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ACCOUNTS OPENING ISSUES IN THE CONTEXT OF THE TRANSFORMATION OF THE BANKING SYSTEM

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Abstract: In order to develop principles and procedures for effective regulation and supervision of the banking system, it is first necessary to analyze the trends in the transformations taking place in the structure of the banking system at the global level. To identify such trends, it is necessary to study and analyze the experience of countries with developed and stable banking systems. The classical banking system is a two-tier banking system. However, as a result of the development of financial markets and infrastructure in recent decades, an objective need has arisen to review a number of approaches related to the classical two-tier banking system. Some countries are trying to introduce approaches to forming a multi-tiered banking system, while others are trying to introduce a hybrid system, where central banks open and service bank accounts not only for depository institutions (banks), but also for systemically important financial market infrastructures. In such a situation, a number of conceptual questions arise, to which this research work is dedicated.

Key words: *banking system, central bank, bank account, financial market, digitalization, financial stability, transformation*

Introduction

In recent years, however, the structure of banking systems has undergone significant transformation. Rapid digitalization, technological innovation, the expansion of financial market infrastructures, and the growing importance of non-bank financial institutions have fundamentally changed the organization of payment and settlement systems. The emergence of real-time gross settlement (RTGS) systems, instant payment platforms, electronic money institutions, fintech companies, and central counterparties has increased the need for more efficient and secure settlement mechanisms. Consequently, many central banks have reconsidered the traditional limits of access to central bank money and have expanded settlement services to a broader range of financial market participants. These developments have gradually transformed the classical two-tier banking system into hybrid or multi-tier institutional models.

Digital transformation has further accelerated these changes. The widespread adoption of mobile banking, open banking frameworks, application programming interfaces (APIs), cloud technologies, and the ongoing development of central bank

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digital currencies (CBDCs) has created new opportunities for improving payment efficiency while simultaneously introducing new regulatory and operational challenges. Expanding access to central bank settlement services requires balancing technological innovation with monetary policy objectives, financial stability, operational resilience, and cybersecurity considerations. Consequently, the design of central bank account opening policies has become an increasingly important component of modern banking regulation.

Despite the growing importance of these institutional developments, existing literature has primarily focused on individual aspects of banking transformation, such as payment system modernization, financial market infrastructures, or CBDCs. Comparatively less attention has been devoted to analyzing how central bank account opening policies themselves are evolving across different jurisdictions and how these changes influence the transformation of banking system architecture. A comprehensive comparative assessment of international practices remains relatively limited, particularly regarding the transition from classical two-tier banking systems toward hybrid and multi-tier models.

This study seeks to address this research gap by examining the evolution of central bank account opening policies in a comparative international context. The analysis focuses on the experiences of the European Union, the United Kingdom, the United States, South Korea, Singapore, Australia, India, Mexico, and other jurisdictions that have adopted different institutional approaches to providing access to central bank settlement services. By comparing these regulatory models, the study identifies common trends, evaluates alternative approaches to account access, and examines their implications for monetary policy implementation, payment system efficiency, and financial stability.

The findings contribute to the literature on banking system transformation by providing a systematic comparative analysis of central bank account opening practices and identifying key principles that may guide future institutional reforms. As financial systems continue to evolve through digitalization and technological innovation, understanding these developments is essential for designing regulatory frameworks that support efficient payment infrastructures while preserving monetary stability and the resilience of the financial system.

Theoretical and methodological bases

The classical banking system is a two-tier banking system (Keynes, Friedman, Samuelson, Mankiw, McConnell, Dolan, Mishkin and others). The central bank, which implements monetary policy, is at the top level. Banks, serving the real economy and the needs of the population, are at the second level. In order to implement monetary policy, central banks open and maintain correspondent (current) bank accounts for banks operating at the second level. These accounts are used both to meet mandatory reserve requirements and to carry out payment and settlement operations within the framework of additional reserves exceeding the mandatory reserve requirement. Central banks do not open accounts for other individuals. Bank accounts for them are opened exclusively by second-tier banks. The existence of a fractional reserve banking system, the issuance of national currency, the provision of a multiplier effect between the money base and the money supply, and the mechanism for implementing monetary policy are based on this model.

Research methods

As a result of the development of financial markets and infrastructure in recent decades, an objective need has arisen to review a number of approaches related to the classical two-tier banking system. Some countries are trying to introduce approaches to forming a multi-tiered banking system, while others are trying to introduce hybrid systems, where central banks open and service bank accounts not only for depository institutions (banks), but also for systemically important financial market infrastructures. In such a situation, a number of conceptual issues arise, including:

- is it necessary to preserve a two-tier model of banking system or to shift to a hybrid or multi-tier model,
- should central banks open accounts for non-bank institutions,
- what criteria should be used to select non-bank institutions for which central banks are willing to open accounts,
- what type of accounts should be opened for non-bank institutions so as not to jeopardize financial stability and the logic of implementing monetary policy,
- may correspondent accounts of banks, intended to meet reserve requirements, be used for making payments, or may separate payment (settlement) accounts be necessary,
- should funds in the payment (settlement) account be included in the calculation of the reserve requirement,
- should payment (settlement) accounts be only in the national currency of the given country, or may they also be in foreign currency.

In such a situation, it is important to set out clear principles for opening and managing accounts at the central bank. Currently, different countries are taking different approaches to the above issues. The methods of comparative analysis, abstraction, induction and deduction were used to study the aforementioned issues.

Results

Is it necessary to preserve two-tier model of banking system or to shift to a hybrid or multi-tier model. Currently, many countries, such as the European Union, the United Kingdom, South Korea and Singapore, are introducing hybrid banking models, in which central banks retain elements of the classic two-tier banking system and open payment accounts for customers who meet certain criteria (e.g. for operators and participants of systemically important payment systems). Moreover, central banks of many countries are also considering the possibility of direct or indirect servicing of accounts for broad public by the central bank. In addition, a multi-tier model of banking system is being formed in a number of countries, such as the United Kingdom, the United States and some European Union member states. In the case of a multi-tier model, central banks open nominee (omnibus) accounts for operators of payment and settlement systems, and the latter, in turn, maintain accounts for the accounting of their clients' funds. Transformation of structural models of banking system in the studied countries is presented in Table 1.

Table 1. **Transformation of structural models of banking system in the studied countries**

	Classic two-tier model	Two-tier model with elements of a single-tier model	Multi-tier model
European Union countries		v	v[1]
United Kingdon			v
USA			v
South Korea		v	
Singapore		v	
India		v	
Australia		v	
Mexico		v	

Source:

1. Account Access Guidelines, Board of Governors of the Federal Reserve System, available at: https://www.federalreserve.gov, web page visited on 11.08.2025.
2. Bank of England Omnibus Accounts - Access Policy, London, 2021, available at: https://www.bankofengland.co.uk, web page visited on 12.08.2025.
3. Bank of England Settlement Accounts, Policy Paper, London, 2021, available at: https://www.bankofengland.co.uk, web page visited on 14.08.2025.
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12. The Bank of England's Sterling Monetary Framework, available at: https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/documentation, web page visited on 12.08.2025.

As it can be seen from Table 1, none of the countries studied currently preserves the classical two-tier model in its entirety.

Should central banks open accounts for non-bank institutions and on what criteria should the selection of the latters be made. According to the Principles for Financial Market Infrastructures (PFMI), a financial market infrastructure should conduct its money settlements in central bank money where practical and available (Principles for

[1] in Poland

Financial Market Infrastructures, Committee on Payment and Settlement Systems, Bank for International Settlements, Technical Committee of the International Organization of Securities Commissions, 2012). These principles are designed to apply to systemically important payment systems. When studying the policies of central banks of different countries for opening payment and correspondent accounts, it becomes clear that final settlement through accounts opened at the central bank is carried out only for payment systems that are important for the financial market of a given country (e.g., systemically important systems). In the countries studied, the decision to open and service payment accounts is left to the discretion of the central bank (Bank of England Settlement Accounts, Policy Paper, London, 2021, Bank of England Omnibus Accounts - Access Policy, London, 2021).

What type of accounts should be opened for non-bank institutions so as not to jeopardize financial stability and the logic of implementing monetary policy. A best practice study shows that currently there are two main approaches to opening payment accounts in the world:

- opening payment accounts with the central bank for operators and participants of systemically or publicly important payment systems,

- opening of nominee (omnibus) accounts with the central bank for operators of systemically or publicly important payment systems and opening of cash accounts with the system operators for system participants.

Best practice study shows that both approaches are widespread in the world (Considerations and Lessons for the Development and Implementation of Fast Payment Systems, Part of the World Bank Fast Payments Toolkit, Main Report, September 2021). The first approach is more widespread and is used in countries such as the European Union member states, Australia, India, Singapore, and Mexico. The second approach is used in countries such as the United States and Poland. The United Kingdom uses both the first and second models (see Table 2).

May correspondent accounts of banks, intended to meet reserve requirements, be used for making payments, or may separate payment (settlement) accounts be necessary. A best practice study shows that payment accounts are opened and maintained at the central bank for payment system operators and certain participants. Central banks open payment accounts for banks, payment and electronic money institutions. However, in many countries, opening a payment account is usually not required for banks (such as in the UK or Japan), as they have correspondent accounts opened with the central bank. In this case, the correspondent accounts of banks also function as payment accounts (Principles for Financial Market Infrastructures, Committee on Payment and Settlement Systems, Bank for International Settlements, Technical Committee of the International Organization of Securities Commissions, 2012). At the same time, in other countries, banks must open payment accounts in addition to the reserve account to participate in payment systems. The accounts used for settlement at the central bank in the countries studied are presented in Table 2.

Table 2. **Accounts used for final settlement at the central bank in the countries studied**

	Current (correspondent) accounts with the central bank	Separate payment (settlement) accounts with the central bank for the payment system operators and participants	Nominee (omnibus) accounts with the central bank for payment system operators
European Union countries		v	v[2]
United Kingdom	v	v[3]	v
USA	v		v
South Korea		v	
Singapore		v	
India		v	
Australia		v	
Mexico		v	

Source:

1. Account Access Guidelines, Board of Governors of the Federal Reserve System, available at: https://www.federalreserve.gov, web page visited on 11.08.2025.

2. Bank of England Omnibus Accounts - Access Policy, London, 2021, available at: https://www.bankofengland.co.uk, web page visited on 12.08.2025.

3. Bank of England Settlement Accounts, Policy Paper, London, 2021, available at: https://www.bankofengland.co.uk, web page visited on 14.08.2025.

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11. TARGET Services, European Central Bank, Eurosystem, https://www.ecb.europa.eu/paym/target/html/index.en.html, web page visited on 14.08.2025.

12. The Bank of England's Sterling Monetary Framework, available at: https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/documentation, web page visited on 12.08.2025.

[2] in Poland

[3] if the entity does not have a correspondent account opened with the central bank for the purpose of meeting reserve requirements

As can be seen from Table 2, unlike the UK, banks in the European Union member states, South Korea, Singapore and a number of other countries open payment accounts in addition to reserve accounts in order to participate in payment systems.

Should funds in the payment (settlement) account be included in the calculation of the reserve requirement. There is no single approach to this issue. In the European Union countries, the balance on the payment account at the end of the day is also included in the calculation of the reserve requirements. In Singapore, the balance of the payment account is not included in the calculation of the reserve requirements, but funds can be deposited into the payment account from the reserve account only in the amount exceeding the minimum reserve requirements. In the UK, this problem is absent, because first, banks can use their reserve accounts as payment accounts. And secondly, even if a separate payment account is opened for a bank at the discretion of the central bank, that account is an account that is almost zeroed out at the end of the day (the central bank sets a maximum threshold, which is usually a small amount due to ensuring financial stability and monetary policy). As for the nominee (omnibus) account, there is no requirement to have zero balance at the end of the day, but only persons, who are authorized to open accounts with the central bank, may have funds in such an account.

Should payment (settlement) accounts be only in the national currency of a given country, or may they also be in foreign currency. As mentioned, according to the Principles of Financial Market Infrastructures, a financial market infrastructure should conduct its money settlements in central bank money where practical and available (Principles for Financial Market Infrastructures, Committee on Payment and Settlement Systems, Bank for International Settlements, Technical Committee of the International Organization of Securities Commissions, 2012). However, the requirement for implementation of final settlement through accounts with the central bank is based on two main reasons:

- the central bank has lower credit risk,
- the central bank is the source of liquidity (the issuer of money).

The emphasis on the second factor indicates that we are talking about the currency issued by the specific central bank.

Best practice study (in particular, the European Union member states, the United Kingdom, South Korea, Singapore) shows that, as a rule, each country's central bank opens payment accounts in the currency issued by itself. Opening foreign currency payment accounts with the central bank not only cannot mitigate liquidity risk, but also creates additional risks for the central bank, since the latter is not the issuer of the foreign currency (Payment, clearing and settlement systems in the CPSS countries, Volumes 1 and 2, Committee on Payment and Settlement Systems, Bank for International Settlements, 2012; Information Disclosure Based on the Principles for Financial Market Infrastructures: The BOJ-NET Funds Transfer System, Bank of Japan, 2025; Payment and Settlement Systems Report, Bank of Korea, 2024).

The account opening policies at the central banks in different countries studied.

The account opening policies at the central banks in different countries studied are presented below.

European Union member states: The payment and securities settlement infrastructure in the European Union is based on TARGET Services, operated by the Eurosystem. The Eurosystem is the body responsible for monetary policy in the

Eurozone, consisting of the European Central Bank and the national central banks of the EU member states. TARGET Services includes the following financial market infrastructures:

- T2 for payment settlements,
- T2S for securities settlements,
- TIPS for instant payment settlements.

The following persons are authorized to open an account in T2:

- credit institutions (banks) established in the territory of the European Union,
- branches of credit institutions (banks), established outside the territory of the European Union, operating in the territory of the European Union.

The central bank may also, at its discretion, open accounts for the following persons:

- for treasuries of governments or local authorities of the member states of the European Union,
- for public sector entities of the member states of the European Union which are authorised to conduct customer accounts,
- for investment firms established in the European Union,
- for branches of investment firms, established outside the European Union, operating in the European Union,
- for operators of payment systems and securities settlement systems.

Two types of accounts are opened in T2: a main cash account and dedicated accounts for settlement in the RTGS, TIPS or T2S.

Main cash accounts are used for:

- centralized liquidity management,
- access to credit lines,
- minimum reserve requirements,
- participation in central bank operations (open market operations, standing facilities),
- cash inflows and outflow transactions (TARGET Services, Annual Report, European Central Bank, 2024).

To perform final settlement in separate payment and securities settlement systems, it is necessary to have dedicated accounts for final settlement in the given systems. Funds are deposited from main cash accounts to payment accounts, after which it is possible to carry out the final settlement in the corresponding system.

As can be seen from the described model, in the EU countries, the accounts intended to meet the reserve requirement and the payment accounts are separated from each other. However, the balance in the payment account at the end of the day is also included in the calculation of the reserve requirement.

The United Kingdom: Reserve accounts with the Bank of England are opened for banks, building societies, central securities depositories (CCPs), international central securities depositories (ICSDs) and investment firms (The Bank of England's Sterling Monetary Framework, Bank of England, 2025). Although reserve accounts and settlement accounts serve different purposes, entities who have reserve accounts may also use these accounts as settlement accounts. When settlement accounts are not also reserve accounts, no interest is accrued on these accounts, and the end-of-day balance is limited to the maximum amount set by the central bank. It is usually set as a small amount, due to the need to ensure monetary policy and financial stability. In fact,

settlement accounts are almost zero-based accounts. It is the account holder's obligation to withdraw funds from the account at the end of each day (to almost zero balance).

Electronic money issuers and payment institutions are not authorized to open reserve accounts with the central bank. Therefore, the latters may only open settlement accounts.

The funds in settlement accounts may only be used for making customers's payments and may not be used for any other purpose.

The advisability of opening a settlement account with the Central Bank is considered from the perspective of mitigating two main types of risks: credit risk of the final settlement agent and risk associated with interruption of operations. When assessing the efficiency of mitigating these risks and cost-effectiveness, the central bank is concerned with the following criteria:

- the volume and number of transactions performed in the payment system. The greater the volume and number of transactions, the greater the risks associated with the operation of the payment system,
- the nature of the transactions carried out through the payment system. This criterion assesses the relative importance of the transactions for the economy and society, regardless of their volume and quantity,
- the authority of participants of the payment system to open settlement accounts with the central bank.

The decision to open a settlement account is under the sole discretion of the central bank. The following entities are authorized to open settlement accounts with the central bank:

- banks or building societies that have reserve accounts with the central bank,
- investment firms that have reserve accounts with the central bank,
- central securities depositories (CCPs) that have reserve accounts with the central bank,
- international central securities depositories (ICSDs), which have reserve accounts with the central bank,
- financial market infrastructure (FMI) operators that do not have reserve accounts with the central bank, but which perform systemically important functions, and the central bank believes that the implementation of final settlement with central bank money may significantly contribute to improving financial stability. The decision to open a settlement account for each system is made at the discretion of the central bank, based on the specifics of that system. These institutions cannot open reserve accounts with the central bank (Bank of England Settlement Accounts, Policy Paper, London, 2021).

In addition to the above, a mandatory condition for opening a settlement account with the central bank is that the potential account holder is a participant in the final settlement of a system whose final settlement is performed by the central bank, and has the operational capabilities to participate in the central bank's RTGS system.

The Bank of England also offers the opening of omnibus (nominee) accounts for payment system operators, so that they can hold their customers' funds in an aggregated form at the central bank. This allows payment system operators to fully settle the wholesale settlement of transactions on their platforms with central bank money. Funds can be held in such accounts both during the business day and after its end (the accounts are not zero-base accounts). Omnibus accounts are also settlement accounts. Omnibus

accounts may be opened only for operators of systemically important payment systems (Bank of England Omnibus Accounts - Access Policy, London, 2021).

Each of these models has a different level of complexity, and therefore also carries a different level of operational risk for the central bank as a settlement service provider and payment and settlement ecosystem provider. Therefore, the use of more complex models, such as those based on omnibus (nominee) accounts, requires more in-depth justifications from the perspective of ensuring financial stability. The choice of model for each specific case is within the competence of the central bank. The choice depends on the results of a thorough analysis of monetary policy and financial stability, as well as operational risks.

South Korea: The cornerstone of the payment and settlement system in South Korea is the BOK-Wire+ system, the South Korean central bank's RTGS system. Members of the system include local banks, branches of foreign banks, investment and insurance companies, the Korea Exchange (KRX) and the Korea Securities Depository (KSD). The system provides for the settlement of wholesale payments between financial institutions, as well as the settlement of net positions of transactions in retail payment systems, securities transactions on the Korea Exchange (KRX) and the Korea Securities Depository (KSD), and foreign exchange transactions.

Institutions that wish to participate in the BOK-Wire+ system must open a current (correspondent) account with the Bank of South Korea. In addition to the existing general current account, the South Korean central bank has introduced a new type of account - the current account for settlement. Depending on the nature of the transaction, the final settlement of the transaction is carried out either through current (correspondent) accounts or current settlement accounts.

Current (correspondent) accounts with the Central Bank of South Korea may only be used for transfers between the Central Bank and participants within the framework of monetary policy and ensuring financial stability, the transfer of the Treasury funds and operations related to the issue and redemption of the government bonds and central bank securities, as well as for transfers between the head office and branches of a given financial institution. In all other cases, the current settlement account is used.

In the BOK-Wire+ system, all transfers between current (correspondent) accounts and current settlement accounts are carried out in the national currency, regardless of the nature of the transfer.

The sole operator of retail payment systems in South Korea is the Korea Financial Telecommunications and Clearings Institute (hereinafter referred to as KFTC). KFTC is the operator of 12 retail payment systems, as well as other financial infrastructure. It calculates the net settlement positions for each retail payment system and transmits them to the Bank of South Korea, which performs the final settlement every day at 11 a.m. in the BOK-Wire+ system. In South Korea, the most widely used retail payments include transfers between bank accounts, card payments and checks. When a payment card is used at a point of sale whose bank account is maintained by a bank other than the bank that issued the payment card, the transactions are settled through the KFTC retail payment system in accordance with the procedure outlined above (Payment and Settlement Systems Report, Bank of Korea, 2024).

Singapore: The Monetary Authority of Singapore (MAS) is the authority responsible for regulating and supervising financial market infrastructure in Singapore. It serves as a

settlement agent for banks operating in Singapore, enabling funds transfers between banks' settlement accounts with MAS. For this purpose, before the start of the operating day, banks transfer the relevant funds from their current account with MAS to the settlement account. If a reserve requirement is set, only the amount exceeding the minimum daily balance can be transferred to the settlement account and used to make payments (Monetary Authority of Singapore (MAS), Annual Report 2024/2025).

Digitalization of payment and settlement operations as a driver of banking system transformation: The ongoing transformation of banking system structures is closely linked to the digitalization of payment and settlement operations. While institutional reforms, such as the expansion of access to central bank accounts, represent the structural dimension of transformation, digitalization constitutes its technological and operational foundation. In practice, the emergence of hybrid and multi-tier banking models would not be feasible without the parallel development of digital settlement infrastructures and payment instruments.

At the core of this transformation lies the modernization of real-time gross settlement (RTGS) systems. Central banks in the European Union (TARGET Services), the United Kingdom (RTGS Renewal Programme), South Korea (BOK-Wire+), and Singapore (MEPS+) have substantially upgraded their settlement platforms to support real-time processing, extended operating hours, interoperability with ancillary systems, and enhanced liquidity management tools. These technological enhancements have reduced settlement risk and increased the feasibility of granting access to central bank money to a broader range of participants, including non-bank financial institutions and financial market infrastructures.

Digitalization has also led to the proliferation of ***instant payment systems***, such as TIPS in the European Union and analogous fast payment platforms worldwide. These systems require near-continuous availability of settlement liquidity and rely on automated transfers between reserve accounts and dedicated settlement accounts. As a result, the traditional distinction between reserve-holding accounts and payment accounts has become more operationally significant, reinforcing the need for clearly defined account opening policies at the central bank level.

In parallel, the digitalization of ***payment instruments***, including electronic money, mobile wallets, tokenized deposits, and application programming interfaces (APIs) under open banking regimes, has altered the role of traditional bank accounts in the payment process. In many cases, end-users initiate payments through digital instruments without directly interacting with a classical bank account, while final settlement continues to occur in central bank money through accounts held by banks, payment institutions, or system operators. This layered structure further supports the emergence of multi-tier models, where settlement functions are centralized at the central bank, while customer-facing services are provided by a diverse range of intermediaries.

From a regulatory perspective, digitalization increases both *the* ***efficiency*** *and the* ***complexity*** of settlement arrangements. Automated liquidity transfers, real-time risk controls, and continuous settlement cycles reduce credit and liquidity risks but simultaneously heighten operational and cyber risks. Consequently, central banks must assess not only the legal status and financial soundness of potential account holders but also their technological capacity to integrate securely with central bank systems. This

consideration is increasingly reflected in access criteria for settlement and omnibus accounts.

Digitalization also reinforces the relevance of ***central bank digital currencies (CBDCs)*** as a potential extension of existing settlement frameworks. Wholesale CBDC models, in particular, may be viewed as a further evolution of digital settlement accounts, enabling programmable, token-based settlement in central bank money. While CBDCs do not fundamentally alter the two-tier logic of the banking system, they may provide an additional technological layer through which hybrid and multi-tier structures can operate more efficiently.

In this context, digitalization does not eliminate the importance of bank account opening policies; rather, it amplifies their significance. As settlement becomes faster, more automated, and more interconnected, the consequences of inappropriate access to central bank money increase. Therefore, the transformation of banking system architecture must be accompanied by rigorous governance frameworks governing digital settlement access, account types, and permissible uses of funds.

Overall, the digitalization of payment and settlement operations should be regarded as a ***functional catalyst*** of banking system transformation. It enables the practical implementation of hybrid and multi-tier models while preserving the central role of the central bank as the issuer of risk-free settlement assets and the anchor of monetary stability.

Conclusions

The conducted comparative analysis of the banking systems in various developed and developing economies demonstrates that the transformation of classical two-tier models into hybrid or multi-tier frameworks has become a dominant global trend. While the traditional two-tier banking structure, separating central banks from commercial banks and other depository institutions, remains the conceptual foundation of most modern systems, practical developments have required the integration of new institutional and operational layers. These transformations have been driven primarily by the expansion of financial market infrastructures, technological innovation, and the emergence of systemically important non-bank financial intermediaries.

The experience of the European Union, the United Kingdom, the United States, South Korea and Singapore confirms that central banks increasingly engage directly with financial market infrastructures through the opening of settlement and payment accounts. This diversification of account types, including correspondent, settlement, and nominee (omnibus) accounts, has allowed central banks to balance efficiency, financial stability, and monetary policy transmission. However, it also introduces new regulatory and operational challenges that require consistent governance and clear eligibility criteria for access to central bank accounts.

Despite the advantages of these hybrid and multi-tier arrangements, the classical two-tier structure continues to ensure monetary control, liquidity management and risk containment within the financial system. Therefore, rather than complete replacement, the current stage of evolution should be viewed as a functional diversification of the two-tier model, allowing it to adapt to modern financial realities.

In summary, the transformation of the global banking architecture reflects an adaptive response to the complexity of modern financial ecosystems. The gradual evolution

toward hybrid and multi-tier systems does not undermine the theoretical integrity of the two-tier model but rather reinforces its resilience through innovation and diversification. Ensuring regulatory clarity, operational prudence, and cross-institutional coordination will be key to maintaining financial stability and effective monetary governance in this new environment.

Based on the conducted analysis, the following suggestions have been made:

✓ ***Development of Unified Regulatory Principles:*** International and national regulatory bodies should develop a standardized framework defining the conditions under which central banks may open and maintain accounts for non-bank institutions. This framework should be aligned with the Principles for Financial Market Infrastructures (PFMI) to ensure consistency and mitigate systemic risk.

✓ ***Strengthening Risk Management Mechanisms:*** Central banks introducing hybrid or multi-tier account structures must establish robust risk assessment systems to evaluate credit, liquidity, and operational risks associated with granting access to central bank money to non-bank entities.

✓ ***Differentiation of Account Types and Functions:*** It is advisable to maintain a clear distinction between reserve, payment, and settlement accounts to preserve the effectiveness of monetary policy implementation. Central banks should ensure that the use of each account type corresponds strictly to its intended regulatory and operational purpose.

✓ ***Promotion of Technological and Infrastructural Integration:*** The introduction of digital payment platforms and potential central bank digital currencies (CBDCs) should be integrated within the evolving multi-tier framework. This will enhance efficiency while ensuring alignment between technological innovation and prudential stability.

✓ ***Enhancement of Cross-Border Coordination:*** Given the increasing interconnection of global financial systems, international cooperation among central banks is essential to harmonize policies on account opening, settlement arrangements, and oversight of financial market infrastructures.

✓ ***Further Research and Monitoring:*** Future studies should focus on assessing the long-term impact of hybrid and multi-tier banking models on monetary transmission mechanisms, financial inclusion, and systemic stability. Empirical evaluation of pilot projects (e.g., omnibus accounts and digital settlement models) would provide valuable insights for policy design.

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