

INTRADAY LIQUIDITY AND CROSS-BORDER COLLATERAL: CENTRAL BANK PERSPECTIVES

JUNE 2025

About this Brief

The ASEAN+3 Bond Market Forum (ABMF) started publishing the ABMF Brief series in January 2023, and the Cross-Border Settlement Infrastructure Forum (CSIF) began the CSIF Brief series in December 2023.¹ A total of 10 ABMF and CSIF briefs had been issued by January 2025.

Both the ABMF and CSIF, as well as the Digital Bond Market Forum inaugurated in February 2025, are convened under the Asian Bond Markets Initiative (ABMI), which was established by the ASEAN+3 Finance Ministers in 2010. The Asian Development Bank (ADB) acts as secretariat to all three forums and the ABMI.

To better reflect that all activities support the ABMI mandate to develop the ASEAN+3 local currency (LCY) bond markets, ADB has reissued the original publications as “ABMI Briefs.” This brief becomes ABMI Brief No. 11.

The ABMI Brief series provides insights into professional bond markets, their development, and necessary or desirable components to issuers, investors, market intermediaries, regulatory authorities and policymakers, academia, and other interested parties. Individual briefs are dedicated to specific subjects discussed in the ABMF and CSIF given their relevance for domestic bond markets.

Introduction

CSIF, which was established in 2013 to enhance financial stability across ASEAN+3, has extensively discussed issues related to the development and integration of the region’s domestic bond markets.

KEY TAKEAWAYS

- ➔ Expanding liquidity instruments enhances financial stability by providing effective measures against stress factors, including disasters and external shocks. This aligns with the financial integration initiatives being pursued by ASEAN+3 member economies.
- ➔ ASEAN+3’s safety net centers on the Chiang Mai Initiative Multilateralization, a multilateral currency swap designed to provide emergency liquidity for foreign exchange crises. However, mechanisms for routine liquidity provision appear to be relatively deficient.
- ➔ Central bank intraday liquidity not only supports effective liquidity management for financial institutions, but extending it cross-border can also foster growth in local currency bond markets. Processes involved in collateral transactions—such as valuation, exchange rate adjustments, and other advanced risk management techniques—can all serve as catalysts for upgrading the region’s capital markets.
- ➔ Implementing tools such as the Cross-Border Liquidity Bridge and the Cross-Border Collateral Arrangement in the ASEAN+3 region requires proactive cooperation among governments, central banks, and financial institutions. Regional networks such as the Cross-Border Settlement Forum can support stakeholder efforts by raising awareness through comprehensive research.

¹ ASEAN+3 refers to the 10 members of the Association of Southeast Asian Nations (ASEAN) plus the People’s Republic of China, Japan, and the Republic of Korea.

As part of a broader effort to enhance cross-border infrastructure, the Bank of Japan and the Hong Kong Monetary Authority launched a central securities depository (CSD)–real-time gross settlement (RTGS) link between their systems in April 2021.

CSIF has recently explored the potential of using LCY bonds as collateral to stimulate cross-border financial transactions.² This effort is partly motivated by the euro area’s experience, where secured lending by financial institutions played a significant role in overcoming the impacts of the global financial crisis. Therefore, it would be desirable for ASEAN+3 member economies to utilize onshore-locked LCY bonds held by fellow members.

The emphasis on high-quality collateral is underscored by enhanced risk management guidelines in line with global standards such as Basel III, leading to steadily increasing demand. In this context, LCY government bonds are widely recognized as the optimal collateral due to their inherent stability and reliability. Moreover, with funding costs in United States dollar terms on the rise—a stark contrast to the previous prolonged low-interest-rate environment—the utilization of LCY government bonds within the ASEAN+3 region becomes even more critical.

This brief explores the considerations involved in utilizing LCY government bonds as cross-border collateral in financial transactions. Reflecting the need to prioritize use cases that are easier to implement, the discussion will concentrate mainly on central banks’ intraday liquidity. After describing the general framework of collateral transactions, the discussion will turn to two specific intraday liquidity facilities: the Cross-Border Liquidity Bridge (CBLB) and the Cross-Border Collateral Arrangement (CBCA).³

Collateral in Financial Transactions

Collateral serves as a safety net, enabling various financial transactions to be conducted efficiently and securely. High-quality bonds—such as government securities issued by public institutions—are typically preferred as collateral. Common financial transactions utilizing collateral include secured lending, over-the-counter derivatives transactions, and central bank lending operations.

Cross-Border Settlement Infrastructure Forum

The Asian Bond Markets Initiative (ABMI) was launched in 2003 by the finance ministers of the Association of Southeast Asian Nations plus the People’s Republic of China, Japan, and the Republic of Korea (collectively known as ASEAN+3) to boost the development of the region’s local currency bond markets. The Asian Development Bank has been acting as the ABMI Secretariat since its inception.

The Cross-Border Settlement Infrastructure Forum, which has central banks and central securities depositories (CSDs) as members and ASEAN+3 government officials as observers, is a subforum under ABMI that promotes more active intraregional portfolio investments by creating an efficient regional settlement intermediary.

Cross-border transactions in bonds and other securities are currently processed through custodians and a correspondent banking network (depending on currency), generating an inevitable lag between the time of trade and the delivery of securities and money, thus increasing credit and settlement risks. To address this problem, the Cross-Border Settlement Infrastructure Forum member organizations agreed to establish CSD–real-time gross settlement linkages, which directly link the settlement systems of central banks and CSDs. The linkages among national CSDs and central banks’ real-time gross settlement systems in different regional markets are expected to facilitate intraregional portfolio investments and the use of local currency bonds as collateral, which otherwise have been locked in onshore markets, by enabling cross-currency delivery-versus-payment of cross-border securities transactions, as well as payment-versus-payment of local currencies, in the region and without a time lag.

² ADB. 2022. *Local Currency Collateral for Cross-Border Financial Transactions: Policy Recommendations from the CSIF*.

³ This ABMI Brief was written by Joong Shik Lee, with support from Matthias Schmidt, both consultants to the Economic Research and Development Impact Department, and Satoru Yamadera, advisor to the same ADB department. The content is largely based on a presentation by J.S. Lee to CSIF members in February 2025 at the 31st CSIF Meeting in Seoul, Republic of Korea. The CSIF secretariat team bears sole responsibility for the contents of this brief.

Figure 1: Use of Collateral in the Euro Area (EUR billion)

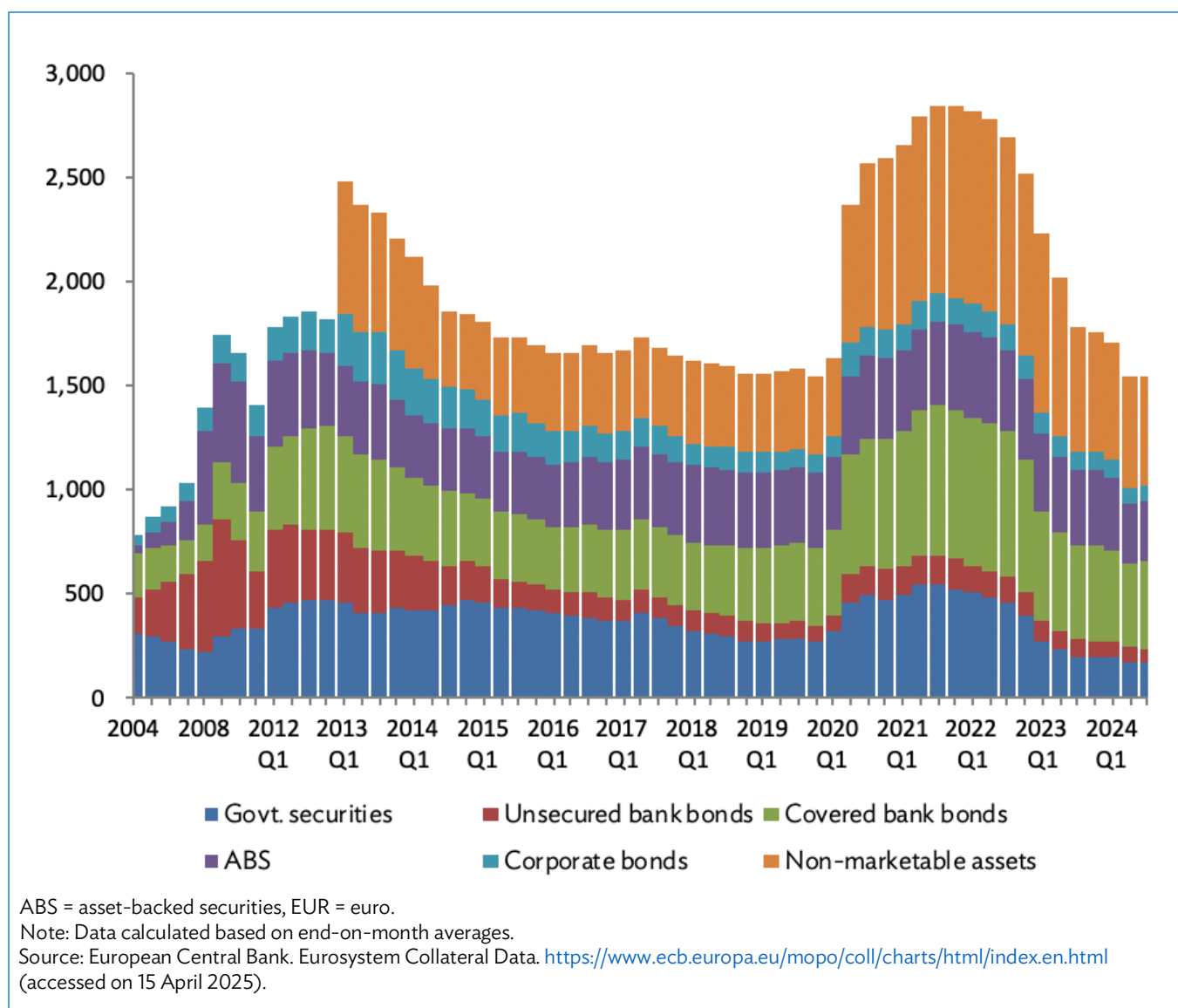


Figure 1 demonstrates that in the euro area, a diverse range of securities—including government bonds, bank bonds, and asset-backed securities—is used in transactions such as repurchase agreements and hedging. Over time, the collateral used has evolved from primarily relying on bonds issued by public institutions to incorporating an increasingly diverse selection of private bonds.

In the ASEAN+3 region, collateral transactions centered on government bonds are increasing in frequency, reflecting the development of LCY financial markets across member economies. During this evolution,

government bonds tend to remain bound to their domestic origins; however, if eligible collateral can be mobilized for cross-border transactions—as demonstrated by the euro area’s successful experience—then financial stability across ASEAN+3 could be significantly enhanced.

To address this, the medium-term road map of ABMI 2.0, specifically under Pillar 4, proposes an LCY CBCA—a form of collateral transaction between central banks—as an effective means of promoting regional financial cooperation.⁴

⁴ ADB. *ABMI Medium-Term Road Map for 2023 to 2026: Beyond Bond Market Development (ABMI 2.0)—Pillar 4: Promoting LCY Liquidity Provision To Mitigate Risk in Cross-Border Transactions*.

This brief underscores that, to foster domestic financial market development in the ASEAN+3 region via the activation of LCY collateral, it is advisable to begin by enhancing central bank intraday liquidity and promoting cross-border transactions. Considering the legal, technical, and interoperability constraints inherent in establishing payment and settlement infrastructures, integrating feasibility into the development of use cases is critical. In this context, initiatives such as CBCA and CBLB can serve as a catalyst for advancing payment and settlement infrastructures by enabling the cross-border use of LCY collateral.

Within the ASEAN+3 region, facilities such as the Chiang Mai Initiative Multilateralization and select currency swaps between central banks exist to support financial stability; however, these mechanisms are designed primarily to address emergencies such as economic shocks or disasters. In contrast, utilizing LCY government bonds as cross-border collateral for central bank intraday liquidity—aimed at smoothing routine payment flows—can add a further layer of resilience to regional financial stability.

Central Bank Money and Intraday Liquidity

Financial institutions often face payment obligations—involving large amounts of central bank money—that can arise in a disorderly manner during the day. Such occurrences may impose substantial liquidity demands on institutions participating in Large-Value Payment Systems, and mismatches in the timing of same-day incoming and outgoing payments can trigger market stress if not resolved adequately. From the central bank's perspective, providing intraday liquidity in central bank money serves as an essential tool for maintaining the smooth operation of the payment system.

Central Bank Money

Central banks play a pivotal role in ensuring settlements by deploying central bank money to enable low-cost transfers across their reserve accounts. Financial institutions depend on central bank money for two primary reasons. First, it stands as the safest and most liquid settlement asset, effectively eliminating the credit and liquidity risks inherent in commercial bank money. Second, settling transactions in central bank money mitigates the risks associated with payment activities, particularly in wholesale financial markets.

The Principles for Financial Market Infrastructure, jointly issued by the Bank for International Settlements' Committee on Payment and Settlement Systems and the International Organization of Securities Committees in April 2012, underscore the essential role of central bank money in supporting robust settlement processes. By guaranteeing settlement finality, central bank money helps cultivate trust and preserve financial stability. Specifically, the Principles for Financial Market Infrastructure state:

(Principle 9: Money settlements) "A [financial market infrastructure] should conduct its settlements in central bank money where practical and available. If central bank money is not used, a [financial market infrastructure] should minimize and strictly control the credit and liquidity risks arising from the use of commercial bank money."

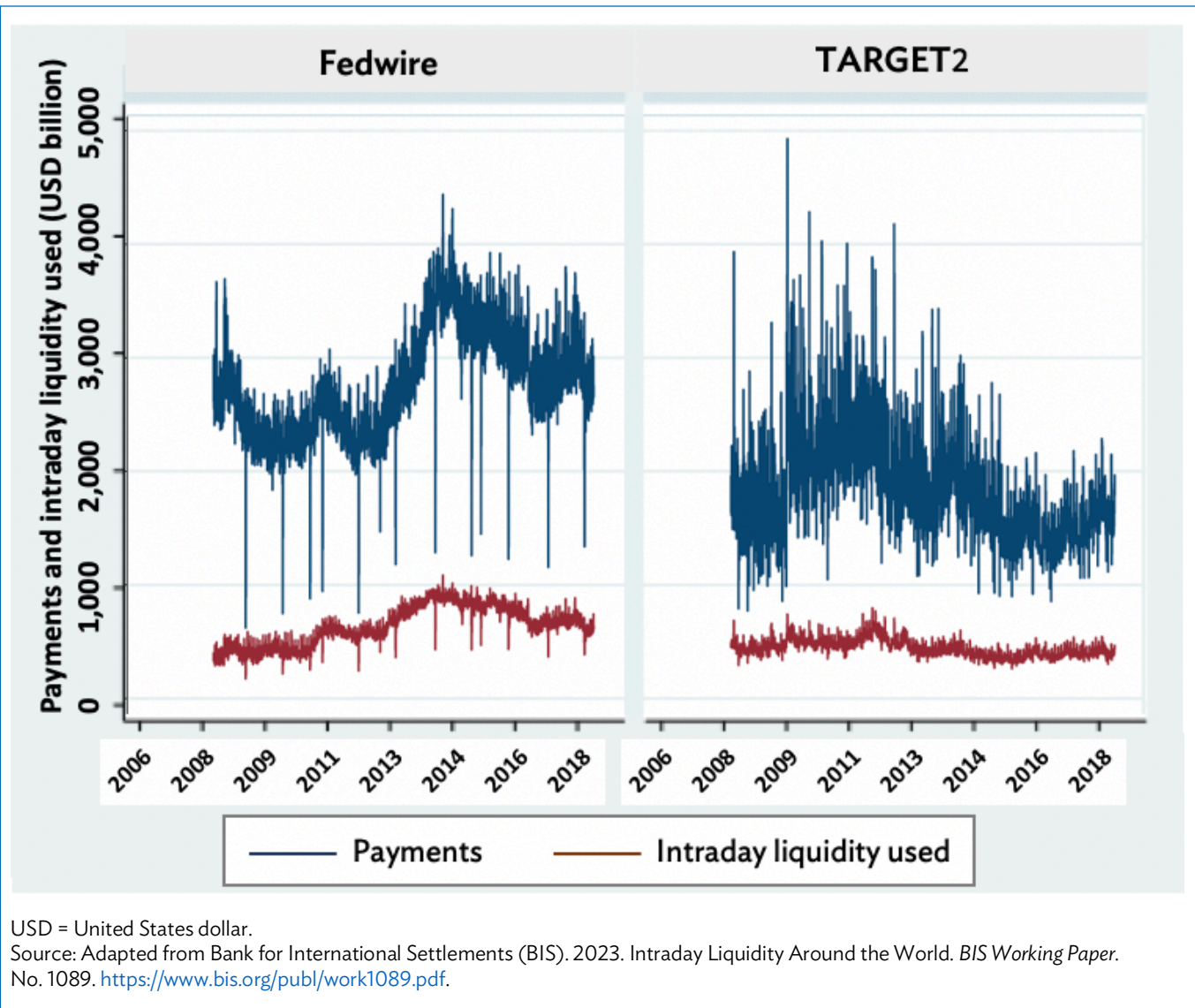
The widespread use of central bank money as a settlement asset reduces risks and offers a stable foundation for payments and market infrastructures. Therefore, central banks actively work to ensure that central bank money functions smoothly, maintaining its reliability and efficiency in financial systems.

Intraday Liquidity Provision

Intraday liquidity provided by central banks, usually in the form of central bank reserves, refers to funds that banks can access to settle obligations within the same business day. This need for ultra-short-term liquidity arises because payment obligations among financial institutions may become trapped, leaving funds inaccessible for ongoing transactions.

The phenomenon of trapped liquidity can be explained through a game theoretic lens. Individual financial institutions, when participating in payment settlements, tend to delay payments strategically in anticipation of uncertain conditions or to reuse liquidity received from other participants. On a broader market scale, the extent of trapped liquidity becomes a critical factor in managing overall intraday liquidity risk.

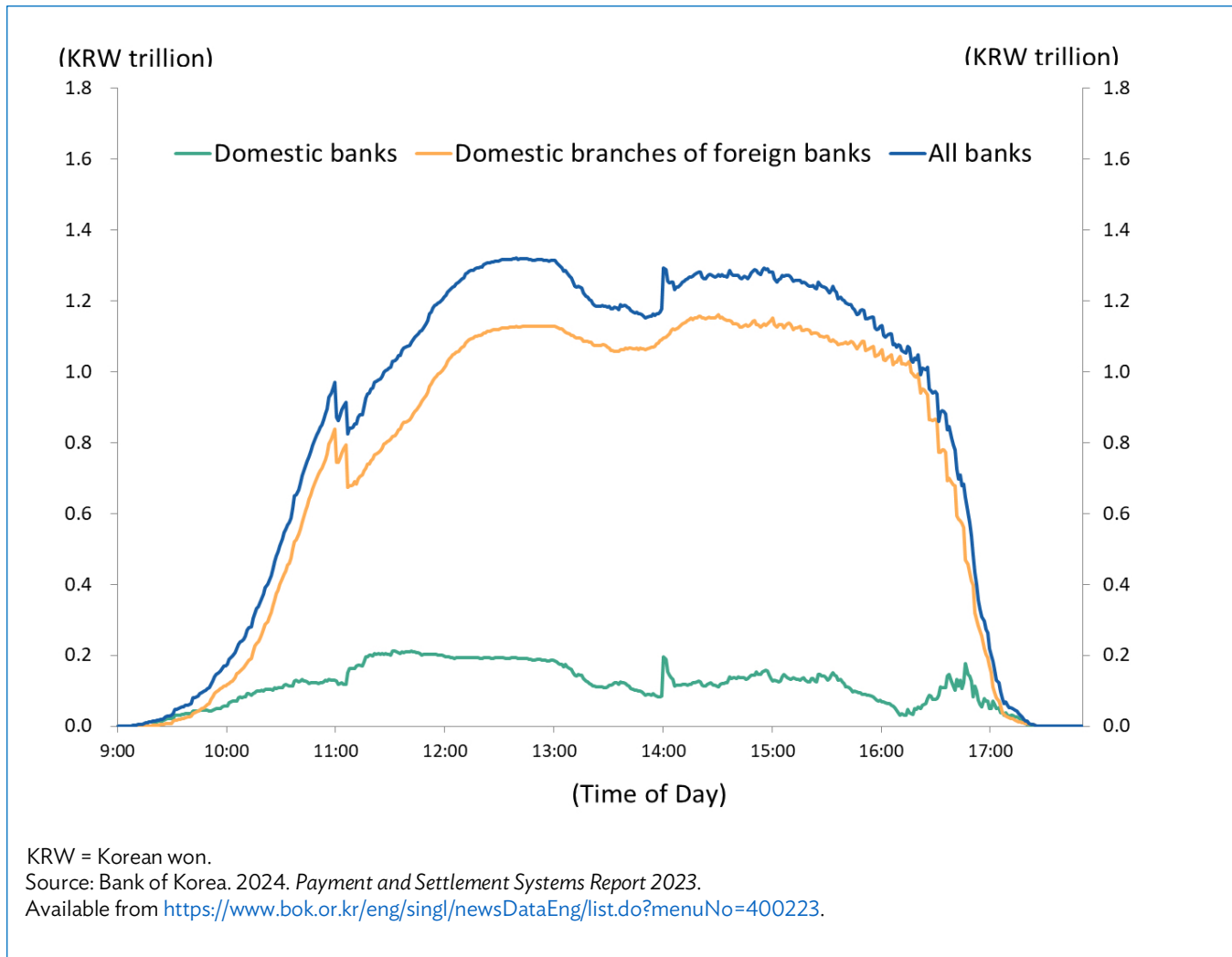
Figure 2: Daily Aggregate Payments and Intraday Liquidity



Recent analysis by the Bank for International Settlements, which filtered proprietary data from aggregate payment messages across nine Large-Value Payment Systems worldwide, reveals that intraday liquidity is significant. **Figure 2** illustrates the trends in intraday liquidity in two leading RTGS systems, Fedwire and TARGET2, by comparing overall payment volumes with the liquidity utilized. Overall, demand for intraday liquidity is estimated to be roughly 15% of total daily payment volumes, or approximately 2.8% of gross domestic product per business day. These substantial amounts underscore liquidity's critical role in maintaining financial stability.

Access to intraday liquidity is generally contingent upon pledging adequate collateral, and its use is typically provided with zero fees. Reflecting the core objective of alleviating the payment gridlock among financial institutions caused by trapped liquidity, this approach not only facilitates rapid liquidity support but also minimizes the direct cost burden on banks. In parallel, central banks mitigate the inherent credit risk of providing such liquidity by imposing measures—such as a net debit cap or overnight penalties—that serve to limit excessive reliance on these facilities.

Figure 3: Bank of Korea's Intraday Overdraft Balance—Daily Average

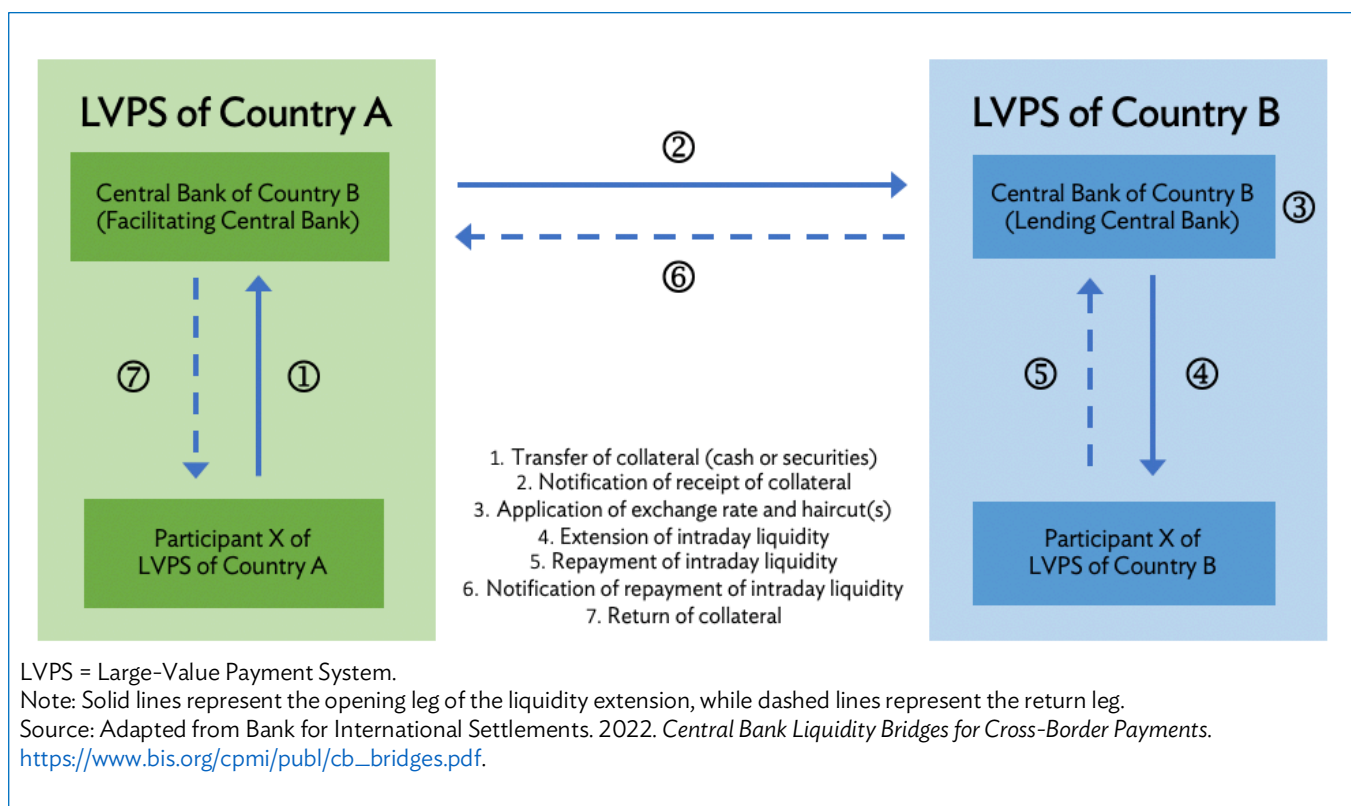


Operationally, the granting of intraday credit by central banks shares similarities with conventional policy tools, such as standing facilities and open market operations, albeit with some notable distinctions. Unlike these standard instruments, whose primary objective is to influence broader monetary conditions, intraday credit is designed specifically to enhance payment system stability. Moreover, its cost structure differs markedly from that of term credit; intraday facilities are provided at very low costs, in contrast to the substantially higher expenses associated with term funding. This pricing differential is justified by the distinct roles these instruments play, particularly in the contexts of risk sharing and asset substitution.⁵

The evolving pattern of intraday liquidity during a business day reflects factors such as strategic funding behavior and is therefore difficult to assess on an institution-by-institution basis. **Figure 3** presents trends in intraday overdraft usage reported by the Bank of Korea, based on aggregate data collected from participants in BOK-Wire⁺, the Bank's RTGS system. The data indicate that foreign banks operating in the Republic of Korea utilize intraday liquidity more actively than domestic banks. This disparity appears to stem from the comparatively limited local funding available to these foreign institutions, which may highlight potential business opportunities for cross-border banking operations involving LCY government bonds.

⁵ H.M. Ennis and J.A. Weinberg. 2007. Interest on Reserves and Daylight Credit. FRB Richmond Economic Quarterly. 93(2). pp. 111-142. <https://ssrn.com/abstract=2186643>.

Figure 4: Stylized Model of a Bilateral Liquidity Bridge



Cross-Border Collateral Mobilization

Mobilizing collateral across borders enhances global financial stability by increasing the overall liquidity and supply of eligible assets and by mitigating the costs associated with fragmented liquidity and collateral holdings across multiple jurisdictions and currencies. By improving access to and the usability of this collateral, policymakers can address liquidity shortages and build buffers against systemic shocks.

Key facilities have emerged to harness these benefits while navigating inherent challenges. Notable examples include CBLB, CBCA, and Euroclear's Collateral Highway. The first two facilities are closely linked to central banks' intraday liquidity operations, whereas Euroclear's Collateral Highway represents a broader platform for centralized collateral management and cross-border mobilization.

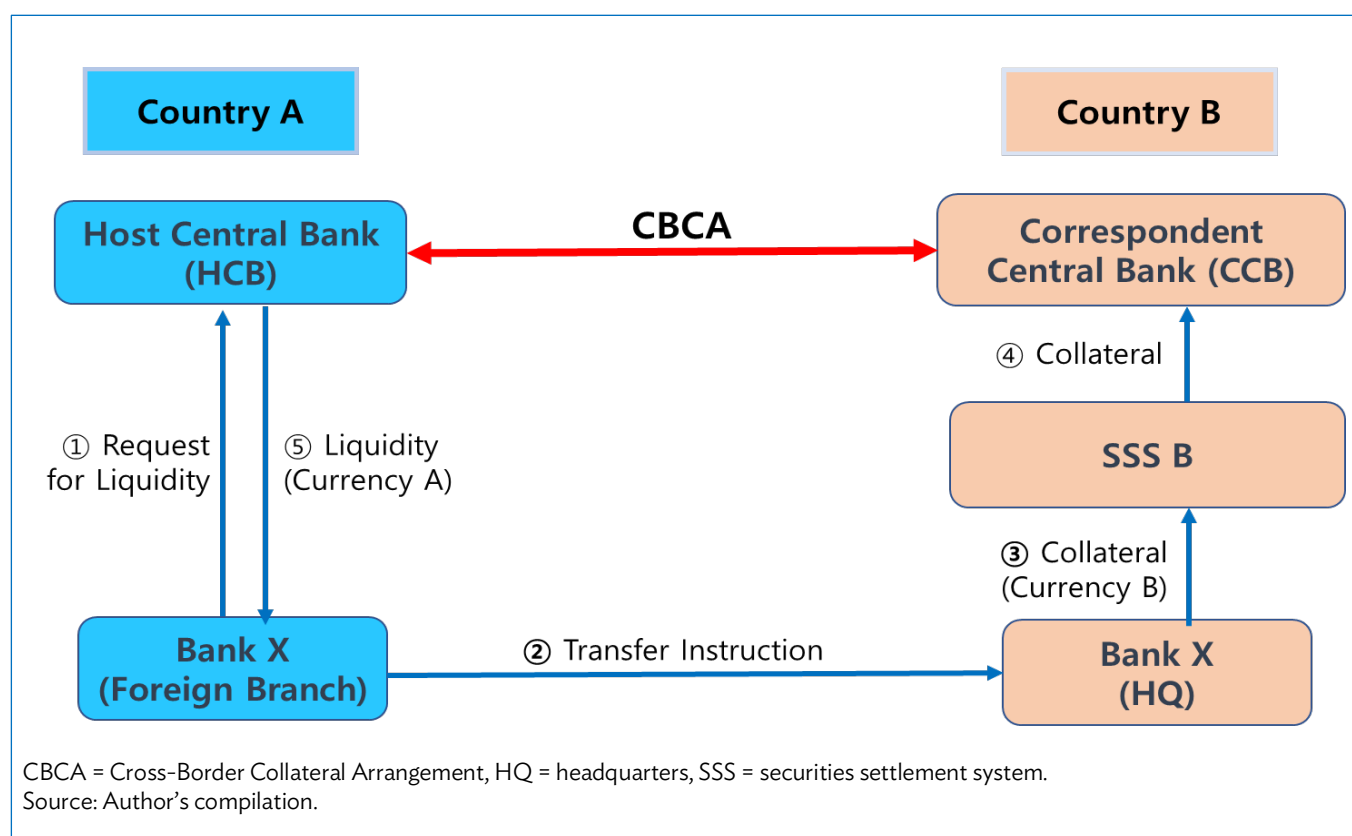
Central Bank Liquidity Bridges

A CBLB is a short-term intraday liquidity arrangement established among two or more central banks. Under this framework, collateral held by payment system participants may be pledged to one central bank to enable another central bank to extend intraday liquidity. Participants can then use this liquidity to meet their intraday payment obligations under both normal and stressed conditions. **Figure 4** illustrates a typical sequence in which a CBLB is employed between two central banks, along with the associated collateral and risk management measures such as exchange rate adjustments and haircuts.

Designed as potent liquidity management tools, CBLBs enable rapid funding transfers across borders to alleviate temporary liquidity shortages and reduce liquidity management costs. In light of these characteristics, the Group of Twenty's Roadmap for Enhancing Cross-Border Payments designates CBLBs as one of its 19 building blocks (i.e., BB11).⁶

⁶ BB11: Explore reciprocal liquidity arrangements. Action 1: Exploration, experimentation and piloting by pioneering central banks; Action 2: Analysis of concrete practical experience to identify the benefits and risks of liquidity bridges and development of a framework on how to establish them; Action 3: Technical assistance for implementation of liquidity bridges.

Figure 5: Stylized Model of a Correspondent Central Banking Model



Currently, implemented arrangements include the Bank of England–De Nederlands Bank liquidity bridge and the Scandinavian Cash Pool. As the implementation of the Group of Twenty's road map progresses, more active discussions on these mechanisms are expected.

Cross-Border Collateral Arrangements

A CBCA is an operational framework in which two central banks provide liquidity to their respective financial institutions through cross-border collateral exchanges. When extending intraday liquidity or other forms of credit, central banks require adequate collateral to be pledged, which effectively expands the pool of eligible assets.

For internationally active financial institutions, such arrangements allow them to leverage both domestic and foreign collateral to satisfy their payment needs, enabling more flexible and efficient liquidity management. For central banks, accepting high-quality, highly liquid foreign securities broadens the range of eligible assets for liquidity provision, thereby enhancing financial stability during periods of stress.

Depending on factors, such as the type of collateral and intermediary structure, CBCA arrangements can take various forms.⁷ Among the many potential CBCA models, the Correspondent Central Banking Model appears to be most prevalent in managing central bank intraday liquidity. **Figure 5** illustrates a standardized Correspondent Central Banking Model transaction, which exhibits a structure similar to a CBLB, as shown in Figure 4.

As mentioned previously, a prominent real-world example of a CBCA can be found in the euro area, where a high degree of economic integration and the use of a single currency prevail. In the ASEAN+3 region, the Bank of Japan has entered into CBCA agreements with the central banks of several countries—including Malaysia, Singapore, and Thailand—where the counterpart central banks maintain a unilateral facility that accepts Japanese government bonds held by domestic financial institutions as collateral.

⁷ Bank for International Settlements. 2006. Cross-Border Collateral Arrangements. *CPMI Papers*. No 71.

Euroclear's Collateral Highway

In contrast to direct central bank involvement, Euroclear's Collateral Highway serves as a centralized platform that enables the efficient management, transformation, and cross-border mobilization of collateral. While its interaction with central bank operations is still evolving, the platform's centralized design enhances transparency and efficiency, potentially bridging operational gaps and enhancing overall market stability.

Collectively, these facilities represent a strategic approach to cross-border collateral mobilization. By leveraging both central bank mechanisms and broader market infrastructures, the integrated financial system can better navigate liquidity challenges and reinforce stability in an increasingly interconnected global economy.

Next Steps

The effective utilization of central bank intraday liquidity on a cross-border basis depends on establishing a solid foundation within LCY bond markets. Strengthening these markets is crucial, as it not only increases liquidity but also reduces the fragmentation of collateral holdings across jurisdictions and currencies. Equally important is fostering close cooperation among central banks, government entities, and financial institutions.

Such coordinated efforts are imperative to align policy measures, harmonize operational frameworks, and secure a shared understanding among stakeholders—including financial institutions and market participants—on the benefits and challenges of cross-border collateral mobilization. Targeted research and awareness-raising efforts can further strengthen these initiatives.

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