INTRADAY LIQUIDITY
REAPING THE BENEFITS OF ACTIVE MANAGEMENT

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EXECUTIVE SUMMARY

Intraday liquidity is critical to the smooth functioning of payment, clearing, and settlement (PCS) activities in the financial markets. Now, rising interest rates and the unwinding of quantitative easing will render intraday liquidity an increasingly precious resource. Banks will need to shift from passively measuring ebbs and flows to actively managing and optimizing intraday liquidity usage. Those that invest in building capabilities beyond the bare minimum will be rewarded with improved balance sheet profitability and higher operational efficiencies, while opening up the possibility of new revenue streams. Those that fall behind will find that existing inefficiencies become increasingly costly.

Every day, trillions of dollars of payments are exchanged to, from and between every type of entity, including individuals, financial institutions, corporations, infrastructure providers, and governments. Intraday liquidity is the grease that oils these exchanges. The financial network is highly interconnected; the failure of a participant to meet these payment, clearing, and settlement obligations can have a material impact on connected counterparties, and ultimately lead to systemic disruption.

Given the critical nature of intraday liquidity management at financial institutions, it is no surprise to see increased scrutiny from regulators during the post-crisis regulatory wave. Major banks in the United States and worldwide have responded by strengthening intraday capabilities. Efforts to date have nevertheless remained narrow in scope. Investments have generally focused on meeting the letter of the guidance rather than on developing more comprehensive and sophisticated intraday liquidity management capabilities. This approach will no longer suffice as we move away from the era of cheap and abundant liquidity.

This paper provides an outline for treasurers, chief financial officers (CFOs), chief risk officers (CROs), and chief operating officers (COOs) within financial institutions, who wish to transform their approach towards intraday liquidity management. Our analysis indicates that a 25-50% reduction in intraday liquidity costs is well within reach. Further, banks will also stand to benefit from optimal efficiency, improved risk management, and timely decision-making around this scarce resource.
THE CASE FOR ACTIVE INTRADAY LIQUIDITY MANAGEMENT

INTRADAY LIQUIDITY IS COSTLY, AND THE COST IS INCREASING

The cost of intraday liquidity directly manifests itself through the cost of carry of liquidity reserves. For banks bound by liquidity stress testing (LST) or resolution planning liquidity metrics, our analysis indicates that typically 10-30% of total liquidity reserves result from intraday liquidity requirements. These reserves, which are usually backed by long-term debt, have an approximate negative cost of carry of 100 basis points in the current rate environment. For large banks, this means that hundreds of millions of dollars in annual funding costs stem from intraday liquidity (Exhibit 1).

There are other costs to intraday liquidity as well. These include overdraft fees, operational expenses covering redundant and manual activities, the opportunity cost of collateral posted, and eventually, lost intraday liquidity usage charges (Exhibit 2).

With interest rates rising and liquidity within the market tightening, intraday liquidity costs are only increasing. Furthermore, as large liquidity-constrained institutions move towards more active management, we anticipate a cascading effect for the rest of the financial ecosystem. Those who do not act now will find themselves at a competitive disadvantage relative to peers within a few years.

Exhibit 1: Intraday liquidity costs for a large bank – illustrative

ILLUSTRATIVE TOTAL GROUP-WIDE LIQUIDITY RESERVES ~$100 BN

10–30% OF TOTAL LIQUIDITY RESERVES IS DRIVEN BY INTRADAY LIQUIDITY

~100 BPS COST OF CARRY FOR LIQUIDITY RESERVES × $100–300 MM COST OF INTRADAY LIQUIDITY ANNUALLY

25% REDUCTION OF INTRADAY LIQUIDITY REQUIREMENT → $25–75 MM IN COST SAVINGS ANNUALLY

1. 25% reduction is an illustrative benefit; Oliver Wyman has identified upwards of 50% reduction opportunities at some institutions

Source: Oliver Wyman analysis
Exhibit 2: Other costs of intraday liquidity

| OVERDRAFT FEES | • The Federal Reserve permits banks to have a negative intraday reserve balance (i.e. daylight overdraft) to facilitate PCS activities  
• Uncollateralized daylight overdrafts incur a fee of 50-150 bps  
• Banks may collateralize these daylight overdrafts, which eliminates the fee; however, this comes with an opportunity cost from tying up the collateral (see collateral costs below) |
| OPERATIONAL EXPENSES | • Operational inefficiencies typically entail manual, repetitive processes that contribute to day-to-day expenses  
• Inefficiencies may also generate operational risks that may result in direct or indirect costs (e.g. reputational damage) |
| OPPORTUNITY COST OF COLLATERAL | • Collateral is required to secure intraday lines of credit at FMUs and central banks to provide banks with sufficient intraday liquidity to execute PCS activities  
• Tying up collateral to obtain intraday liquidity prevents the collateral from being deployed elsewhere within the firm, often more profitably (e.g. secured financing transactions, derivatives margin) |
| INTRADAY LIQUIDITY USAGE CHARGES FROM OTHER FINANCIAL INSTITUTIONS | • Currently, intraday liquidity costs are not baked into products and services pricing at most institutions  
• As other firms increasingly turn to active intraday liquidity management to reduce and recuperate their own costs, we anticipate that the industry will begin pricing costs into products and services more comprehensively |

THE MANY BENEFITS OF INTRADAY LIQUIDITY MANAGEMENT

Since the financial crisis, banks have made efforts of varying degrees to improve intraday liquidity measurement and monitoring capabilities in a way that meets regulatory requirements (Exhibit 3). In the United States, these capabilities have been scrutinized, tested, and augmented as part of the resolution planning process and other horizontal reviews. Many banks now face a new reality in which resolution planning liquidity obligations – of which a significant portion is triggered by intraday liquidity requirements – have become the binding liquidity constraint.

Exhibit 3: Timeline of key regulations with intraday liquidity implications

| FEDERAL RESERVE’S SR10-6 | “...institutions with material payment, settlement and clearing activities should actively manage their intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions.” |
| FEDERAL RESERVE’S SR14-1 | “...[firms] should evaluate the funding requirements necessary to perform critical operations, including shared and outsourced services and access to FMUs.” |
| RESOLUTION PLAN GUIDANCE | “...methodology should take into account ... trapped liquidity as a result of actions taken by clients, counterparties, key financial market utilities...”  
“The MOL estimates should capture material entities’ intraday liquidity requirements, ... to ensure that material entities could operate without disruption during the resolution.” |
| BASEL COMMITTEE ON BANKING SUPERVISION (BCBS) 248 | “The BCBS, in consultation with the Committee on Payment and Settlement Systems (CPSS) has developed a set of quantitative tools to enable banking supervisors to monitor banks’ intraday liquidity risk and their ability to meet payment and settlement obligations on a timely basis under both normal and stressed conditions.” |
| FEDERAL RESERVE’S ENHANCED PRUDENTIAL STANDARDS (EPS) – BHCs/ FBOs with $50 billion or more of total consolidated assets | “Collateral. The [BHC/FBO] must establish and maintain policies and procedures to ... monitor shifts in the bank holding company’s funding patterns, such as shifts between intraday, overnight, and term pledging of collateral.”  
“Intraday exposures. The [BHC/FBO] must establish and maintain procedures for monitoring intraday liquidity risk exposure.” |
Banks have the opportunity to extend these regulation-driven monitoring and measurement capabilities into active intraday liquidity management, integrated within the normal course of business activity. This would achieve several tangible benefits:

- **Reduced funding costs**: Active intraday liquidity management can decrease usage, and optimize associated liquidity reserves and a bank’s funding structure. More specifically, it can significantly reduce contingent liquidity requirements and daily collateral needs, thereby shaving millions of dollars off the annual costs of liquidity reserves. For many banks, especially active capital markets participants, intraday liquidity requirements comprise a considerable proportion of the total liquidity reserve. Both LST and resolution planning liquidity metrics include a minimum operating liquidity (MOL) component which ensures that a firm has sufficient liquidity to continue its operations during stress. Most of the MOL calculation is tied to intraday liquidity usage and has typically been calibrated through analyzing a firm’s historical intraday liquidity usage peaks. Active intraday liquidity management can lower the contingent liquidity requirement by reducing peaks in usage (thereby decreasing MOL).

- **Improved operational efficiencies**: Active intraday liquidity management can significantly reduce costly operational risks and inefficiencies (manual overrides for example) that may result in direct or indirect costs (such as reputational damage). Furthermore, banks may also see benefits from reductions in operational expenses that have stemmed from these inefficiencies. Many banks are considering re-engineering their PCS processes to increase operational efficiencies. For example, some banks are implementing and automating a system to prioritize payments so that management of the payments process can be improved on an ongoing basis. Such an operational enhancement reduces the risk of reputational damage associated with mishandling a client time-sensitive payment, and the operational expense of previously manual steps. Banks are also reconsidering the trade-offs between self-clearing vis-à-vis clearing through an agent bank, with intraday liquidity implications as a key consideration.

- **Accurate cost attribution and potential new revenue streams**: There is often limited understanding within the industry about how much intraday liquidity usage results from specific activities, products, or services. Improved transparency and a disaggregation of total intraday usage into relevant categories – transaction types, products, clients, financial market utilities (FMUs), or legal entities – will allow firms to identify measures that could influence client behavior and inform product and service management, while helping to normalize intraday liquidity patterns. This approach can also be incorporated more systematically into the firm’s funds transfer pricing (FTP) framework. This would provide a more complete view of profitability and incentivize better front-line decisions (such as pricing or new product approvals). Of course, any decision to incorporate intraday liquidity into client pricing must be weighed against the potential negative implications, such as adverse client reactions.

The composition and magnitude of these inefficiencies and associated benefits will vary among banks, but there is an untapped opportunity for most banks to realize significant value.
Successfully implementing active intraday liquidity management requires building a unified target operating model. We examine the current state of the industry, and the enhancements needed to facilitate active intraday liquidity management, across the five pillars of a target operating model (Exhibit 4):

**A. GOVERNANCE AND ORGANIZATION**

A decade ago, intraday liquidity-related considerations were seen by most banks as a back-office responsibility, with executive management playing little role. Increased regulatory focus on intraday liquidity usage and risks in recent years, from various angles, has led to greater senior attention and awareness of the associated risks. In particular, many banks have established governance mechanisms to monitor the risk, for example by implementing policy enhancements, increasing board engagement and oversight, as well as clarifying roles and responsibilities across the three lines of defense.

**B. PROCESSES, OPERATIONS AND CONTROLS**

**C. INTRADAY LIQUIDITY MANAGEMENT ANALYTICS**

**D. CLIENT AND PRODUCT MANAGEMENT**

**E. DATA, TECHNOLOGY AND REPORTING**

**Exhibit 4: Current state vs. future state of the industry**

<table>
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<tr>
<th>CONSIDERATIONS</th>
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<tr>
<td>• Intraday liquidity policy</td>
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<tr>
<td>• Clarity of mandate, roles and responsibilities</td>
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<tr>
<td>• Resourcing and senior engagement</td>
</tr>
<tr>
<td>• Operational capabilities</td>
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<tr>
<td>• Contingency processes and limits</td>
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<tr>
<td>• Appropriate controls</td>
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<tr>
<td>• Sophisticated liquidity stress testing and RRP analytics</td>
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<tr>
<td>• BAU forecasting capabilities</td>
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<tr>
<td>• Funds transfer pricing</td>
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<tr>
<td>• Mapping of activities to intraday liquidity usage</td>
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<tr>
<td>• Ability to attribute usage and costs at granular level (e.g. business, client, product, legal entity)</td>
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<tr>
<td>• Real-time positions; historical data for analytics</td>
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<tr>
<td>• Granularity/frequency of reporting</td>
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<tr>
<td>• Data governance and MIS quality assurance</td>
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To make active intraday liquidity management possible, however, governance structures need to extend beyond risk management. Governance and organizational structure will have to support the identification of opportunities, the evaluation of trade-offs and investments, and the supervision of capability implementation. Engaging stakeholders throughout all parts of the company will be necessary if this is to be accomplished (Exhibit 5). At a minimum, banks need to generate cross-functional participation with representatives in the treasury and operations functions, as well as business units, in order to identify and implement active management opportunities. Leading players may also clarify and codify the cross-functional collaboration by establishing a single committee or taskforce with an end-to-end view of intraday liquidity management processes and risks. Establishing a strong central role for the treasury function and ensuring adequate resourcing and engagement throughout all participating groups are essential to success.

Exhibit 5: Cross-functional considerations

<table>
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<tr>
<th>MANDATE FOR INTRADAY LIQUIDITY</th>
<th>Require the right bank resources (e.g. focused intraday liquidity team within Treasury) with the mandate to manage the calculation and drive optimization of the bank’s BAU as well as contingent intraday liquidity need</th>
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<tr>
<td>OPERATIONAL CAPABILITIES</td>
<td>Require resources with deep operational knowledge and capabilities (e.g. throttling) to manage the bank’s day-to-day intraday processes and contingency actions</td>
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<tr>
<td>BUSINESS ENGAGEMENT</td>
<td>Require engagement from the bank’s businesses to help identify drivers of BAU and contingent intraday liquidity need and own measures to reduce the need</td>
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<tr>
<td>CLIENT IMPACT</td>
<td>Require willingness of executives to “test and learn” from changes that may impact client behavior (e.g. smoothing transactions, differentiated pricing) to achieve liquidity benefits</td>
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B. PROCESSES, OPERATIONS AND CONTROLS

LST and resolution planning initiatives have prompted the development of foundational intraday liquidity operational activities. However, as these efforts have focused on managing intraday liquidity in times of stress, manual intervention is often required to mobilize these activities, preventing them from being utilized on a daily basis.

Firms can more systematically identify operational levers that would either increase the supply of available client cash and collateral or reduce demand for funding from financial market utilities. On the supply side, banks can redeploy existing liquidity sources or require pre-funding of select transactions. On the demand side, banks can pursue actions such as rationalizing FMU and third-party account structures, or implementing bank-wide offsetting or netting of transactions (such as foreign exchange transactions), among other levers. Banks could also make intraday liquidity usage frameworks more specific (such as with specific product or client limits), and therefore manage peaks in demands.

In addition, firms can make use of levers to reduce indirect costs, such as operational expenses and losses. For instance, firms may automate decision-making processes and controls, rather than rely on manual overrides, which oftentimes lead to delays in the processing of transactions.
C. INTRADAY LIQUIDITY MANAGEMENT ANALYTICS

To date, firms have focused their analytics efforts on intraday liquidity stress testing and measurement methodologies. Intraday liquidity analytics for BAU purposes, such as activities forecasting, profitability measures, and pricing, are only just emerging.

Improved forecasting can help firms in proactively identifying opportunities to optimize intraday liquidity usage or normalize peaks. It also enables more effective planning, timing and prioritization of PCS activities.

Intraday liquidity costs should ideally be incorporated and reflected in the firm’s FTP framework so that a more complete view of profitability can be observed at a granular level. Passing on costs to the business will incentivize managers to make more informed decisions, thereby helping optimize intraday liquidity and credit usage. As more sophisticated internal analytics and pricing schema become available, such information should also be put at the disposal of relevant stakeholders and incorporated into business-as-usual processes. In this way, firms can also estimate the costs of intraday liquidity in strategic decisions more accurately, such as when they approve new products or identify priority client segments.

D. CLIENT AND PRODUCT MANAGEMENT

Enhanced client and product management will be critical for both optimizing intraday liquidity usage through influencing client behavior, as well as for generating new revenue streams by pricing intraday liquidity usage into products and services that have historically been provided to clients at no cost. Banks have laid the groundwork by starting to build the required data inputs for various regulatory purposes. However, there is still more work to be done for most banks.

With appropriate data granularity, banks can incorporate intraday liquidity analytics into client management activities and front-line decisions in an appropriately targeted manner. For example, banks may charge clients (or specific client segments) for intraday credit lines, or alter product design to limit intraday cash flow mismatches. With the right tools and capabilities, it is also possible to generate revenue streams from new services, such as charging clients for prioritized payments. Such actions should be carried out with a focus on the net value to the overall client relationship.

E. DATA, TECHNOLOGY AND REPORTING

Granular, accurate, and timely information is essential to supporting the development of more sophisticated intraday liquidity management analytics and capabilities. Efforts to date have focused on monitoring current positions and enhancing historical datasets. However, much progress still needs to be made.

Today, many firms must rely on aggregate views that lack detail, significantly curtailing their ability to identify opportunities for active management. As a starting point, firms should disaggregate data and analytics across several dimensions, such as client, product, account, payment purpose, time, entity. Firms should also start delivering foundational reporting on intraday liquidity usage to front-line and treasury decision-makers, even when those reports are subject to a time lag.
CONCLUSION

Active management of intraday liquidity is becoming increasingly critical in today’s market environment, offering considerable benefits. Banks can reduce funding costs, increase operational efficiencies and even uncover new revenue streams by actively managing intraday liquidity. In our view, the first steps should be as follows:

1. Convene a cross-functional team of key stakeholders.
2. Establish a common understanding of current intraday liquidity management capabilities, and conduct analytics on intraday liquidity usage to gauge the potential upside of active management.
3. Design target state active intraday liquidity management capabilities, and outline a feasible execution roadmap.
4. Identify and mobilize a portfolio of levers to optimize intraday liquidity.
5. Expand (and self-fund through short-term benefits realized in step four) sustainable active intraday liquidity management capabilities.
6. Monitor medium- and longer-term financial and non-financial benefits, and “test and learn” to improve active intraday decisioning.

In the quest for financial advantage, intraday liquidity management is an often-overlooked area, but one that can have a significant impact. Depending on where you start, the journey to achieve best practices will vary in complexity and required investment. However, in our experience the necessary investment in establishing active intraday liquidity capabilities is dwarfed by the realizable and sustainable financial and non-financial benefits that are ripe for reaping.
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