Opportunities for the participants in the payments ecosystem

"The future of payments is not cash; it's not cards; it's invisibility."
A paraphrase of the ideas of Dan Schulman, CEO of PayPal (2015–2024).

As discussed throughout this document, the payments ecosystem is undergoing a profound transformation that presents not only challenges but also a wide range of opportunities for both traditional and emerging players.

The convergence of technological innovation, proactive regulation and financial inclusion is creating favorable conditions for the development of new business models, more accessible payment solutions and enhanced user experiences. Traditional players can seize opportunities by reaching new customer segments, innovating products, monetizing data, exploring niche markets, or even issuing proprietary digital currencies. Emerging players, meanwhile, may enter the ecosystem either to replace incumbents or to provide specialized technological services that support others in the value chain.

This dynamic fosters not only greater operational efficiency, but also contributes to building a payments ecosystem that is increasingly interoperable, resilient, and user-centric.

Traditional stakeholders

Although the evolution of the payments ecosystem might be seen as a threat to traditional players who have led the sector for centuries, it also presents significant opportunities – provided they commit to deep transformation of their processes and systems.

Potential access to new customer segments

The sustained growth in global payments volume has driven increased sophistication on both the supply and demand sides. While services have become more standardized and tailored to meet evolving customer needs, users have also shifted their perception of payments – from a final stage to a strategic core of transaction and liquidity management.

However, not all customers have the same level of adoption of these new trends, nor do banks have adequate channels to reach all segments.

If we view customer segmentation in the payments ecosystem as a normal distribution, financial institutions are focusing on improving their ability to serve the outer ends of that curve, and are encountering challenges at both ends: At one end are sophisticated customers whose demands exceed conventional offerings; at the other, small businesses, particularly SMEs, that compete on priority of attention.

Two lines of action are emerging to address these challenges:

- Measures to close the supply gap: strengthening omni-channel capabilities (host-to-host connections, open platforms) and integrating complementary services such as currency hedging, large-volume payments and supply chain visibility.

- Measures to fill the demand gap: leveraging marketplace platforms to capture SMEs and other underserved segments through a more competitive and accessible offer.

Potential for innovation in new products and services

The current context offers traditional banks an opportunity to innovate in several areas:

- **Cryptocurrencies**: Custody services, exchange (purchase, sale and transfer), payments, loans, investments, cross-border payment solutions, specialized insurance, or cash pooling and cross border cash pooling solutions based on atomic settlement[48].

- ***Banking as a Service*** **(BaaS)**: monetization of banking infrastructure by providing services to third parties, such as fintechs or non-financial companies that do not have the capacity, possibility and/or interest in developing their own banking infrastructure, under API-ified models. BBVA Open Platform, Solarisbank, N5 Now or Ohpe are relevant cases that have made banking as a service a profitable business model by including in their catalogs B2B services such as:

    - **Regulatory compliance services** to fintechs and other companies that wish to operate in the financial sector and become regulated entities but do not have the know-how or structure to do so. This includes managing compliance requirements, monitoring transactions and ensuring that all operations comply with current regulations.

    - **Data monetization:** Exploiting the data generated through your BaaS platforms to deliver personalized services and improve the customer experience. This includes data analysis to identify behavioral patterns, provide personalized recommendations and optimize risk management.

[48]The process by which a transaction (or series of related transactions) is completed in its entirety or not at all. It is an "all or nothing" principle. In the context of cryptocurrencies and blockchain, it means that assets change hands instantaneously and synchronously, eliminating risks such as counterparty risk (the possibility that one party does not fulfill its side of the deal) or failed settlement risk (when a payment is made but the corresponding asset is not delivered, or vice versa).

- **Regulated market access services:** Provision of intermediation services for companies that do not wish to become regulated entities and prefer to use a third party as an intermediary. This includes account management, transaction facilitation and the provision of white label financial services under a secure and reliable regulatory framework.

- **Emerging markets (Web 3.0)**[49]: Development of solutions tailored to virtual reality, the metaverse and decentralized economies, offering products such as Web 3.0 wallets, token-based loyalty programs, payment services for virtual environments and decentralized digital identity (DID) solutions.

  The global Web 3.0 market reached a value of $3.2 billion in 2021 and is projected to reach $81.5 billion by 2030, with a compound annual growth rate of 43.7%[50]. This new world represents a significant challenge for financial institutions as it is based on a fully decentralized model that renders current services obsolete and demands new services.

Potential increase in revenues from monetization of the data

Data mining has become a fundamental strategy for financial institutions today:

- **Personalization of services** through the analysis of behavioral patterns from transactional data. For example, financial product recommendations can be developed based on customers' spending and savings habits, increasing the relevance and effectiveness of offers.

- **Development of new financial products** by anticipating emerging customer needs. For example, identifying segments that are not offered traditional financing or lack credit cards but actively use Buy Now, Pay Later (BNPL) services.

- **Optimization of risk management** using predictive models that detect behavioral patterns signaling potential payment defaults.

- **Operational efficiency** through automation processes based on Artificial Intelligence.

- **Generation of new sources of revenue** by commercializing anonymized, aggregated data and offering financial intelligence services.

[49] Web 3.0 is considered the third generation of the Internet´s evolution, characterized by decentralized data architecture (Filippi & Wright, 2018) , the semantic capability to understand and interpret content contextually (Berners-Lee et al., 2001), and the intensive use of emerging technologies such as blockchain, artificial intelligence (AI) and smart contracts (Al-Khalil et al., 2020) , in order to create a more interoperable, secure, transparent and user-centric network.

[50] https://www.emergenresearch.com/

Use of niche companies as accelerators of transformation

Traditional institutions can leverage new specialized providers, such as Paytech[51], to accelerate the implementation of cutting-edge solutions, minimizing internal development and integration costs while enhancing the user experience.

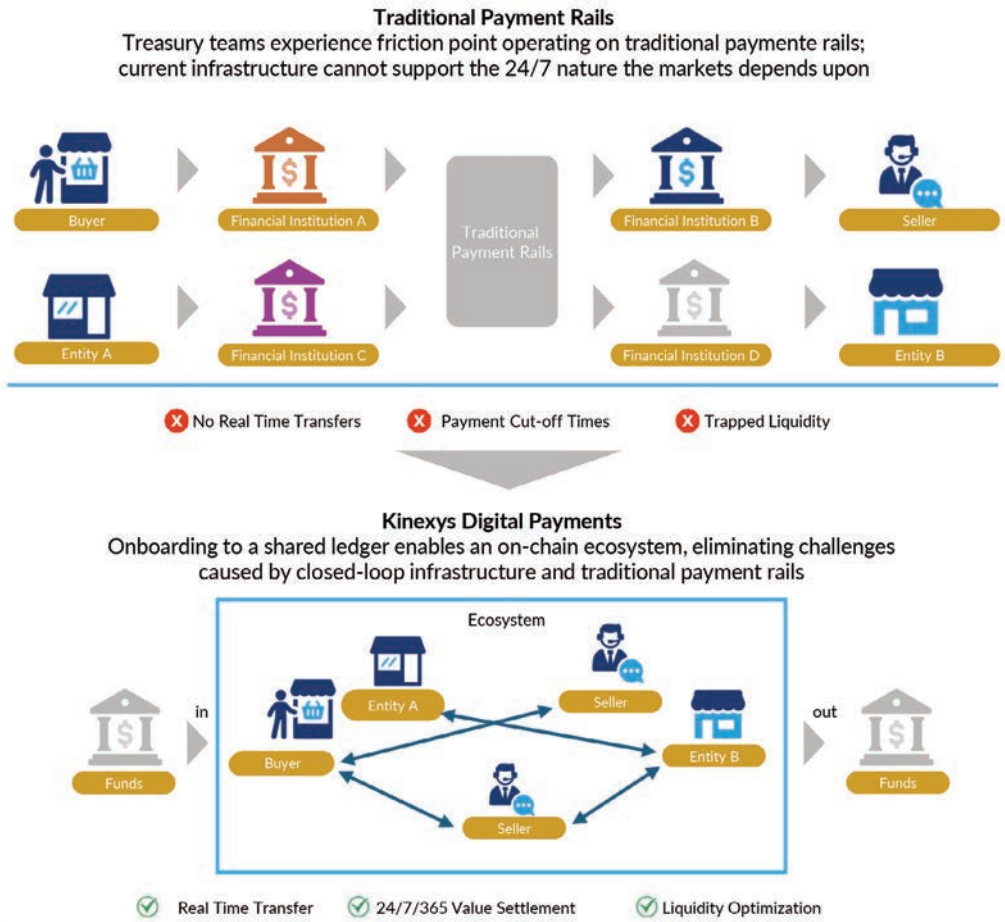
Potential for issuance of own currency

The possibility for financial institutions to issue digital currencies opens new horizons:

- **Proprietary currencies**, such as JPM Coin/Kynexis, a cryptocurrency issued by J. P. Morgan for interbank settlements, cross-border payments and corporate treasury optimization[52]:
  - Designed for use by institutional clients only, with 1:1 backing in USD (each Kynexys represents one US dollar on deposit at JPMorgan).
  - It eliminates traditional treasury friction points and enables real-time liquidity management through cross-border payments beyond currency cut-off times, holidays or weekends[53] by operating according to a scheme such as the one described in Figure 17.
- **Stablecoins:** Banks can issue regulated stablecoins, creating digital versions of deposits or e-money tokens whose settlement times and costs, compared to traditional systems such as SWIFT, are significantly lower.
- **Tokenization of assets** (stocks, bonds, real estate) that can be traded on blockchain.
- **New digital financial services** (wallets, programmable payments, blockchain-based smart credits) as well as services related to the roles defined for financial entities in monetary regions that have issued public digital currencies (CBDCs) such as the Digital Euro.

[51] AEFI_Libro-Blanco-PayTech-2020_Diciembre-2020.pdf (asociacionfintech.es).
[52] According to data from J. P. Morgan (https://www.jpmorgan.com/kinexys/index), Kynexis, in its 4 years of operation, has accumulated a transaction volume in excess of $1.5 trillion with an average transaction volume per day in excess of $2 billion.
[53] J.P. Morgan– Kynexys Digital Payments (https://developer.payments.jpmorgan.com/docs/treasury/global-payments/capabilities/global-payments-2/jpm-coin-system/index).

Figure 17. Comparison between payment through traditional rails and payment through a digital currency issued by a commercial bank.



Fuente: J. P. Morgan

Emerging Actors

Likewise, emerging players - such as fintechs, technology startups, digital platforms and projects based on decentralized technologies - find opportunities to access the ecosystem either by replacing traditional intermediaries with more agile, user-centric solutions aligned with contemporary digital demands, or by replicating Marketplace models of financial services under the Banking as a Platform philosophy.

Potential for replacing traditional intermediaries

New players are revolutionizing the ecosystem with highly competitive value propositions through diverse business models, including:

- Becoming Payment Service Providers by offering specialized payment services (including integrated solutions and value-added services).
- Designing and commercializing Open Banking solutions.
- Launching paid services on Web 3.0 through NFTs.
- Offering DeFi (decentralized finance) solutions.

Establishing their own entities classified as "Payment Service Providers," offering various types of solutions:

- Solutions for integrating different payment methods under standardized APIs, designed for fully digital processes with:
  - Instant approval.
  - Flexible contracting models, without long-term commitments, cancellation fees, or permanence requirements.
  - Low or no monthly fees, avoiding the high charges typical of traditional merchant account providers.
  - Flat processing fees, with no additional charges for card types, PCI compliance or paper statements.
  - Simplified sales and business management tools, combining payment services with features such as point-of-sale (POS) systems, online stores, and electronic invoicing.
- Embedded value-added services: Fraud protection, compliance consulting, multilingual and multicurrency processing.

The digital euro

What is the digital euro?

The digital euro is a digital currency (CBDCs) that will be issued and backed by the European Central Bank (ECB) mirroring the traditional euro. Consequently, it is considered a liability of the Central Bank, rather than of a commercial bank.

Why do we need the digital euro?

One of the main arguments put forward by the ECB for the launch of the digital euro lies in the absence of a European digital payment option covering the entire Euro Area. Currently, 13 of the 20 member countries rely on international payment schemes - managed mainly by U.S. companies such as Visa and Mastercard - for card transactions. The digital euro is presented as a European electronic means of payment, accessible and accepted in all eurozone countries.

However, one of the most prominent fears is that the digital euro could facilitate excessive surveillance of citizens' financial transactions, thus compromising their privacy. Unlike cash, which allows anonymous transactions, the digital euro could leave a digital trail of every transaction. The ECB has acknowledged this concern in its report on the digital euro, noting that "privacy is the most important aspect of a digital euro for both individuals and professionals." However, various critics warn that, even if measures are implemented to protect privacy, the very design of the digital euro could make it easier for authorities to track transactions.

How is the digital euro regulated?

The digital euro falls outside the scope of both the Cryptoasset Markets Regulation (MiCA) and the DLT/MiFID II framework. For this reason, on June 28, 2023, the European Commission presented a dedicated legal framework for its potential introduction, as part of its broader “Single Currency Package“. The preparation phase of the project started in November 2023 and, as by December 2024, the second progress report[1] was published. This report anticipated a decision on whether to move to the next phase of the project by late 2025. In any case, the ECB´s Governing Council will not make a final decision on issuing the digital euro until the relevant legislation has been adopted.

What stage are we at?

In October 2020[2] , the ECB published a report analyzing the potential issuance of a digital central bank currency for the Eurozone. Nine months later, the ECB Governing Council decided to launch the digital euro project. The research phase, which ran from October 2021 to October 2023, explored a range of design options and distribution models, in close collaboration with EU authorities and market participants. The findings from this phase provided the foundation for the decision to move forward with the preparation phase, which began in November 2023[3].

The current preparation phase focuses on laying the groundwork for the potential issuance of the digital euro, including the finalization of the scheme's operational rules and the selection of suppliers responsible for developing the required platform and infrastructure. The preparation phase includes numerous tests and experiments, as well as regular exchanges with the public and other stakeholders, in order to ensure that the digital euro meets both the needs of users and the requirements of the Eurosystem. This phase is expected to be completed in the fourth quarter of 2025 (see Figure 18).

What role distribution is foreseen?

There are concerns that the digital euro could lead to a disintermediation of the traditional banking system. Should citizens decide to hold their funds directly in digital euros with the ECB, commercial banks could face a significant reduction in deposits, affecting their ability to lend.

The ECB has pointed out that "the digital euro should be designed taking into account the possible unintended consequences of its issuance, in order to limit its possible adverse effects on monetary policy and financial stability". To this end, a distribution of roles and functions between the Eurosystem and supervised intermediaries has been envisaged so that:

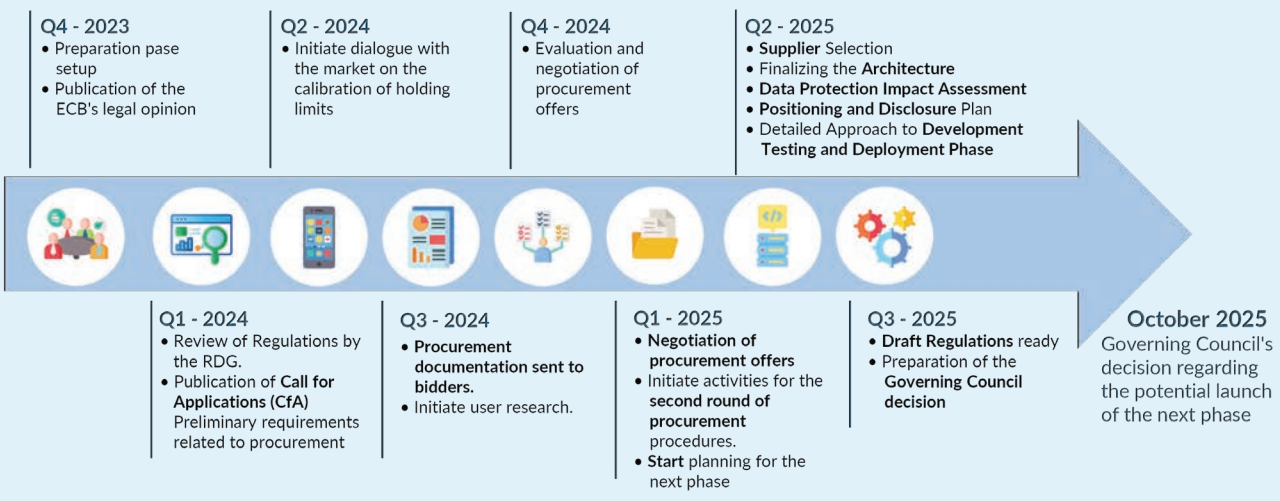
- The Eurosystem is responsible for issuing currency and ensuring adequate liquidity in the system, managing the entities under supervision and providing settlement services.
- Intermediaries are responsible for managing accounts and digital wallets, providing the devices that enable the management of payment instruments, performing initiation, authentication, validation and post-settlement services associated with transactions, and providing services related to the funding and withdrawal of funds between accounts and wallets.

In the context of digital euro distribution, financial intermediaries will need to evolve if they wish to remain relevant players within the Eurozone's payments ecosystem, by offering services such as:

- Providing a front-end portal for customers and implementing a Know Your Customer (KYC) protocol.
- Supplying devices and interfaces that support digital euro payments, as well as account opening services, digital wallets, onboarding and offboarding processes.
- Enabling the financing and defunding of customers´ digital wallets 24 hours a day, 365 days a year.
- Initiating, authenticating, validating and executing post-settlement activities such as transaction reconciliation.
- Offering application programming interfaces (APIs) in compliance with the PSD2 Directive, allowing third parties to access and develop value-added services.

[1]https://www.ecb.europa.eu/press/pr/date/2024/html/ecb.pr241202~d0b19e5e1b.en.html.
[2]https://www.ecb.europa.eu/pub/pdf/other/Report_on_a_digital_euro~4d7268b458.en.pdf.
[3]https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr231018~111a014ae7.en.html.

Figure 18. Digital euro project schedule.



Source: European Central Bank.

Design and commercialization of Open Banking solutions

- Account aggregation Financial information aggregators access their clients' payment accounts across various financial institutions, allowing clients to view their entire financial position from a single access point. This basic service can be enhanced to offer higher value-added solutions, such as advanced personal financial management tools or treasury management systems for SMEs.

- Payment initiation: This service involves issuing a payment order directly from a customer's bank account to a merchant's account, enabling Account-to-Account payments without relying on credit or debit card intermediaries.

- Development of scoring/debt advise models: By accessing clients' financial information from multiple institutions, aggregators can build scoring models to evaluate the financial capacity of loan applicants. These services can also provide debt counseling, assessing optimal debt levels or refinancing options.

- Overdraft coverage: Combining account aggregation and payment initiation, these services monitor payment account transactions and automatically initiate transfers from another account of the customer to prevent overdrafts through instant fund transfers.

Launch of Web 3.0 payment services via NFTs

Within virtual ecosystems such as the metaverse, buy/sell transactions are conducted using wallets where NFTs – Non-Fungible Tokens – are traded. NFTs are unique digital assets that represent ownership of a specific item and cannot be exchanged for other tokens of equal value. These assets, whether digital or physical, are registered on a blockchain.

Currently, many regulations restrict financial entities from providing custody or services related to these digital assets, creating opportunities for non-financial entities to fill this gap.

Although most common uses of NFTs today lie outside the traditional payments ecosystem – such as digital art, collectibles, virtual real estate, music, media, and gaming – these new asset types within virtual ecosystems mark a key development within Web 3.0. This represents the next evolution of e-commerce, where customers no longer expect to receive a physical object or service but rather an NFT instantly, introducing a novel concept of "currency" and ownership.

Adapting payment platforms to process NFTs opens up new business opportunities, including:

- **Offering a stablecoin gateway:** Allows end users to pay with fiat money while converting the value into an equivalent amount for the NFT issuer.

- **Metaverse experiences:** Facilitating payments for virtual experiences within the metaverse, similar to how traditional e-commerce handles physical goods today.

- **Financing / subsidizing projects:** Using NFTs without direct monetary value as symbols of solidarity or sustainability, such as awarding NFTs to participants in recycling campaigns as proof of contribution.

- **Interoperability:** Enabling seamless transfer of NFTs and other digital assets between different metaverse platforms.

Leverage in DEFI solutions (decentralized finance)

In the context of cryptocurrencies and blockchain technology, "DeFi" stands for "Decentralized Finance".

The term DeFi refers to an ecosystem of financial applications built on blockchain infrastructures that operate without traditional intermediaries such as banks, brokers or centralized payment platforms. Instead of relying on centralized financial institutions, DeFi services are managed through smart contracts, which are automated programs capable of executing agreements according to agreed terms, without third-party intervention.

Although the maturity level of these services is still low, DeFi opens up new business opportunities, including:

- Connecting the decentralized environment with traditional payment channels through DApps integration, enabling seamless interaction between both financial worlds.
- Offering liquidity in fiat currency (FIAT) within DeFi services in an integrated and accessible manner, simplifying the overall user experience.

Main examples of DeFi services:

- **Decentralized loans and credits:** Users can apply for or grant cryptocurrency loans without the intermediation of traditional financial institutions.
- **Decentralized Exchanges (DEX):** Platforms that allow the direct exchange of cryptocurrencies between users, eliminating the need for a central agent.
- **Yield farming:** A strategy whereby users contribute liquidity to DeFi protocols in exchange for rewards, thereby optimizing the performance of their digital assets.
- **Staking:** The process of holding funds in cryptocurrency wallets to support the security and operability of blockchain networks, earning periodic rewards in exchange.

There are many benefits that users of the DeFi ecosystem recognize: easier access to financial services, cost reduction, increased competition, improved operational resilience, enhanced transparency, and avoidance of arbitrary government interference. However, we must not forget that the associated risks are significant[54]:

- Operational risks that arise from the recombination of ecosystem components to create value, leading to increased interconnections and, consequently, greater complexity - making incidents more likely (e.g., cyberattacks, performance limitations, operational congestion, etc.)
- Financial risks that are mainly related to conflicts of interest, the possibility of price manipulation, and excessive leverage (the DeFi system relies on automated mechanisms that can accelerate and amplify crises in short periods of time - these mechanized actions increase the price volatility of underlying assets, ultimately exacerbating naturally occurring tensions).
- Governance issues inherent to a decentralized system. It is not uncommon, for example, for a few agents to hold the majority of voting tokens, or for crucial decisions to be made by a small group (founders, developers, etc.) under the pretext of greater agility - without investors necessarily being aware of this situation. Additionally, decentralization makes it difficult to identify a valid point of contact to address complaints and claims.
- Dishonest conduct or, at the very least, actions misaligned with the interests of the clients.
- Propensity for market manipulation and fraud, whether through mechanisms aimed at deliberately altering the validation sequence of pending transactions, exploiting access to insider information to influence price movements, or falsifying activity volume to inflate market growth expectations and create speculative bubbles, among other risks.

[54] Economic Bulletin de Banco de España (https://www.bde.es/f/webbe/SES/Secciones/Publicaciones/InformesBoletinesRevistas/BoletinEconomico/23/T3/Fich/be2303-art04.pdf)

Regulation of the DeFi sector remains limited and evolving in most jurisdictions. The decentralized nature of these platforms and their constant innovation pose significant challenges for regulators, as many applications lack a centralized entity that can be directly supervised.

Potential for the creation of banking services platforms

Large technology companies are looking to replicate Market Places models for the financial sector, leveraging payment data to offer integrated financial services under the Banking as a Platform philosophy:

- The platform manager, who is not a financial institution, retains control over the customer relationship and therefore is not subject to the regulatory obligations typical of the financial industry.
- The financial entity acts as the service or product provider, with no direct interaction with the end customer, and assumes all operational and regulatory responsibilities involved in the "manufacturing" of the financial instrument.

Case study - Inclusion of new players in cross border transfers

This case study aims to show how the inclusion of new players in the payments ecosystem leads to more efficient processes and better economic outcomes for end consumers. To this end, a comparison will be made between two cross-border transfers involving accounts of a business group operating in three countries – Spain, Croatia and Colombia - under a traditional environment and a digital environment.

Based on the comparison, the following conclusions can be drawn:

- In a traditional environment, the two transfers take between 3 to 7 days (see Figure 19).
- In a digital environment, with "book to book" or virtual account-based solutions, the same transfers can be executed instantaneously or take a maximum of 2 days.

Conceptual response in a traditional environment

Since both Spain and Croatia belong to the SEPA Zone, daily transactions initiated from Spain will take a maximum of one day to become effective, and with the same cost as a standard transfer.

On the other hand, for transactions initiated from Croatia to Colombia, as these are international transfers, the time it will take for the transfer to become effective will vary between 3 and 7 days depending on whether the intervention of a single correspondent bank or several correspondent banks is required. (see figure 19).

Conceptual response in a virtual environment

A situation like the one described in the previous section is far from the target model that today's customers demand. Therefore, an institution aiming to be at the forefront of payment services would consider undergoing a transformation to convert its processes into those of a digital bank. This would enable the institution to deliver financial services through online platforms and mobile applications, allowing customers to carry out transactions, manage accounts, apply for loans, invest and perform other financial activities entirely over the Internet (see Figure 20). This model would significantly reduce transaction times and could even enable transactions to be completed instantaneously.

Common characteristics:

- Online operations.
- Absence of physical branches.
- Low or no operating costs.
- Access to a variety of financial services.
- Technological innovation.

Achieving value-added and differential service:

- Account opening in minutes.
- Instant access to accounts.
- Transfers with lower costs.
- Accessible banking with greater transparency.
- No opening or closing hours.

Undertaking a transformation process like the one described in this case study is not simple. However, the market reality is that there are emerging players with the ability to carry out international transfers, competing on both cost and processing time—at both the individual level (P2P or C2C) and the business level (B2B)—based on a virtual model. For illustrative purposes, some benchmark examples in this space include:

1. Revolut for Business.
2. TransferWise.
3. B2BPay.
4. Xoom (a Paypal service).

Figure 19. Schematic diagram of the process for an international transfer outside the SEPA zone through physical banks.

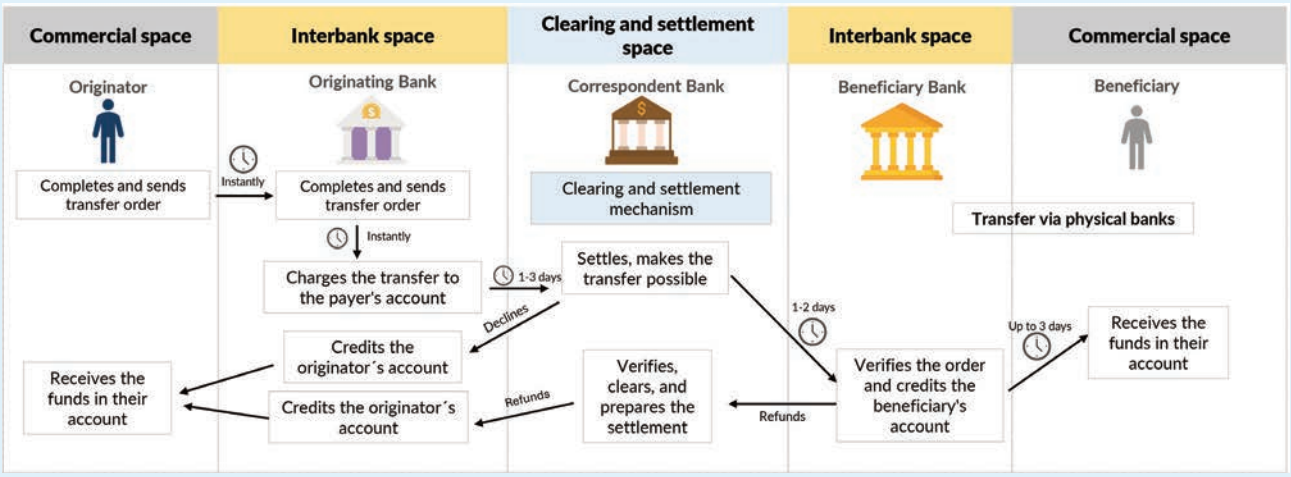


Figure 20. Schematic of the transfer process through virtual banks.