MASTERCARD INSIGHTS

OCTOBER 2024

High speed, high stakes

Navigating liquidity in an era of volatility

Contents

01 Executive summary

Liquidity is the lifeblood of an institution, allowing it to meet operational costs while funding future investment. Finding the right balance between the two is nothing new to corporate treasurers, but recent trends are challenging the traditional systems and processes commonly used. This report focuses on **three of those key trends**, assesses their implications for liquidity management at banks, and investigates the emerging technologies which are creating new opportunities in the field.

TREND 1

Faster payments

Real-time payments (RTP), also known as instant payments, are becoming commonplace around the globe. For banks, this creates unpredictable cash flows that must be managed instantly around the clock — often without a clear picture of their optimal intraday liquidity or future funding requirements.

TREND 2

Tighter oversight

Governments are strengthening regulatory frameworks and introducing new policies to address potential vulnerabilities in the financial system — with a focus on banks' liquidity management.

TREND 3

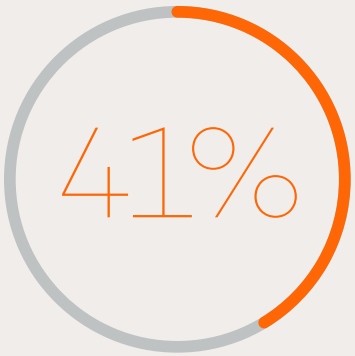
Fragmented liquidity pools

Banks typically maintain liquidity across multiple accounts and systems — and this fragmentation is accelerating as new platforms are launched, cross-border payments proliferate, and the use of digital assets increases.

WHY LIQUIDITY MATTERS

For corporate treasury teams, effective liquidity management is a top priority. It's essential for sound financial performance, risk mitigation, operational efficiency and overall competitiveness. For treasury teams in banks, the stakes are even higher. Too much liquidity ties up resources that could be otherwise used for investment. Too little liquidity, and the potential consequences are worse — bankruptcy, or the trigger for a global financial meltdown, as in 2008.

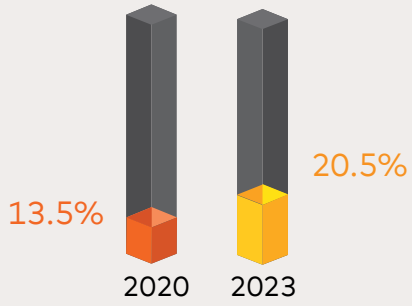
of CFOs cite liquidity risk management as a top priority.[1]



of corporate executives say they are "highly confident" in their cash and liquidity management — and confidence levels have fallen since at least 2020.[2]

TECH SOLUTIONS

Some bank treasuries are implementing emerging technologies to help them better manage liquidity in today's high-stakes environment. These solutions use integrated data, advanced analytics, AI and business intelligence tools to enable real-time liquidity monitoring and forecasting, better financial decisions and smarter stress testing.



20.5%

of corporate execs said their companies used advanced technologies (advanced analytics, AI, machine learning) to manage liquidity in 2023 — up from 13.5% in 2020.[3]

DELIVERING VALUE

Accurate, reliable forecasting that provides an accurate view of what's coming around the corner is particularly important for banks. It informs decisions that help treasury teams maintain sufficient liquidity, avoid overfunding or underfunding, prevent delays that frustrate customers, and bolster the bottom line.

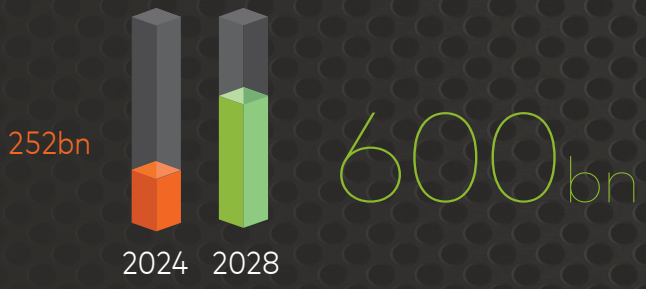
By using more effective predictive analytics to optimizing liquidity and cash flow management for a real-time world, bank treasuries can graduate from a back-office function to a strategic partner of the C-suite — from a cost center to a profit center.

02

TREND 1

Faster payments

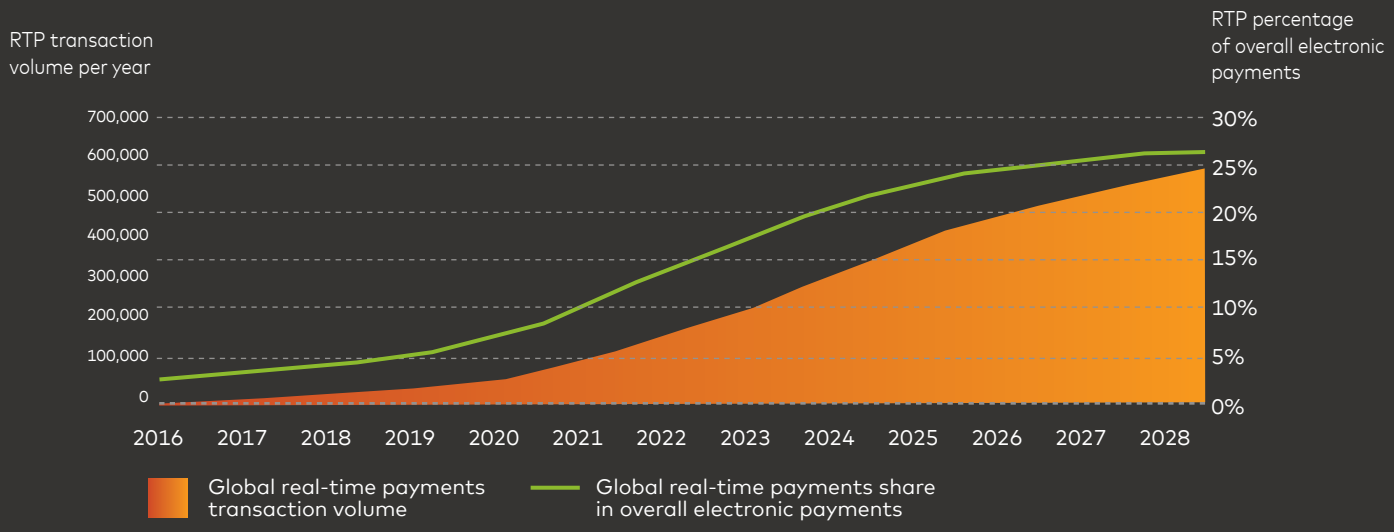
the number of countries with RTP systems increased from 14 in 2014 to about 100 by mid-2023.[6]



the number of instant payments expected to be processed globally in 2028, up from 252 billion in 2024.[7]

By 2028, more than one quarter of all electronic payments worldwide will be RTP. In India, which dominates the global RTP market, more than 80% of all electronic payments are real-time.[8]

GLOBAL RTP AS A SHARE OF OVERALL PAYMENTS, 2016-2028



16.7%

Volume of Real-Time Payment Transactions CAGR 2023-2028

Liquidity management becomes more complex as RTP volumes rise

The number and size of RTP transactions are growing — and becoming a larger share of global payment volumes — as use cases expand, size limits rise, and non-bank entities access RTP schemes directly. These developments create more complexity for treasury teams that manage liquidity and cash flow.

New use cases are emerging

RTP typically gains traction within a market via person-to-person (P2P) transfers and disbursements, then expands to consumer bill payments and retail purchases — online and in-store — and business-to-business (B2B) payments.

Incentives are aligned

RTP USE IS EXPANDING BECAUSE EVERYBODY SEES BENEFITS

One in four **consumers** say they are challenged by the slow speed of payments and want better ways to instantly move money. Their top use cases are paying friends and family, transferring money between accounts, and paying bills.[8]

For **merchants,** instant payments improve cash flow, which can be particularly valuable to small and mid-sized businesses.[9]

Irregular ad hoc payments, those made outside standard invoicing and payroll channels, make up a growing portion of enterprise payment volumes and they're increasingly managed through automated processes and RTP. This benefits **gig workers, freelancers and small businesses** that rely on ad hoc payments.[10]

In a recent survey, three quarters of companies said they expect to use instant payments for **B2B transactions** by 2028.[11] The top benefits cited were lower transaction costs and greater operational efficiency. In addition, faster settlements can optimize supply chain management, inventory and sales management, and just-in-time delivery — ultimately strengthening the bottom line.

Corporations are accessing RTP clearing infrastructure

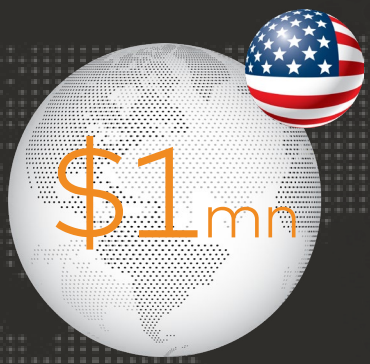
Domestic RTP system operators are enabling non-bank entities — corporations, fintechs and wallet providers — to directly access RTP clearing infrastructure, whether they are banked with direct or indirect RTP scheme financial institutions (FIs). Indirect scheme FIs allow their corporate clients to access the scheme through a sponsor bank. All settlement and clearing must be completed at the sponsor bank on behalf of their corporate clients as well as the corporate clients of the indirect participant they are sponsoring and have dedicated settlement accounts for. As fintechs and multinational companies get direct access, the burden of providing liquidity becomes even higher for sponsor banks that are further removed from managing their RTP flows.

$18.9 trillion

RTP could replace $18.9 trillion in Automated Clearing House (ACH) and check-based B2B payments in the U.S. by 2028. (Deloitte)[21]

RTP transaction limits are rising

The Single Euro Payments Area (SEPA) Instant Credit Transfer scheme had a limit of €15,000 when it was introduced in November 2017. Three years later, it was increased to €100,000 — supporting larger transactions and the growing use of instant payments. Under the Instant Payments Regulation 2024/886, transaction-level limits for instant credit transfers in the SEPA will be removed altogether by next year, giving individual financial institutions the discretion to set limits as they see fit. There are other examples of this trend:



US

The FedNow Service launched in July 2023 with no specific transaction limits, enabling financial institutions to set their own.
The Clearing House increased the general transaction value limit from $100,000 to $1 million on the RTP network.[12]

UK

The Faster Payments scheme raised the individual payment limit from £250,000 to £1 million in February 2022.

AUSTRALIA

The New Payments Platform was launched with no limit in 2018.

Implications

As instant payments proliferate, bank treasury departments need sufficient intraday liquidity to accommodate immediate settlements.

OPERATIONS

24/7/365: RTP systems operate around the clock, requiring banks to extend their operational hours for liquidity management, including nights, weekends and holidays.

Intraday liquidity management tools: Banks require tools and processes to manage intraday liquidity, including unexpected spikes in payment volumes.

LIQUIDITY MONITORING AND FORECASTING

Real-time monitoring: There is a demand for robust systems to monitor liquidity positions in real time, enabling fast responses to changes in cash flow and payment demands.

Predictive analytics: Institutions have to adopt advanced analytics and forecasting tools to predict liquidity needs based on transaction patterns, seasonal trends and customer behavior.

FUNDING STRATEGIES

Short-term funding needs: Banks may need to rely more on short-term funding sources to meet immediate settlement obligations.

Diversified funding mix: A more diversified funding mix is required to mitigate the risks associated with liquidity shortfalls.

INTERBANK RELATIONSHIPS AND MARKET DYNAMICS

Interbank lending: Real-time payments can impact interbank lending markets, as banks may need to borrow or lend funds more frequently to manage their liquidity positions.

Market liquidity: The accelerated flow of funds caused by RTP can influence overall market liquidity, potentially affecting interest rates and the availability of short-term funding.

REGULATORY COMPLIANCE

Regulatory requirements: Meeting regulatory requirements such as the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) becomes more complicated with the adoption of RTP.

Intraday reporting: Regulators require more frequent and detailed reporting on intraday liquidity positions and payment flows.

TECHNOLOGY INFRASTRUCTURE

Real-time data systems: Banks need advanced technological infrastructure capable of collecting, processing and analyzing real-time data to support liquidity management.

Automation and AI: Both enhance the efficiency and accuracy of liquidity management processes, helping banks respond quickly to RTP demands.

More from Mastercard on instant payments

Real-time payments: Modernizing bank account-based payments

The real-time payments playbook

Building a real-time payments strategy

Mastercard and The Clearing House extend partnership on real-time payments

03

TREND 2

Tighter oversight

In the aftermath of bank failures in 2023 — namely, the collapse of Silicon Valley Bank and Credit Suisse — regulators are enhancing existing frameworks and introducing new policies to address potential vulnerabilities and ensure stability within the financial system. This extends the long-term trend, dating back to the Great Recession, of increased oversight of banks' liquidity management. Consider:

The Basel Committee on Banking Supervision (BCBS) has proposed revisions to enhance its liquidity standards, focusing on the adequacy and quality of liquidity buffers.[13]

The EU has been revising its banking regulations through the EU Banking Package, which includes proposed amendments that are set to increase scrutiny of liquidity management practices.[14]

The U.S. Federal Reserve has proposed new rules to adjust capital and liquidity requirements for large banks, reflecting a move toward more stringent supervision.[15]

Regulating liquidity

2007 - 2024

The **global financial system nearly collapsed**, with banks worldwide facing acute liquidity shortages. Central banks took steps to prevent a repeat scenario, including the provision of emergency liquidity facilities to stabilize markets.

2007-2008

The Basel III Framework included new global liquidity standards to strengthen banks' resilience. It established:[16]

The **Liquidity Coverage Ratio** (LCR) to ensure banks hold sufficient high-quality liquid assets to survive a 30-day stressed funding scenario.

The **Net Stable Funding Ratio** (NSFR) requiring banks to maintain funding to cover up to a year of extended stress.

2009

In the U.S., the **Dodd-Frank Wall Street Reform and Consumer Protection Act** mandated new liquidity requirements and stress-testing protocols.

2010

The **European sovereign debt crisis** raised concerns about the liquidity of European banks. In response, the European Banking Authority (EBA) conducted stress tests and provided additional liquidity support.

2011

The EU Bank Recovery and Resolution Directive established a framework for the recovery of failing banks and ensured banks maintain sufficient liquidity during crises.

2014

The U.S. Federal Reserve implemented **liquidity requirements** for large banks and foreign banking organizations operating in the U.S. Large bank holding companies were required to maintain a specified amount of highly liquid assets and undergo regular stress testing to assess their liquidity under adverse conditions.

2015

In response to **evolving financial risks**, several countries, including the U.S, the UK and Japan, enhanced their liquidity stress testing frameworks for banks.

2016

The EU made the **LCR a legally binding requirement** for all EU banks, ensuring they hold sufficient liquid assets to cover short-term liabilities and standardizing liquidity management practices across member states.

2017

Basel III reforms were finalized, including revised NSFR standards and guidance on intraday liquidity risk management.

2018

The NSFR became a **binding requirement for banks** in major economies including the EU, the U.S. and Japan.

2019

In response to the economic shock caused by the **COVID-19 pandemic**, regulators worldwide relaxed liquidity requirements to ensure banks could continue lending to businesses and households.

2020

As economies **recovered from the pandemic,** regulators began re-imposing stricter liquidity requirements.

2021

In the aftermath of the **2023 bank failures**, namely the collapse of Silicon Valley Bank and Credit Suisse, central banks and regulators strengthened liquidity buffers and emergency liquidity facilities, enhanced liquidity stress testing, introduced dynamic liquidity requirements and introduced new guidelines for intraday liquidity management.

2023

Regulators began incorporating **climate-related financial risks** into their liquidity frameworks, including guidance on how banks should manage liquidity risks associated with climate change and environmental events.

2022

Regulators drive RTP adoption

Governments worldwide recognize the potential for RTP systems to increase economic efficiency, reduce transaction costs, expand financial inclusion and increase global competitiveness. That's why they are promoting their use through a variety of incentives and regulatory mandates.

In many markets where RTP payments are live, the government owns and operates the instant payment system — either independently or in partnership with private sector partners. These include some of the largest RTP markets, such as India, Brazil and Thailand. India has provided incentives for merchants to adopt RTP through no-fee accounts, digital IDs, QR codes and mobile wallets.[17]

In some cases, regulators are taking steps to ensure RTP pricing is competitive. For example, banks and other payment service providers in the European Union (EU) will soon be required to provide an instant payment option at a cost no higher than the cost for non-instant methods.

70%

Brazil's central bank launched the popular Pix RTP platform in 2020. Today, it's used by 15 million companies and more than 150 million Brazilians, about 70% of the population. (European Payments Council)

100bn

The number of transactions conducted over India's UPI platform has grown exponentially, surpassing 100 billion in 2023. (CNN)

"Governments globally are driving RTP adoption, leveraging a blend of incentives and regulatory measures. By balancing encouragement with oversight, they are paving the way for more seamless transactions and ensuring a secure, competitive, and customer-centric financial system. In parallel, banks are increasingly partnering with fintechs and technology providers to enhance their RTP offerings and expand their customer base, thus rethinking their liquidity management capabilities"

Helena Forest
Mastercard EVP,
Global Product Management and Commercial,
Real Time Payments

Carrots

Subsidies and grants

Many governments, particularly in developing economies, have provided subsidies to banks and fintechs to build their RTP infrastructures. The Reserve Bank of India has supported the National Payments Corporation of India in the development of the Unified Payments Interface (UPI) through a mix of grants and incentives. With UPI, consumers use digital wallets as virtual debit cards, instantly transferring money from nearly 600 participating banks and fintechs without entering bank details or paying transaction fees.[18]

Public-private partnerships (PPP)

Under the digital euro framework, private intermediaries can develop new services and solutions on the public digital euro infrastructure. Specifically, the public sector is responsible for issuance and settlement, and private financial intermediaries are responsible for accounts and associated payment operations.

Public awareness campaigns

Governments have used public education to boost consumer confidence in RTP. Singapore launched a nationwide campaign to promote its PayNow platform, resulting in higher adoption rates among individuals and businesses.[19]

Sticks

Regulatory

Several jurisdictions, including Brazil [20] and the European Union,[21] require banks to integrate with real-time payment systems. In Australia, financial institutions must integrate with the New Payments Platform to ensure RTPs are accessible, secure and efficient for consumers and businesses. In the UK, the government has mandated the integration of a payment system into state benefits programs: the tax system, auto licensing and other programs where citizens make payments to or receive funds from government entities. Additionally, businesses have been offered incentives to encourage the use of electronic payment systems for fund transfers. This has built trust and led to double-digit growth over many years.

Interoperability requirements

In 2020, the G20 endorsed a plan to make cross-border payments faster, cheaper, accessible and more transparent by 2027 — which spurred efforts to interlink domestic RTP systems. Southeast Asia has led the way, with countries including Indonesia, Malaysia, the Philippines, Singapore and Thailand working to link their RTP systems.[22]

Fraud prevention

Governments are enacting regulations to address security and fraud. For example, the UK's Financial Conduct Authority has introduced robust guidelines addressing the security of RTP.

TREND 3

04 Fragmented liquidity pools

Banks typically maintain liquidity across multiple accounts and systems — reserve accounts, settlement accounts, cross-border payment systems, correspondent banking accounts, internal liquidity pools, clearing house accounts, securities settlement accounts, mobile and digital payment platforms, and others.

To settle real-time payments, banks need to maintain sufficient liquidity across these fragmented channels and also across currencies, jurisdictions and instant payment systems. In this environment, they often lack a consolidated view of their liquidity positions, which reduces operational agility and efficiency, increases the risk of liquidity shortfalls or over-funding, and makes forecasting and planning more difficult. The growth of cross-border RTPs complicates this work.

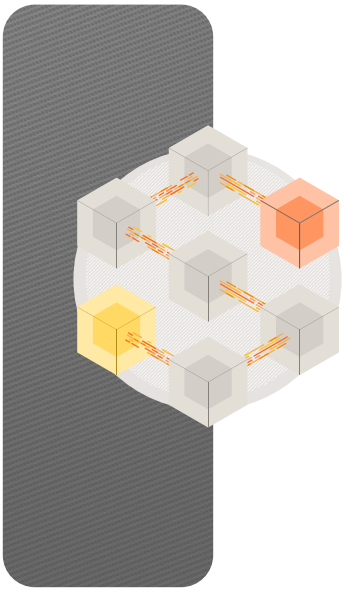
Additional factors making liquidity pools more fragmented and challenging to manage:

Markets launch multiple domestic instant payment platforms

Some countries including the U.S., South Africa, Turkey, Singapore and India have two or more RTP schemes. Schemes can be added to serve different purposes, customer bases or transaction types through improved innovation, capabilities and financial inclusion. Banks must maintain sufficient liquidity to fulfill their settlement obligations for all of them and, under certain circumstances, to deposit multiple sets of funds with the Central Bank. This results in higher collateral deposits as banks need to ensure there is sufficient liquidity for each instant payment system.

Cross-border payments create liquidity challenges for banks

The volume and value of cross-border payments are increasing, so banks must facilitate faster cross-border settlements. This requires them to support various currency structures and, in some cases, hold liquidity in 10 to 20 currencies. The lopsided shift from T+2 to T+1 settlement (i.e. the shortening of settlement cycles from two days after execution to just one day) around the world further compounds the issue. While currency markets have largely remained at a T+2 pace, there are securities being traded at T+1 out of different time zones further complicating FX management. Meanwhile, the surge in emerging market e-commerce necessitates speedier and more efficient cross-border payments in local currencies. To facilitate these transactions, banks need to hold enough local currency to meet real-time payments demands across time zones. In addition, they often pre-fund correspondent bank accounts in different jurisdictions, which traps liquidity across funding sources in multiple geographies. As the world moves towards multilateral, real-time cross-border payment platforms, these liquidity and FX risks will be exacerbated.



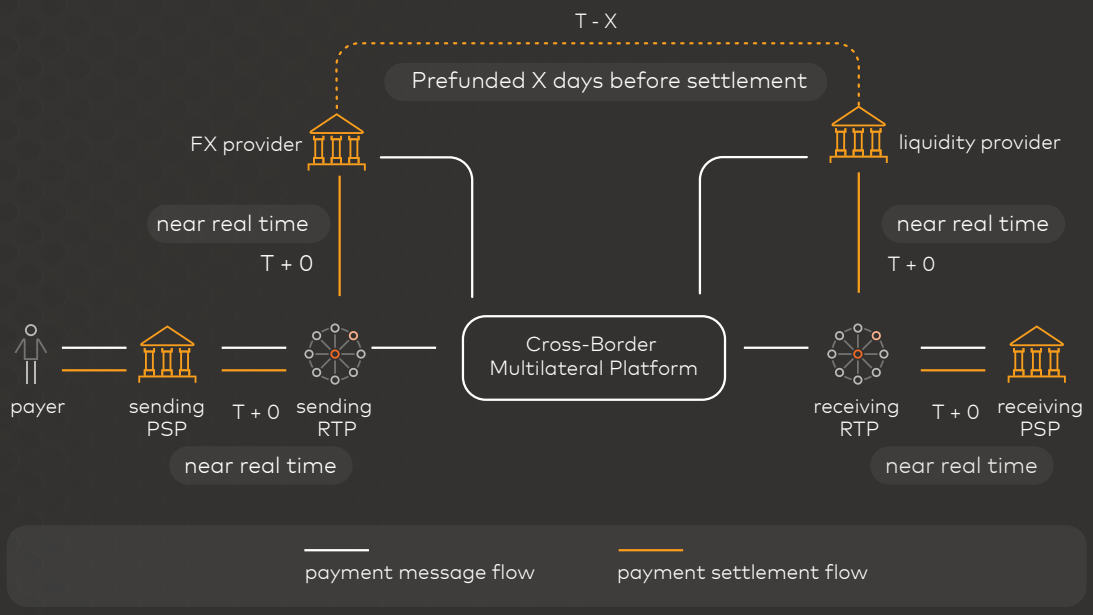
Use of digital assets is on the rise

In a recent survey of investors, traders and asset managers, half of the respondents said they were currently transferring digital assets to ledger or were prepared to do so.[23] The growing use of digital assets — including cryptocurrencies, stablecoins and central bank digital currencies (CBDCs) — requires banks to split their liquidity across more settlement venues (with fiat currency, the liquidity can be consolidated into existing pools). This makes it more difficult for treasurers to see all of their bank's liquidity in one place, updated in real-time.

Cross-border RTP innovations

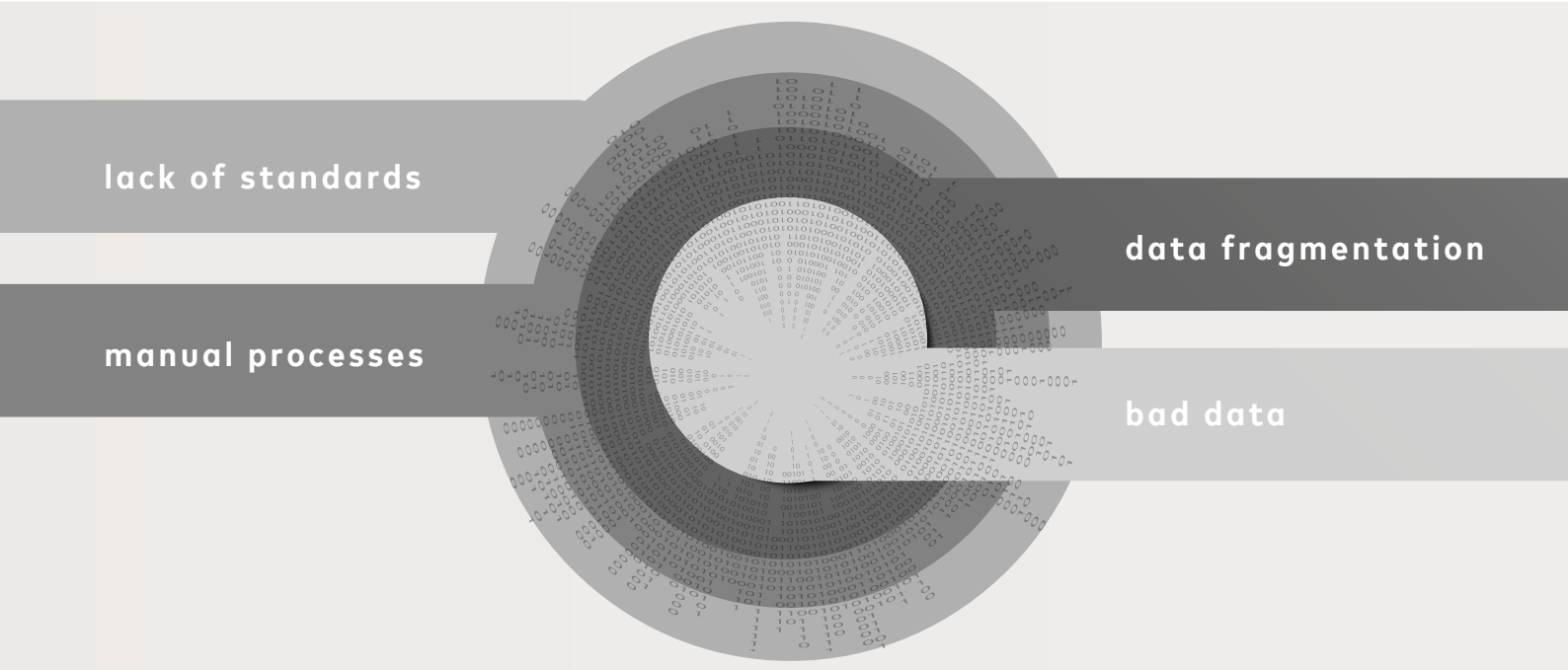
BIS Nexus is a global initiative connecting multiple domestic instant payment systems to a single multilateral cross-border payment platform — removing the need to tie up liquidity in multiple currency pots. With enough reach, Nexus aims to enable banks to leverage liquidity pooled on the platform in a way that minimizes liquidity demands. This is an alternative to managing multiple currency accounts at correspondent banks or directly linking bilaterally to multiple domestic instant payment schemes.

The European Payments Council and Buna, a cross-border and multi-currency payment system founded by the Arab Monetary Fund, are introducing One Leg Out (OLO) cross-border schemes. These innovative schemes process the originating leg of a cross-border payment domestically via RTP, while delivering payment in the destination country is completed through an exit payment service provider. This approach enables banks to optimize liquidity by using domestic funds for cross-border transactions, eliminating the need of pre-funding correspondent banks.



05 Challenges

Despite the accelerating operational environment, many bank treasuries still rely on outdated infrastructure and processes. This can lead to data fragmentation, poor data quality, and a lack of real-time monitoring and forecasting that hampers liquidity management.



1 Manual processes create higher costs and risks

Spreadsheets are still the most common tools that treasury teams rely on to capture, track, reconcile and analyze data. Ninety-one percent of banks and corporate treasuries use spreadsheets to create and manage forecasts.[24] Manually maintaining and updating these increasingly complex spreadsheets creates several issues for banks: The process is time-consuming and inefficient, prone to human error that heightens operational risks, and lacks proper security protections.

In most cases, teams use relatively static and traditional statistical forecast methods that are less accurate, incapable of self-learning, and require constant intervention by skilled operators. These forecasting strategies are reliable only when established patterns and periodicity exist in the data — so they are less suited to new payment systems with low volumes of historic data. Generally, data science and AI can learn, adapt and predict this type of workload better than static, rule-based forecasting approaches can.

Smaller-to-medium-sized banks tend to be particularly vulnerable, because they lack the resources and technological capabilities of tier 1 banks, and their smaller volumes often don't justify a sizable investment in system automation. A subset of these smaller banks, on the other hand, are fintechs that have built in-house systems to manage liquidity — intraday reporting, monitoring and short-term forecasting — on par with big banks.

2 Data fragmentation hinders treasury operations

Banks often can't construct a complete picture of their cash position and liquidity demand, because essential data is maintained in different formats and scattered across business units, regions and disparate systems — as many as 10 to 20 for many large banks. This forces treasury departments to toggle between fragmented sources — accounting systems, spreadsheets, treasury reports, bank statements — to manage day-to-day tasks. And it leaves them ill-equipped to generate reliable forecasts or measure the impact of multiple geographies, business lines and asset classes — or to adequately manage their balance sheet and liquidity risk.

of banks have difficulty accessing, or cannot access, data needed for analytics. More than 80% lack access to real-time transaction data and analytics. (Mosaic Smart Data)

3 Data quality is a problem, too

Even if data visibility issues are resolved, data quality and integrity remain a challenge for bank treasurers.

A recent study found that the majority of banks struggle with data quality, including gaps in important data flows.[25] This inhibits daily treasury activities such as cash flow forecasting and prevents effective adoption of advanced treasury solutions which need accurate data inputs to generate valuable insights. Additionally, the lack of consistently reliable data may cause banks to make overly conservative assumptions in their cash flow forecasting — ultimately leading to cost inefficiencies.

4 Lack of standardized data prevents real-time response

ISO20022 is the leading universal structured data rich format standard, but industry-wide adoption has lagged as banks report varying stages of migration from limited-capacity legacy formats.[26] This results in insufficient metadata and low levels of message standardization, which make it more difficult for banks to fully understand their overall transaction flows. Despite foundational message standards for RTP like ISO20022, in many cases financial institutions supply data that is only intelligible to them, or adequate for their own purposes. This is especially problematic as the growing number of transactions increases the volume of data sent between banks. Ultimately, it prevents a comprehensive, granular understanding of what any single real-time transaction entails. Without this, banks are incapable of providing reliable or sufficient inputs into forecasting, stress tests or other risk modeling mechanisms operations they rely on to manage liquidity.

Case study

PLANIXS

Planixs, a UK treasury management analytics company, delivers real-time intraday cash and liquidity management. Lloyds Banking Group formed a strategic partnership with Planixs to deploy its Realiti software.

As a result, Lloyds can now consolidate millions of cash flows per hour in real-time, maintaining an accurate and up-to-date view of cash balances across all settlement accounts.

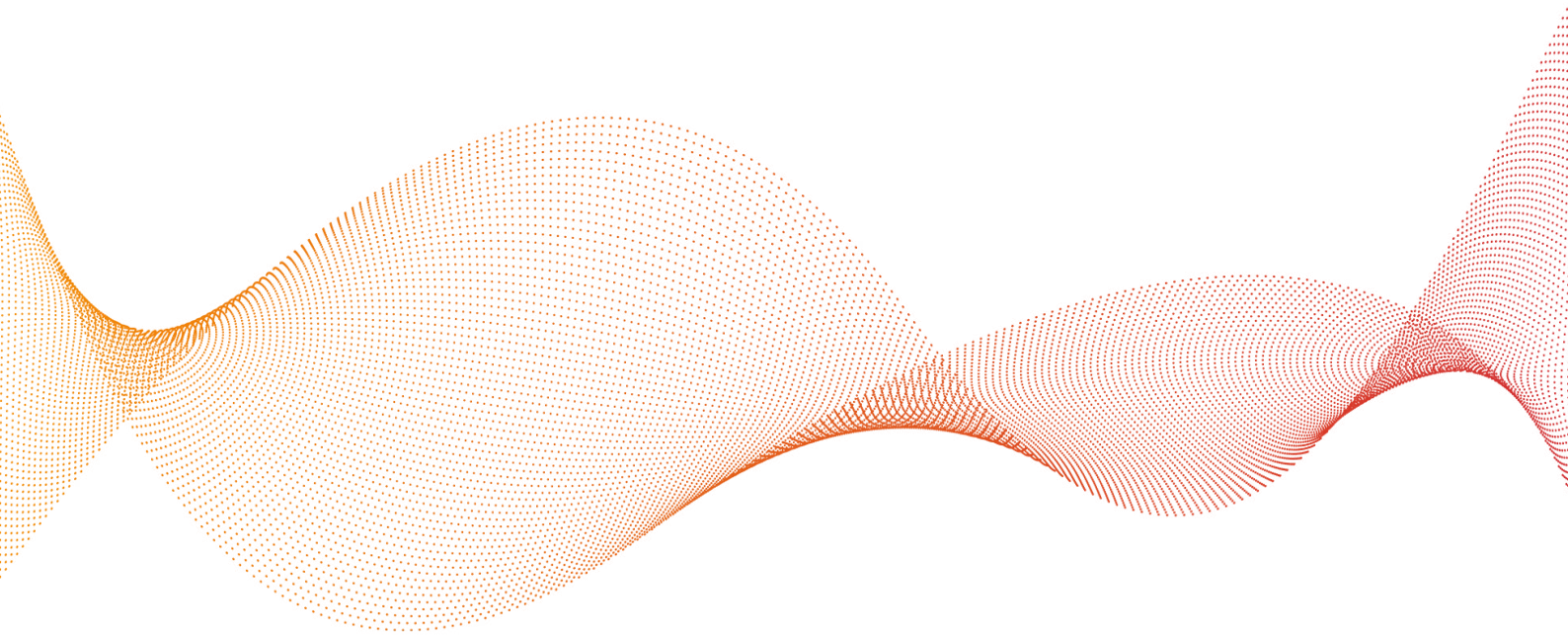
This lets the bank compare projections with actual balances, quickly identify discrepancies and make rapid adjustments. Realiti's real-time liquidity control allows Lloyds to manage liquidity requirements effectively, reducing the risk of shortfalls and surpluses. With enhanced insights, the bank's treasury, risk, and operations teams can make more informed decisions, resulting in significant cost savings and full compliance with BCBS 248 regulations.

06 Outlook — On the horizon

Real-time liquidity management for banks is evolving rapidly due to technological advances, regulatory changes and market demands. Since the financial crisis, bank treasurers increasingly steer execution activities for P&L-related risks, and their scope has expanded to become the overall resource manager of the balance sheet.

They manage liquidity by managing cash flow forecasting, liquidity buffers, funding diversification, contingency and stress testing, and compliance management. However, data, processes, analytics and digital tools generally have not received enough investment to allow them to succeed in these mandates.

Bank treasuries need new technologies and tools that enable banks to manage their liquidity and mitigate risks across their entire balance sheet with greater speed and efficiency. Data is the common thread in this evolution — data that is aggregated, integrated and analyzed to generate insights that inform everyday tasks and strategic plans. Banks are at different stages of the journey to develop these capabilities.



Horizon 1

Data integration and processing

Treasurers have long sought a holistic view of their banks' liquidity based on consolidated data from various pools including internal systems, settlement venues and counterparties. Enabling technologies include:

Data aggregation tools that pull together data from various sources, including core banking systems, payment processors and market data feeds.

A centralized data repository or data lake that provides quick access to consolidated information.

Robotic Process Automation (RPA) that streamlines data reconciliation, ensures data is consistent and accurate across systems, and enables seamless data flows between legacy systems and modern applications.

Horizon 2

Real-time liquidity management

The rate at which banks are progressing toward real-time liquidity management varies widely, with leading global institutions making significant strides in the use of advanced technologies, real-time data feeds and payment systems, and liquidity optimization strategies.

Application Programming Interfaces (APIs) facilitate real-time data exchange between different systems — for example, connecting bank treasury systems with market data providers or payment networks.

Automated reporting tools deliver real-time alerts and reports on liquidity positions, compliance and risk exposure.

Interactive, real-time dashboards provide a visual representation of liquidity positions, cash flow forecasts and other metrics.

Horizon 3

Reliable cash flow and liquidity forecasting

To effectively predict future cash flow and manage liquidity, bank treasuries need real-time monitoring, accurate forecasting, the generation of actionable insights and programmable decision-making.

Predictive analytics use historical data and statistical models to forecast future cash flows and liquidity needs —identifying trends, seasonal shifts and anomalies.

AI and machine learning algorithms can analyze large datasets to uncover patterns and make more accurate predictions. These technologies can improve over time with exposure to new data, leading to increasingly precise forecasts.

Scenario analysis software models different scenarios and assesses their impact on cash flow and liquidity, allowing bank treasuries to prepare for various market conditions and stress-test liquidity positions.

Smart contracts built on distributed ledger technology (DLT) can automate and execute liquidity management processes, including automatic fund transfers and compliance checks.

07 Mastercard and liquidity management

Mastercard has developed Liquidity Optimizer, an Artificial Intelligence/Machine Learning solution that leverages historical data, real-time insights and industry knowledge of peak periods, seasonal trends and other data patterns to forecast banks' future funding needs.

Liquidity Optimizer data models inform deviation identification, historical patterns, regulatory reporting and early warning systems for treasuries. Initial trials found that it accurately predicted optimal funding levels up to eight weeks in advance, with a 90% confidence interval. This frees liquid assets — held in settlement accounts or as collateral in payment systems — which can be invested to generate revenue, while also increasing a bank's LCR ratios.

Liquidity Optimizer reflects Mastercard's focus on developing scalable, interoperable real-time payment solutions.

In fact, 12 of the world's largest economies rely on Mastercard's suite of RTP solutions.

"Historically, bank treasurers have used manual, slower methods to monitor and manage liquidity. The development of real-time payments and high-volume money movement has compounded the complexity they have to manage. However, the rise of treasury analytics platforms and AI technology has helped transform how liquidity is tracked and managed. These capabilities allow real-time performance and accurate liquidity predictions which are vital for keeping ahead of the game. Taking advantage of these advancements is crucial for mitigating risks and ensuring financial stability as payment flows become even more complex and fast-paced."

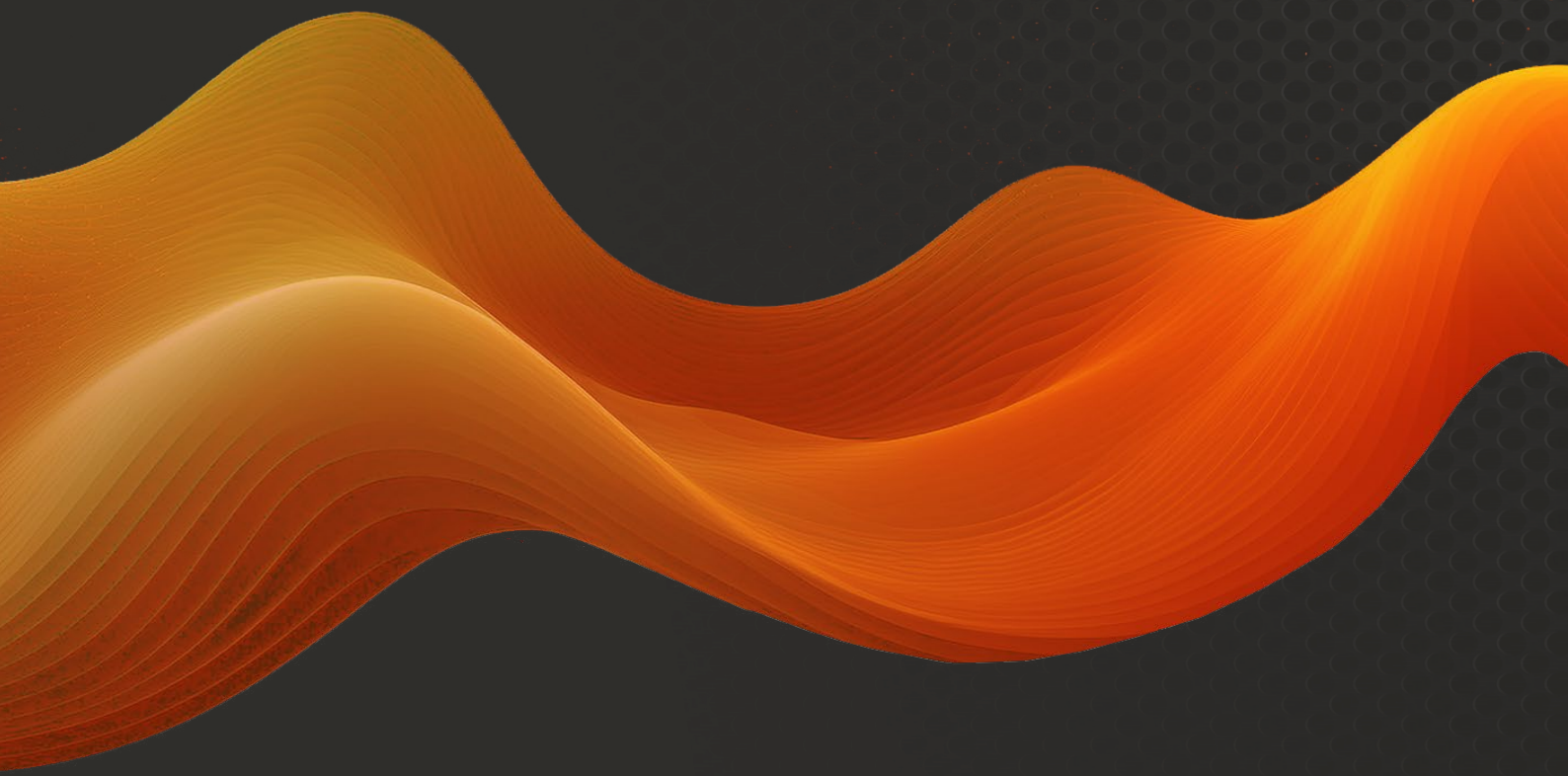
Mohamed Abdelsadek
Mastercard EVP,
Business and Market Insights

08

Conclusion

Despite a myriad of challenges, there are very real opportunities to transform bank treasury from a back-office function into a strategic partner to the C-suite — from a cost center to a profit center — by optimizing liquidity and cash flow management for a real-time world.

At Mastercard, we believe this will become standard practice: Every bank treasury team will use predictive analytics to both illuminate future funding needs and help define investment strategies. Until then, early adopters and fast followers stand to reap the rewards, write the rules of play and seize a competitive advantage.



Sources

1. PwC's 2023 Global Treasury Survey
2. Deloitte poll released May 2023
3. Deloitte poll released May 2023
4. What's trending in the world of faster and instant payments? The Federal Reserve
5. The Future of Fast Payments, The World Bank
6. Global Instant Payments Market, 2024 – 2028, Juniper Research
7. 2024 Prime Time for Real-Time, ACI Worldwide
8. Federal Reserve Payments Insights Brief: Gen Z and Millennials are driving change in payments
9. Why Make the Move to Real-Time Payments, ACI Worldwide
10. Automating Ad Hoc Payments Makes Instant Pay a Reality for Gig Workers, PYMNTS
11. 2023 Real-Time Payments Survey, Association for Financial Professional
12. TCH to Raise RTP® Network Transaction Limit to $1 Million
13. White Paper of BASEL III Endgame proposal
14. Capital Requirements Regulations III, PWC
15. Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank
16. History of the Basel Committee, The Bank for International Settlement
17. UPI Ecosystem Statistics, NPCI
18. Sari shops and street food stalls: How e-payments have taken over India, CNN
19. World Bank Fast Payments Toolkit
20. The Evolution of Pix in Brazil, Merchant Risk Council
21. What is TIPS? European Central Bank
22. Interlinked systems are revolutionizing cross-border fast payments, The Banker
23. State Street Digital Asset Survey 2024
24. Cash Forecasting & Visibility Survey, Strategic Treasurer
25. Mosaic Smart Data, 2024
26. Navigating the ISO 20022 migration: Insights and strategies, The Paypers

Contributors

Maja Lapcevic

Kelly Grayson

Kiran AK

Svitlana Repina

Gen Batista Inoa

Kudzai Mupotsa

Alex Muetzel

Brendan McGrath

Helena Forest

Humberto Fuente

Hamzah Rahman

David Wilkins

Matt Prodger

Sinéad Fitzgerald

Nathalie Maccarthy

Mohamed Abdelsadek

Dave Wild

Susan Hall

EXTERNAL CONTRIBUTORS

BCG BOSTON CONSULTING GROUP

PLANIXS

lpa