and funding based on actual balances rather than relying on fuzzy ledger positions
- Understand better how long (days, weeks, months) will be in a particular excess or shortfall on their currency cash position
- Reduce both the frequency and size of funding swings with fewer large exposure situations requiring internal management reporting
- Utilize excess currency balances in other markets that close later in the day (same day currency swaps)
- Improve the service to business groups and clients by extending funding cutoff deadlines

Understanding credit risk considerations—Options on dealing with late incoming payments are more flexible. More options mean organizations can identify, investigate, and challenge when counterparts and clients regularly pay late. They can also receive earlier notifications about unadvised payment receipts and more timely accounting. Intraday control also provides clear insight over the value of overnight nostro balances and consistent daily management reporting so that targets can be set that reduce credit risk if correspondent banks default.

Optimizing cash management, intraday liquidity, and funding—Having global insight over balances as they settle minute-by-minute throughout the day enables organizations that operate across international markets to adopt more flexible location-based support. A treasury unit strategically based in Hong Kong, for example, can effectively manage and fund the currency positions when it operates within the local time zone of the Asia currency clearing systems. However, it's not best located to manage the intraday liquidity and funding of European currencies or the Americas markets.

Intraday liquidity management technology can provide insight into balances in real time at both the currency and legal entity level. This enables the treasury unit, in London as an example, to manage the Sterling and European intraday funding for the Asian and Americas legal entities. The group's entire US dollar cash management and intraday funding could similarly be managed by a treasury unit based in New York.

Leveraging control dashboard and alerting—A control dashboard should incorporate daily balance proofing, which ensures the cash flow database is complete, accurate, and reliable. The control dashboard should be designed to confirm the source data received in real time is complete and in sync with clearing and correspondent bank accounts at close of business each day.

Exceptions (such as missing bank statements and cash flow messages) are highlighted for further investigation. This control process ensures funding decisions are as accurate as possible, enable end users to investigate and correct exceptions sooner, and (where necessary) improve service from the agent network.

Alerts are generated when thresholds are breached. Alerts are also published to the user's dashboard and can also be communicated by email. Alerting, along with machine learning, can help alleviate the burden of real-time liquidity monitoring. This allows employees to better focus on value-added analysis instead of data processing.

Improving global network management (GNM)—Managing the relationships of agent banks with transparency and control is important. Related intraday benefits include:

- Gaining control over new account openings is a constant challenge faced by GNM. It's possible to enforce the control process, as it requires the input of specific data to identify each new clearing or correspondent bank account. Payment activity over accounts not set up in the system can be written to an exception queue for immediate investigation.
- Taking a consolidated view of the organization's activity with a correspondent bank, at the account level, enables building a profile that shows start of the day balance, turnover debit and credit, intraday liquidity usage, credit line, intraday credit exposure, and overnight balance.
- Managing the relationship with the correspondent bank to understand balances, trends, increases and decreases in number, and value of transactions in a stronger profile, better position the organization to manage GNM.
- Leveraging a consolidated view of the entire correspondent bank network enables users to create consolidated views where the firm's legal entities operate accounts with multiple correspondent banks in the same currency. This can be used to better understand existing flows, volumes, and values.

Exploiting netting—Gaining insight over intercompany transactions that use intraday liquidity as they settle externally over correspondent bank accounts is also important. Much of this liquidity usage can be eliminated by techniques that net or internalize the settlement. This also reduces settlement costs. Counterparty netting helps identify settlement activity that should be netted, but is not, through industry services and where bilateral netting would be advantageous by reducing settlement risk for both parties.

Understanding technology's role

In the scope of liquidity risk (including intraday), regulators now expect a demonstration from institutions of strategies, policies, processes—and systems—for the management and monitoring of related activities. When the PRA released the Statement of Policy Pillar 2 Liquidity, the organization outlined oversight of liquidity measures, but added interest in technology along with processes and policies. Since then, regulators consider the quality of the technology and IT systems banks are using.

A growing number of organizations rely on technology and commercial-market solutions to ensure satisfactory levels of liquidity buffers and take advantage of other organizational benefits. Leaders are recognizing the advancements and reliability of software technology today, and that any challenges of technology implementation are outweighed by finding solutions that make an impact across the organization.

Attributes of top technology

Not all software is created equal. When it comes to large financial investments, details matter. Modern banking software that's flexible and innovative to match the needs of each bank typically has several common characteristics. When considering intraday liquidity management software, look for this type of functionality:

Business configuration—Summarize and aggregate data to reflect your business model with drill-down to transaction detail.

Approvals workflow—Support "four-eyes" control and audit for your critical changes to data.

Industry standard—Accelerate implementation and minimize risk by using industry standard message formats, such as SWIFT.

Grid views—Display relevant balances and transactions in spreadsheet-style grids.

Global reporting—Support intraday compliance with templates provided for published regulatory reports that are continually updated to reflect global regulatory changes, such as Federal Reserve Resolution Planning and Regulation YY.

Graphical insight—Create extensive charting across selected timeframes, including intraday at a minute-by-minute level.

Sophisticated security—Keep the organization secure with wide-ranging user security at both the functional and data level with role profiling.

Alerting—Improve processes with real-time alerting based on business-specific monitors—where alerts can be emailed to you or delivered to a dashboard—freeing up the workforce to focus on more strategic, urgent matters.

Data export—Empower users with deeper analysis and data sharing with export capabilities for charts, summarized data, and detailed transactions.

Capabilities to look for

A liquidity management core platform should run on an engine that consumes and intelligently transforms transactional messages from external account providers in real time—via existing financial industry infrastructures—and internal systems across the front, middle, and back offices. This helps ensure financial institutions have accurate, up-to-date data for analysis.

Modules and features to look for include:

Intraday liquidity management—Gain comprehensive visibility of an organization's settlement activity across all its direct and indirect accounts—where balances, turnover, and transactions are stored, aggregated, and analyzed every minute of every day to give real-time intraday insight, including:

- External intraday advice
- End-of-day statements
- Alerting monitors

Regulatory reporting—Support compliance with global regulatory monitoring and reporting guidelines and regimes related to intraday activity—which should be regularly refreshed to keep pace with evolving regulator demands across the world, including:

- BCBS 248
- UK PRA intraday regime
- Extended for new requirements as released by regulators

Funding and forecasting—Capture cash flow projections from an organization's internal systems and deliver detailed analytics and forecasts of end-of-day projections for all accounts—and when used in conjunction with intraday liquidity management, produce a single view of:

- Activity based on projections
- Real-time, accurate forecasting
- Manual adjustments as needed

Payment control—Gain insight into the lifecycle of outgoing payments and the ability to control and smooth payment flows. Users can see the volume and value of payments at each stage of the cycle and are alerted to issues so they can proactively address them and ensure transactions are processed smoothly. Control capability allows the firm to fit within liquidity limits by throttling payments that are not considered time-critical.

Other valuable capabilities financial institutions should look for when considering liquidity management software, include:

Intraday stress modeling—Apply analytic capabilities across the rich data history building up over time in the database. Granular data underpinning typical or extreme days can be modified (e.g., defer payments, halt receipts, modify credit lines) and existing front-end tools used to understand the impact of such stresses. For example, BCBS 248 reports can be re-run to understand the new peaks and troughs under the stressed condition.

Intraday reconciliation—Utilize both manual matching and real-time auto-matching capabilities to link together external confirmations from account providers with internal projected ledger bookings. This enables much more timely awareness of the progress of settlement activity to support funding processes. It also delivers enhanced insight on the drivers of liquidity usage by consolidating data from the actual movements of liquidity with data in internal systems that identify the underlying activities driving such movements. This insight supports a range of activities, such as funds transfer pricing and business unit allocation processes.

Intraday balance forecasting—Leverage machine learning that uses historical transactions to identify factors driving settlement times and probability of failure. These factors are applied to projected activities to create intraday forecasts of account balances. Forecasts provide early warning of potential issues and alert users when actual behavior deviates substantially from expected profiles. This optimizes intraday liquidity positions, reduces costs, and improves the ability to manage obligations.

Inventory monitoring and management—Extend intraday models and allow users to understand forecast and actual intraday positions of securities held across the firm's network. Insight is given into both the volume of individual securities and their cash equivalent balances—including the impact of "**haircuts**." The module also supports a range of capabilities, including liquidity risk and collateral management, optimization, and funding activities.

Vostro monitoring—Monitor and manage intraday activity across client accounts, building on the nostro model utilized in other modules. Clients can be considered individually or aggregated into hierarchies and groupings. Users can understand client behavior, client usage of credit, and the impacts on the firm's liquidity usage. This insight can be utilized to adhere to regulations and deliver BCBS 248 reporting.

Harnessing the power of intraday liquidity to build a competitive edge

Innovative approaches to liquidity management and related activities—like intraday liquidity—position banks, financial services, and global corporates for greater success and alleviate the pain associated with managing details and changes related to regulations that require immediate action. As regulatory scrutiny increases, financial services institutions are turning to technology as an enabler of organizational benefits and opportunities. The key is finding agile tools that work for each unique organizational situation.

Is your business able to easily produce reporting and monitoring right now? Can you prove to regulators that you understand your intraday positions across all your accounts in real time, and hence are in control during the day? Banks, financial services, and global corporates that take a proactive track now, will avoid falling behind competitively and experience greater efficiencies and profitability.

[1] Justin Silsbury, "Time for real-time: the many benefits of real-time liquidity management," Financial IT, 2021 June 23.
[2] "Credit and Liquidity Programs and the Balance Sheet," Board of Governors of the Federal Reserve System, 2021 May 10.
[3] Pete McIntyre, "Intraday liquidity regulation: a decade of progress?," Finextra, 2021 March 11.
[4] McIntyre
[5] Adrian Sargent, Karen Moss, "Negative Interest Rates: What ALM Practitioners Need to Know," Moody's Analytics, 2021 May.

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