

# *Project IZZI™*

Building the  
next-generation  
global payment  
infrastructure

*IZZl, Inc*



# The *Project IZZI* Vision:

Global adoption of next-generation payment infrastructure that:

- Delivers safe, efficient, real-time, seamless, 24x7, account-to-account payments domestically, across borders, and across currencies.
- Leverages the time-tested strengths of international banking while promoting competition among bank and nonbank payment service providers.
- Meets the G20 call for faster, cheaper, more transparent, and more inclusive cross-border payment services, including remittances.
- Provides the payment foundation for a unified, global network of interoperable financial ecosystems that can continually expand and innovate.
- Promotes financial inclusion by creating payment services and connected accounts that can be offered to the unserved and the underserved at low-to-no cost.

*IZZI* is patented\*  
 next-generation  
 interbank payment  
 infrastructure

# Core elements of the *IZZI* infrastructure

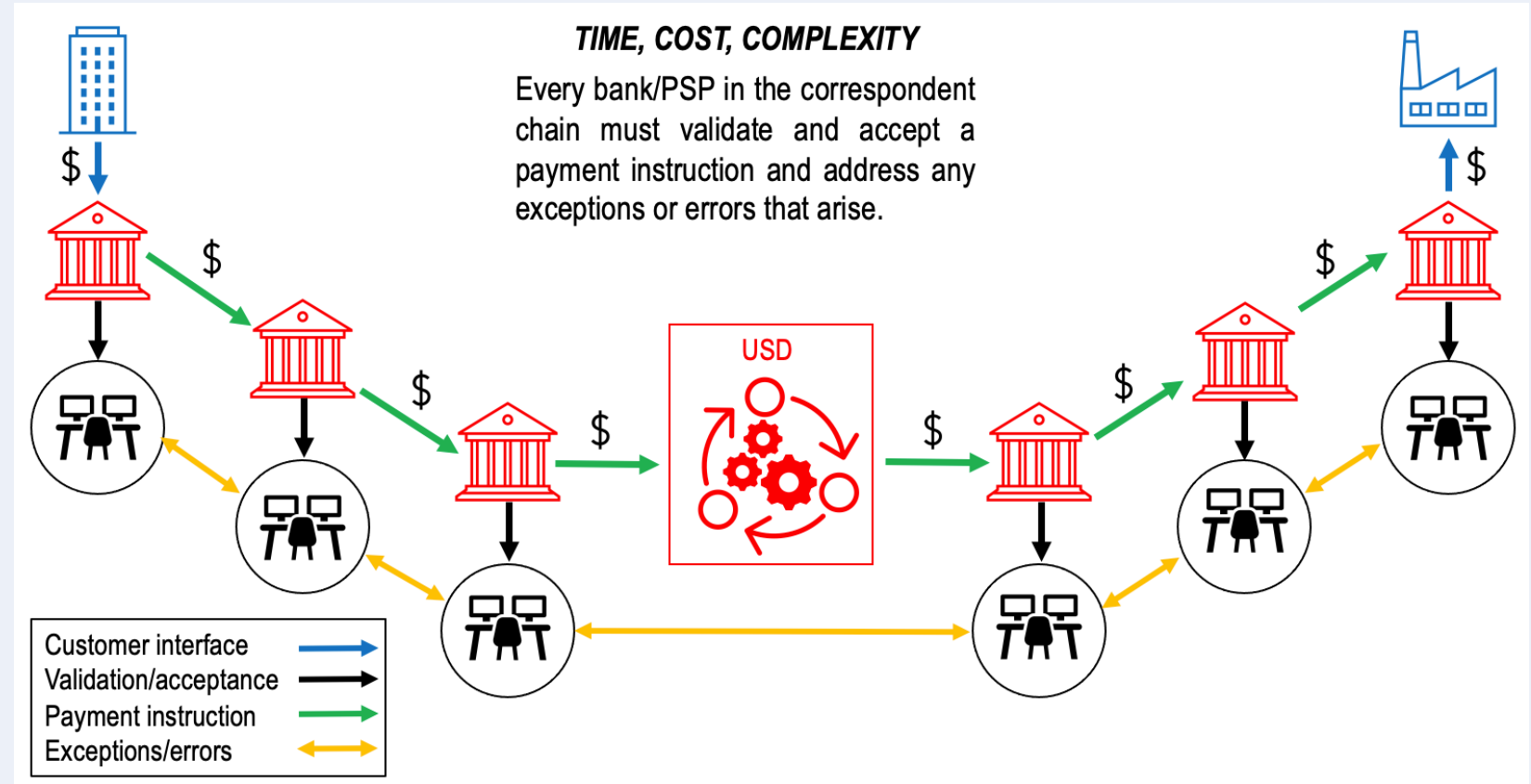
Tokenized central bank money	Digital representations of claims on central bank money by authorised holders are recorded as balances either on the currency's partition on a common ledger or on an independent single-currency ledger located in the currency's jurisdiction.
Tokenized commercial bank money	Digital representations of deposits in each currency at authorised domestic and foreign bank and nonbank payment service providers (PSPs) are also recorded as balances on that currency's partition/ledger.
Tokenized correspondent banking	Each currency's partition/ledger records the correspondent relationships between all banks and PSPs in that currency and identifies the correspondent chain that connects each payer to each payee in the currency, no matter how long or how many borders the chain might cross.
Real-time single-currency payments, domestically and across borders	The programmable payment process verifies balance availability and payment permissibility and, if and only if verified, atomically updates the payer's, the payee's, and their connecting correspondents' balances on the currency's partition/ledger with real-time finality.
Real-time cross-currency payments at real-time FX rates	The programmable, composable process integrates a cross-currency payment with a market-priced FX trade and atomically updates the balances of the payer, the payee, the FX trader, and their connecting correspondents on the two single-currency partitions/ledgers.
Real-time enforcement of all applicable KYC/AML/CFT requirements	The programmable payment process enforces all applicable system-wide and customized rules and restrictions on behalf of every bank/PSP in the correspondent chain while retaining each bank's/PSP's responsibility for determining its customized requirements.

\*U.S. Patent No. 11,354,662

# Today's single-currency payment problem

This graph shows the intermediaries and processes that can be required when, for example, a company in one city/country wishes to pay US dollars to a supplier located in another city/country.

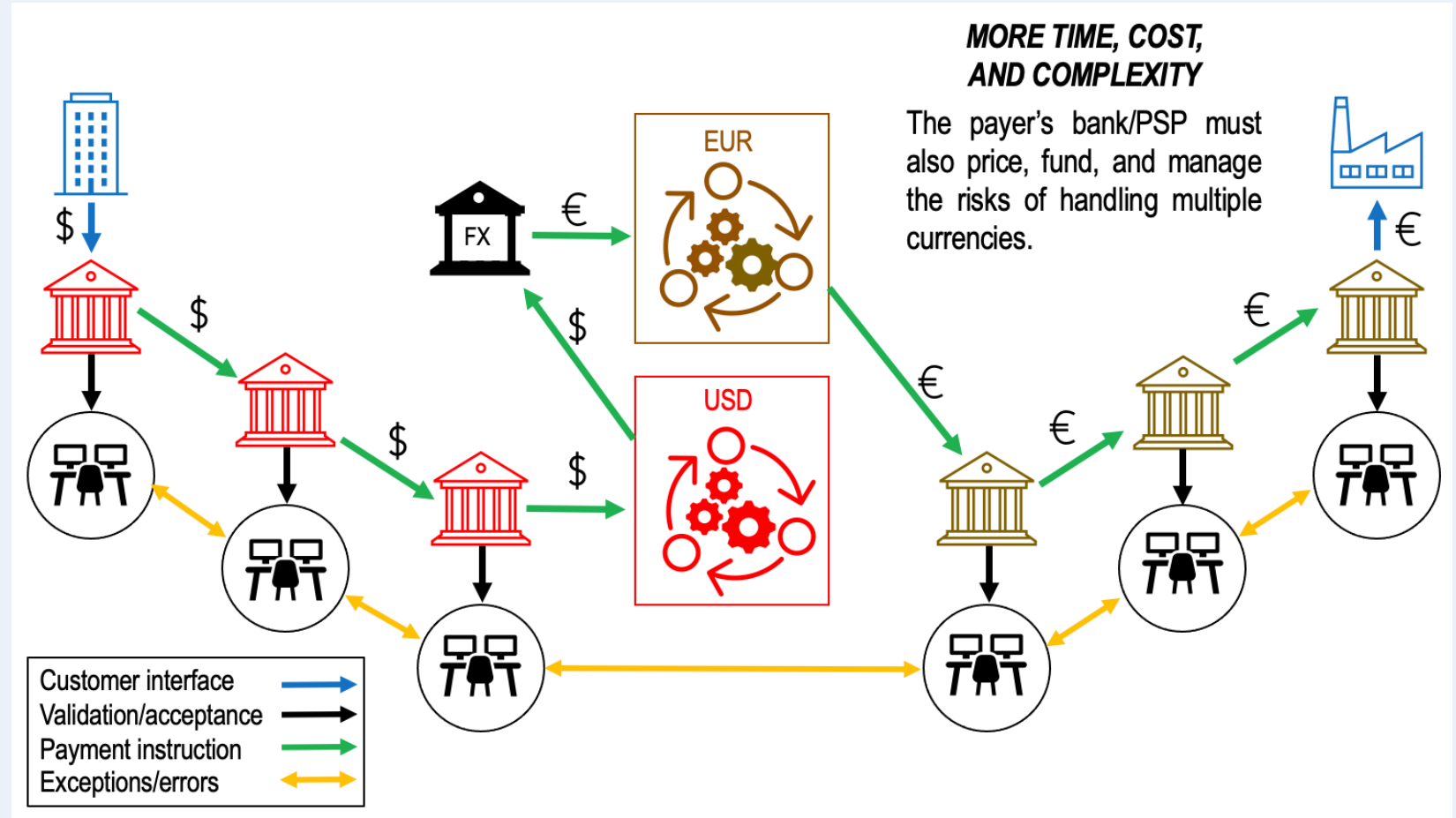
Today's infrastructure requires every bank/PSP and payment system in the correspondent chain to validate and to accept a payment instruction (PI). Each intermediary must dedicate back-office resources to scan each PI against all relevant KYC/AML/CFT, credit, and liquidity criteria. Each intermediary must also dedicate back-office resources to handle exceptions and errors, to track in-flight payments, and to reconcile payments across the correspondent chain.



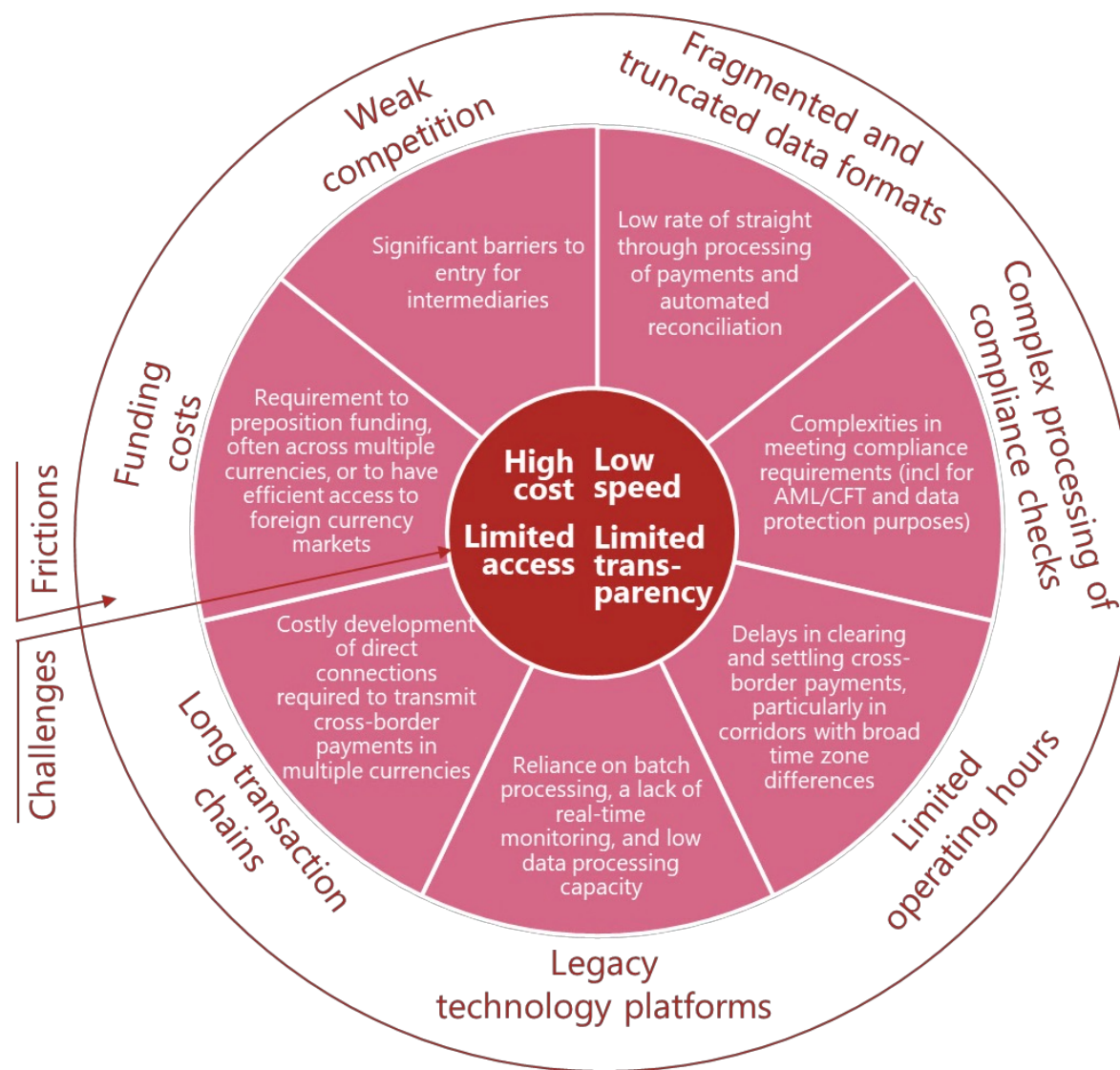
# Today's cross-currency payment problem

This graph shows the additional intermediaries and processes that can be required when, for example, a company in one city/country wishes to use US dollars to pay euro to a supplier located in another city/country.

Today's infrastructure for a cross-currency payment requires at least two separate single-currency payments and the associated time, cost, resources, and uncertainty of settling each. It also requires the payer's bank/PSP to price, to fund, and to manage the risks of converting the payer's currency into the payee's, whether it does so directly or through another bank, PSP, or FX service provider.



# Today's payment problem reflects seven fundamental frictions identified by the G20\*



\*Source: CPMI, *Enhancing cross-border payments: building blocks of a global roadmap, Stage 2 report to the G20, July 2020.*

Many initiatives seek to solve today's payment problem...

- Past and ongoing efforts aimed at improving today's payments include:
  - Establishing new “fast” or “instant” single-currency payment systems.
  - Linking existing interbank payment systems that operate in different jurisdictions.
  - Introducing services that pre-validate, pre-authorize, or track PIs across the correspondent chain that connects a payer to a payee.
- In addition to solving today's payment problems, several forward-looking initiatives intend to support interoperability across an evolving global network of interconnected digitized financial ecosystems, including:
  - The Finternet. [see Carstens, A and N Nilekani (2024): “Finternet: the financial system for the future”, BIS Working Papers, no 1178, April]
  - A unified ledger. [see BIS (2023): “Blueprint for the future monetary system: improving the old, enabling the new”, Annual Economic Report 2023, Chapter III, June, pp 85–118]
  - Cross-border payment and contracting platforms. [see Adrian, T and Mancini-Griffoli, T (2023): “The rise of payment and contracting platforms”, IMF Fintech Note 2023/005]
  - Regulated liability networks. [see McLaughlin, T (2021): “The regulated internet of value”, Citi Treasury and Trade Solutions]

...but none  
of these  
initiatives  
provides a  
complete  
solution

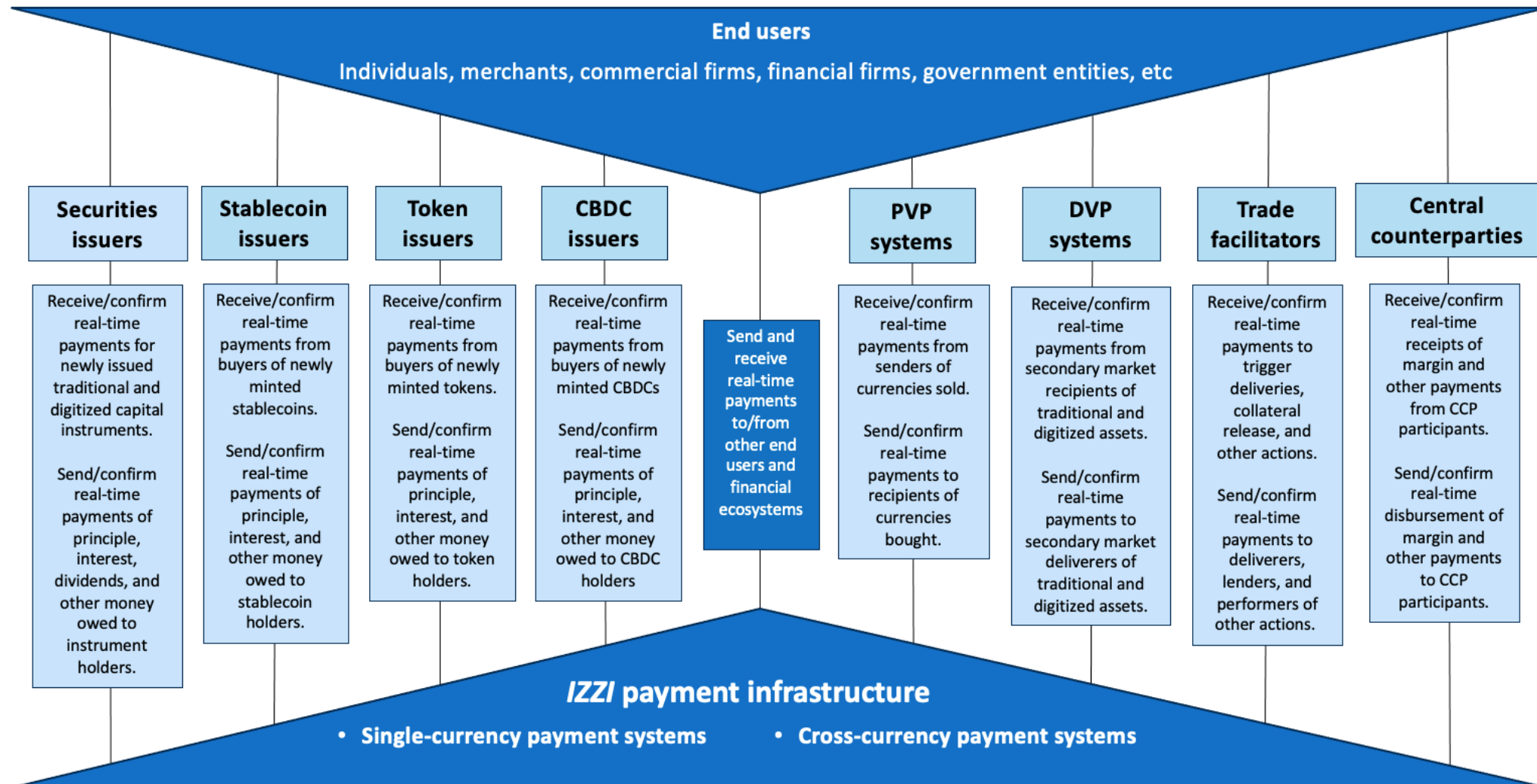
- They do not remove all seven fundamental frictions identified by the G20 that add to the cost, time, opacity, and inaccessibility of today's payments:
  - Each bank/PSP in a domestic or cross-border correspondent chain would still need to process and approve each PI.
  - Each would still need to scan each PI for AML/CFT purposes, whether it is acting as originator, beneficiary, or intermediary.
  - Each would still need to monitor and manage unsettled in-flight payments, to address any exceptions or errors, and to reconcile payments across the correspondent chain.
  - For cross-currency payments, the payer bank/PSP would still need to price, to fund, and to manage the risks of converting the payer's currency into the payee's currency.
- Many initiatives also raise significant governance, oversight, and other public policy concerns that can delay or even prevent approval:
  - For example, see CPMI (2024): Linking fast payment systems across borders: governance and oversight, Final report to the G20.



# IZZI removes all seven fundamental frictions

Friction	The IZZI infrastructure solution
<b>Long transaction chains</b>	Programmability lets one PI replace redundant PI processing by each party in the correspondent chain.
<b>Funding costs</b>	Composability integrates each cross-currency payment with an FX trade in real time to eliminate the payer bank's/PSP's cost and risk of pricing, funding, and converting the payer's currency into the payee's currency.
<b>Weak competition</b>	Direct access for all authorized banks and nonbank PSPs, including direct access across borders, promotes competition.
<b>Fragmented and truncated data formats</b>	Final, immutable, auditable, and atomic on-ledger settlement provides straight-through processing and automatic reconciliation across all parties.
<b>Complex processing of compliance checks</b>	The programmable payment process provides real-time, on-ledger enforcement of all applicable system-wide and bank/PSP-customized rules and restrictions on behalf of every party in the correspondent chain between payer and payee.
<b>Limited operating hours</b>	Interoperable ledgers permit seamless, real-time payments across borders, across currencies, and across time zones 24x7 with real-time finality, even when correspondents are closed.
<b>Legacy technology platforms</b>	Banks/PSPs can use simple APIs to access and to integrate their existing internal systems (including batch platforms) with the IZZI infrastructure to achieve real-time gross execution and settlement of payments.

# IZZI also provides the payment foundation for an interoperable network of evolving financial ecosystems



# Key benefits of the IZZI interbank payment infrastructure:

A public  
interest  
perspective

Macroeconomic stability	Strengthens the fundamental role of banks in supporting economic growth as intermediaries between savers and borrowers.
Financial system stability	Leverages the time-tested strengths of banks in payments with the protection of the banking safety net and avoids the potential for “digital runs” on the overall banking system.
Financial system structure	Preserves the two-tier banking system while promoting price and service competition among banks and nonbank PSPs.
Transparency	Enables cheap and fully transparent end-to-end payment costs, including competitive and transparent real-time FX rates for cross-currency payments.
Accessibility and ubiquity	Can be established for any cross-border and cross-currency payment corridor and can be accessed directly by any authorized bank or nonbank PSP, including across borders.
Financial inclusion	Creates simple-to-use payment services and connected accounts that can be offered at low-to-no cost per the CPMI-World Bank <i>Payment aspects of financial inclusion</i> guidance.

# Key benefits of the *IZZ* interbank payment infrastructure:

## A regulatory perspective

---

### Monetary sovereignty

Preserves each central bank's ongoing control of its currency and the effectiveness of its tools for monetary policy implementation.

---

### Domestic regulatory authority

Each single-currency *IZZ* payment system will fit neatly within, and be subject to, the existing regulatory, supervisory, and oversight framework for payment systems in the currency's jurisdiction.

---

### International oversight

Each *IZZ* cross-currency payment system that is established in any one jurisdiction will be subject to the cooperative oversight of, and as determined by, all the central banks of all included currencies.

---

### Privacy and anonymity concerns

The programmable payment process enforces compliance on behalf of all parties in the impacted correspondent chain with each jurisdiction's privacy, KYC/AML/CFT, and all other applicable regulations and policies.

# Key benefits of the *IZZ* interbank payment infrastructure:

## An individual bank perspective

---

### Improved competitiveness

Banks can retain and grow their deposit base, payment flows, and overall competitiveness with new and improved services that are impractical within the limitations of today's interbank payment infrastructure.

---

### Lower costs

Banks can use the *IZZ* infrastructure to lower the cost and to improve the profitability of their single-currency and cross-currency payments business.

---

### Regulatory confidence

Banks can plan to use the *IZZ* infrastructure to improve and expand their payment services -- including to meet the G20 payment targets -- notwithstanding uncertainties in the regulatory environment and the evolving needs of the digital financial system.

# Key benefits of the *IZZI* interbank payment infrastructure:

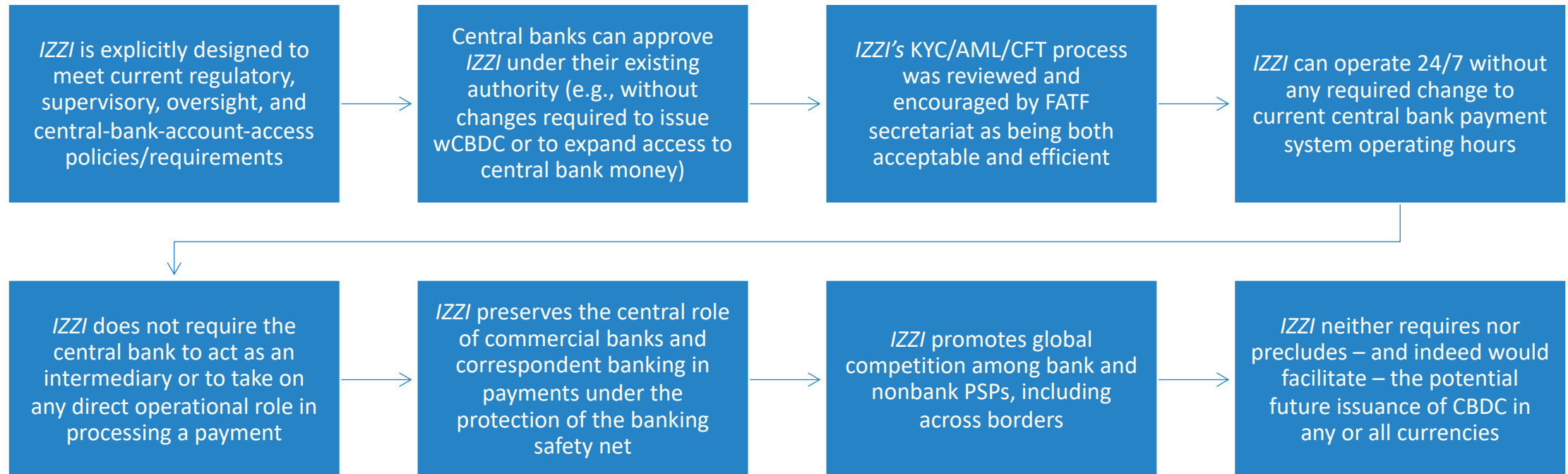
## An individual nonbank PSP perspective

---

Direct access	<p>Any PSP can access the <i>IZZI</i> infrastructure directly, including:</p> <ul style="list-style-type: none"><li>• Credit and debit card networks</li><li>• Traditional and digitized securities issuers and custodians</li><li>• Stablecoin, token, and other digitized asset issuers</li><li>• DVP and PVP settlement systems</li><li>• Central counterparties</li><li>• Remittance providers</li></ul>
Improved competitiveness	<p>PSPs can improve and lower the cost of their services with enhanced back-end interbank settlement processes, including by:</p> <ul style="list-style-type: none"><li>• Offering customers real-time, 24x7, low-cost funding/defunding.</li><li>• Eliminating the need, cost, and risk of incurring interbank credit exposures to support funding/defunding.</li><li>• Eliminating uncertainty and delays in a customer's ability to access its receipts, which can often last 1-3 business days.</li></ul>
New services	<p>PSPs can offer new innovative services that are impractical with today's back-end interbank payment infrastructure, such as:</p> <ul style="list-style-type: none"><li>• Real-time point-of-sale payments to merchants/acquirers</li><li>• Real-time issuance/trading with immediate DVP/PVP settlement</li><li>• Real-time and defined-time intraday swaps and repos</li><li>• Real-time release/transfer of physical assets against payment</li><li>• Atomic multi-currency margin collection and disbursement</li></ul>

---

# IZZI is custom-tailored for central bank approval





## *Project IZZI:* Next steps

- Payment system operators and bank and nonbank PSPs from around the world are invited to join *Project IZZI* and to participate in the development and testing of a prototype for potential adoption as the next-generation version of their current systems .
- The *IZZI* prototype for single-currency and cross-currency payments will be built on a common programmable platform with a partition for as many individual currencies that wish to test.
- The prototype will be developed with state-of-the-art technology, utilizing the beneficial elements of distributed ledger technology to maximize security, resilience, and auditability but without dependence on decentralized governance or decentralized operations.
- Upon successful testing, an operational single-currency system can be established for each currency at each jurisdiction's own pace based on jurisdictional readiness and capacity, including potentially as the next-generation version of an existing payment system.
- Individual banks/PSPs can access and use each single-currency system as direct participants, including across borders, and they can fund their proprietary and customer balances either through their own central bank accounts or through their domestic or foreign correspondents.
- In parallel, one or more operational cross-currency systems can be established to coordinate cross-currency payments across one or more pairs of operational single-currency systems.
- While each single-currency and cross-currency *IZZI* system can be built and operated independently, any could outsource its back-office switch to a third-party platform provider, if desired and permitted.
- Whether each *IZZI* system operates independently, on an outsourced switch, or on a common third-party platform that supports other *IZZI* systems, they will collectively act as a unified network of interoperable payment ledgers.
- Going forward, an ever-expanding and evolving network of financial ecosystems can integrate and interoperate with the growing *IZZI* payment infrastructure, each at their own pace.





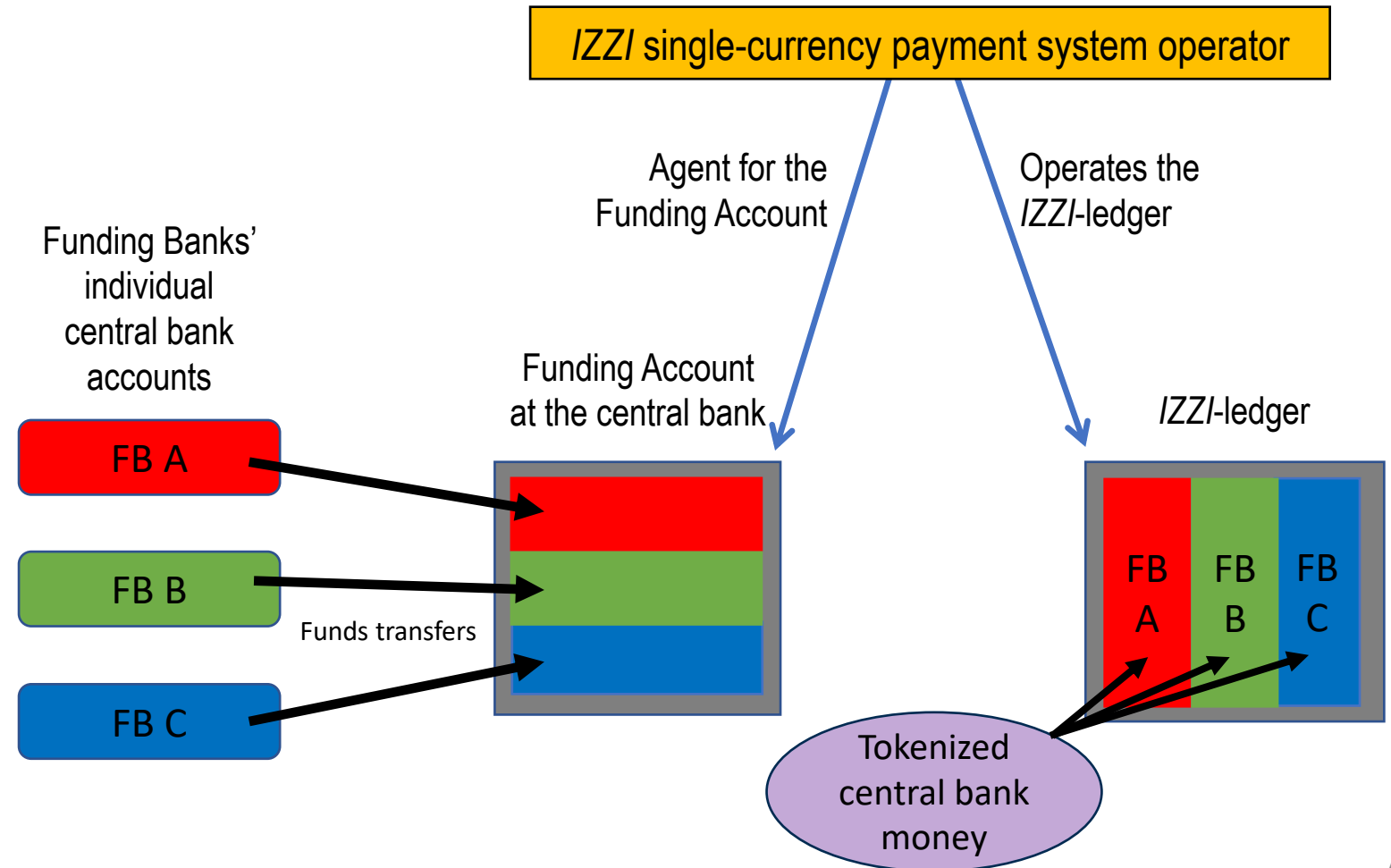
# Technical appendix: How *IZZI* works

- Tokenizing central bank and commercial bank money in a single currency
- Constructing the *IZZI* ledger and distributing tokenized commercial bank money
- Making a single-currency *IZZI* payment
- Making a cross-currency *IZZI* payment
- Centralized enforcement of KYC/AML/CFT compliance
- The *IZZI* interbank payment ecosystem

# Tokenizing central bank and commercial bank money in a single currency

A set of Funding Banks (FBs) will establish a Funding Account (FA) at the central bank and appoint the currency's payment system operator as the FA agent. The operator will also establish and be responsible for the currency's programmable ledger (or partition on a common ledger).

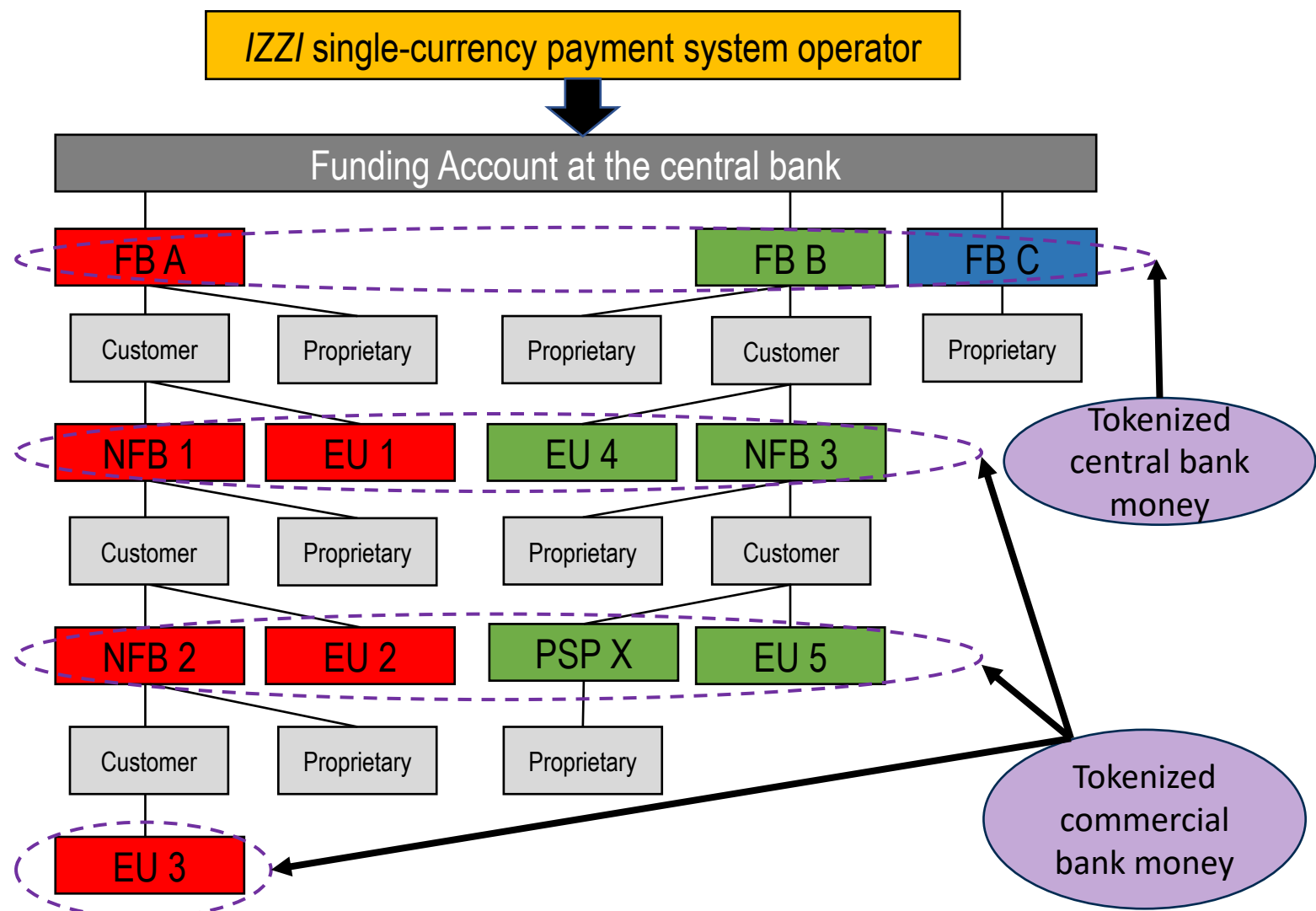
Each FB will have a balance on the ledger that represents its total claim on central bank money (i.e., its total right to receive central bank money paid out of the FA). When a FB transfers funds from (to) its individual central bank account to (from) the FA, the FB's ledger balance (i.e., its tokenized central bank money, or T-CeBM) will increase (decrease) equivalently. Each FB can then establish proprietary and customer sub-balances to create (destroy) tokenized commercial bank money that is matched 100% by the FB's T-CeBM. It does so by debiting (crediting) its proprietary sub-balance and crediting (debiting) a customer's sub-balance.



# Constructing the *IZZ* ledger and distributing tokenized commercial bank money

A FB customer's sub-balance represents the customer's demand deposit at the FB (i.e., its tokenized commercial bank money, or T-CoBM) that is matched 100% by the FB's T-CeBM.

A customer can be any type of End User (EU), (e.g., an individual, merchant, commercial firm, financial firm, or government entity), including a respondent Non-Funding Bank (NFB) or nonbank PSP. A NFB/PSP customer can then establish sub-balances for its customers (T-CoBM) that are also matched 100% by the FB's T-CeBM. If that customer is another NFB/PSP, it can, in turn, establish sub-balances (T-CoBM) for its customers that are also matched 100% by the FB's T-CeBM...and so on. In this way, T-CoBM can be created and distributed through existing correspondent relationships, with each entity on the ledger linked through a unique chain to a specific FB.



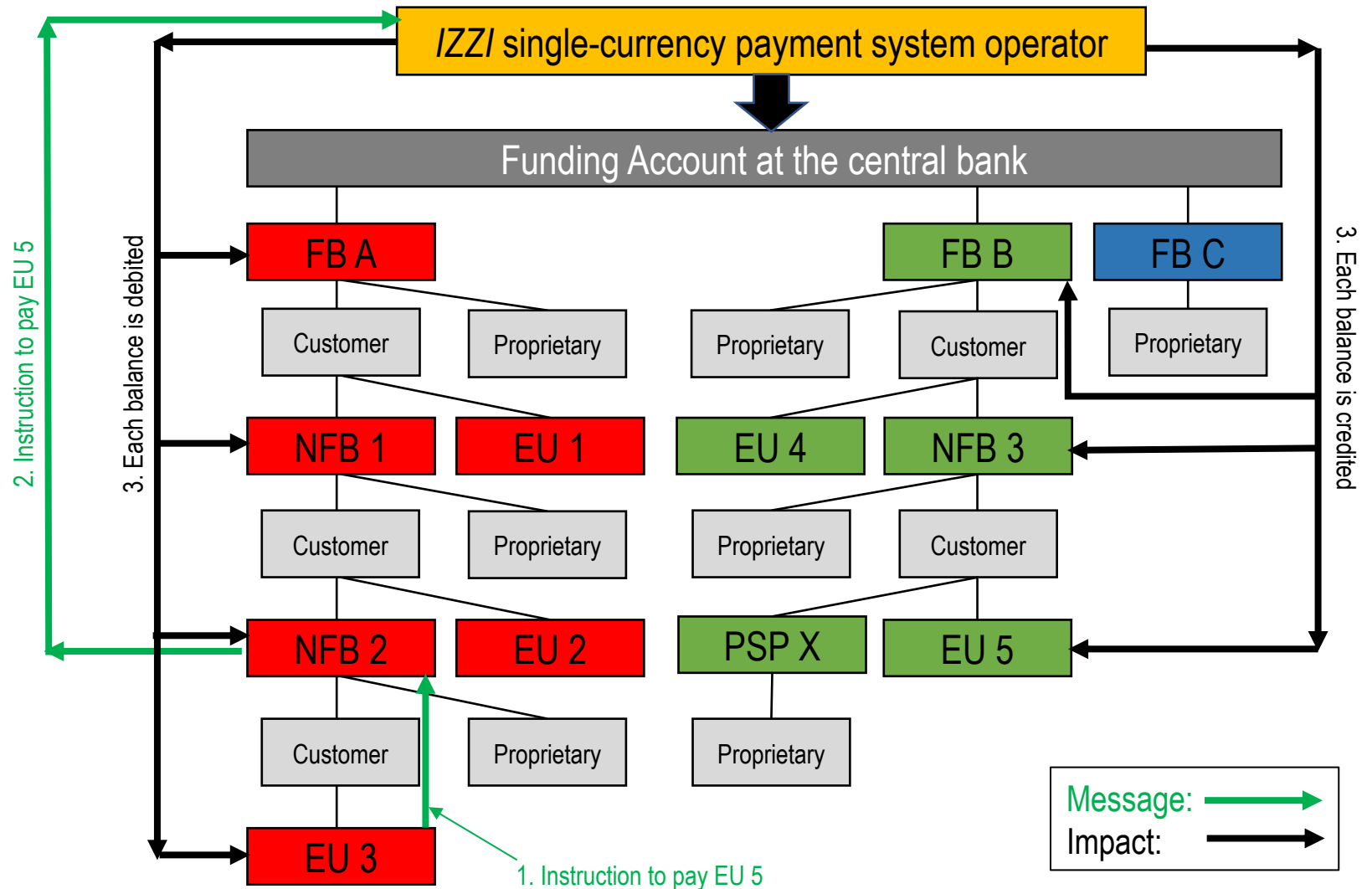
# Making a single-currency *IZZI* payment

In this example, EU 3 wishes to pay EU 5. EU 3 instructs its bank, NFB 2, to make the payment, and NFB 2 sends a PI to the *IZZI* single-currency payment system operator.

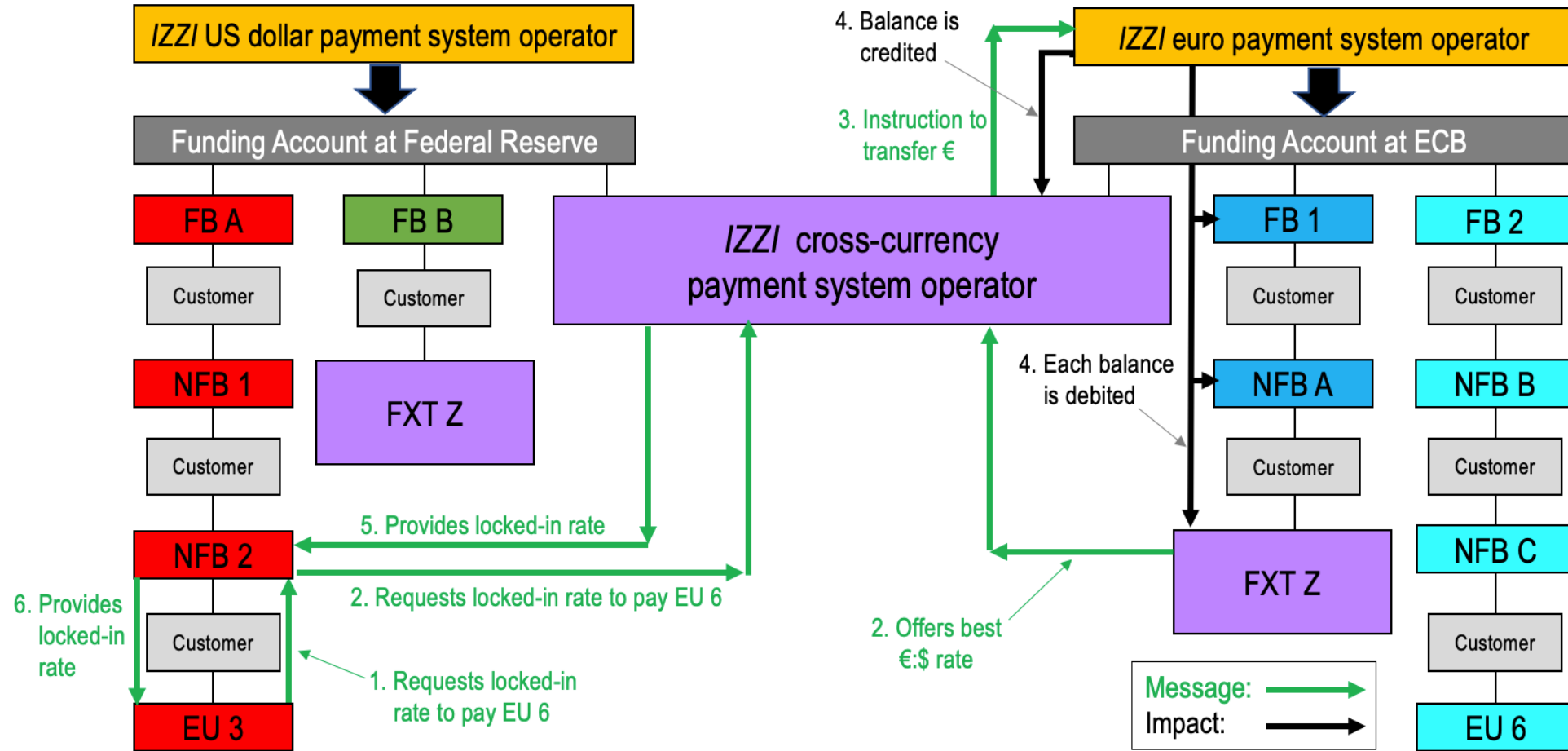
The operator determines the unique chain that connects the payer to the payee, which is NFB 2 to NFB 1 to FB A to FB B to NFB 3. The operator checks (i) the permissibility of the payment against all applicable system-wide and customized rules and restrictions of each party in the chain; and (ii) if EU 3 (or NFB 2) has a sufficient balance on the ledger to cover the payment. If both conditions are met, all the impacted balances on the ledger are updated atomically in a single programmable operation.

The balance changes are final, immutable, auditable and made simultaneously available to all parties in the chain. EU 3 and EU 5 receive confirmation of the payment from NFB 2 and NFB 3, respectively.

**Note:** *None of the intermediaries in the chain needs to process or scan a PI.*

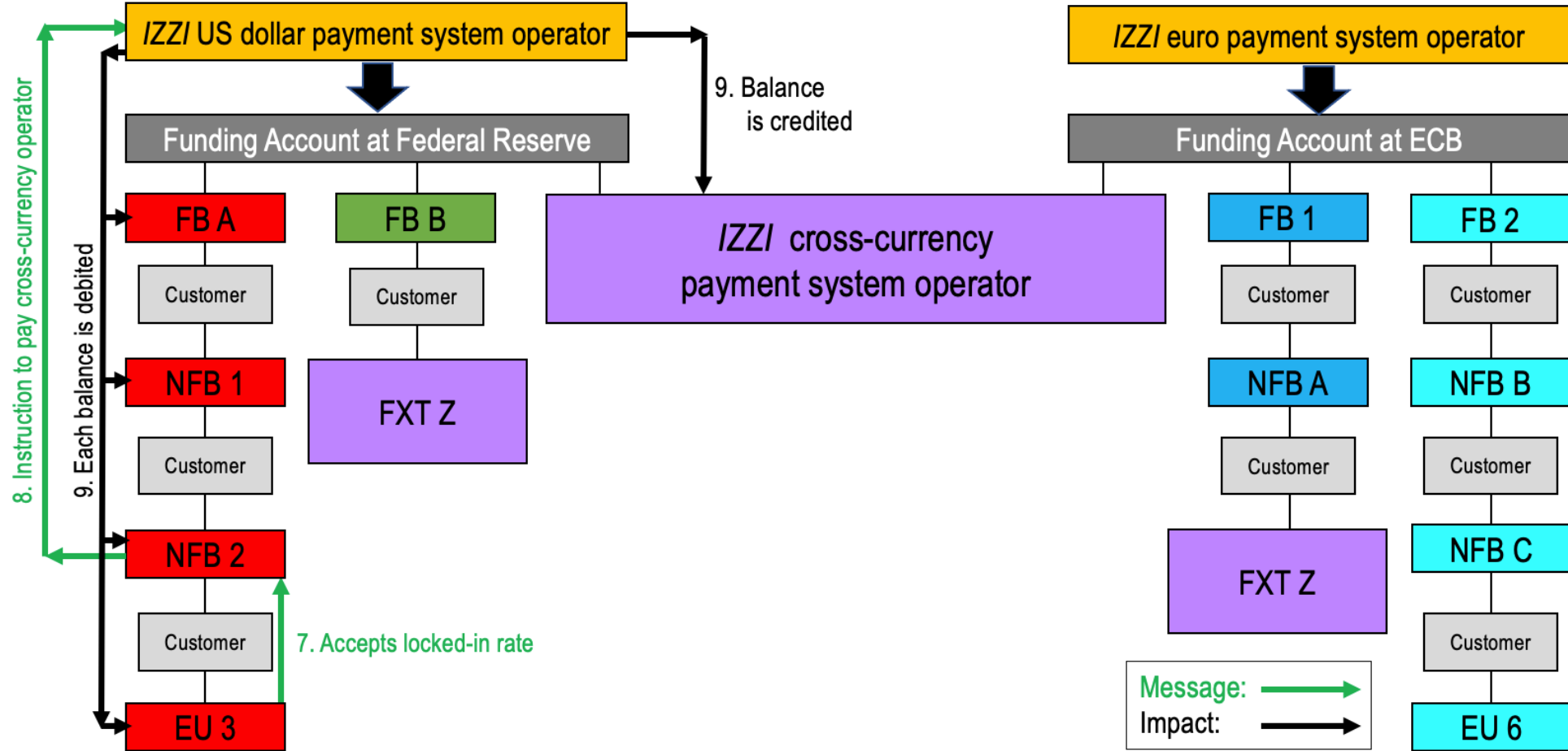


# Making a cross-currency *IZZI* payment: Part 1



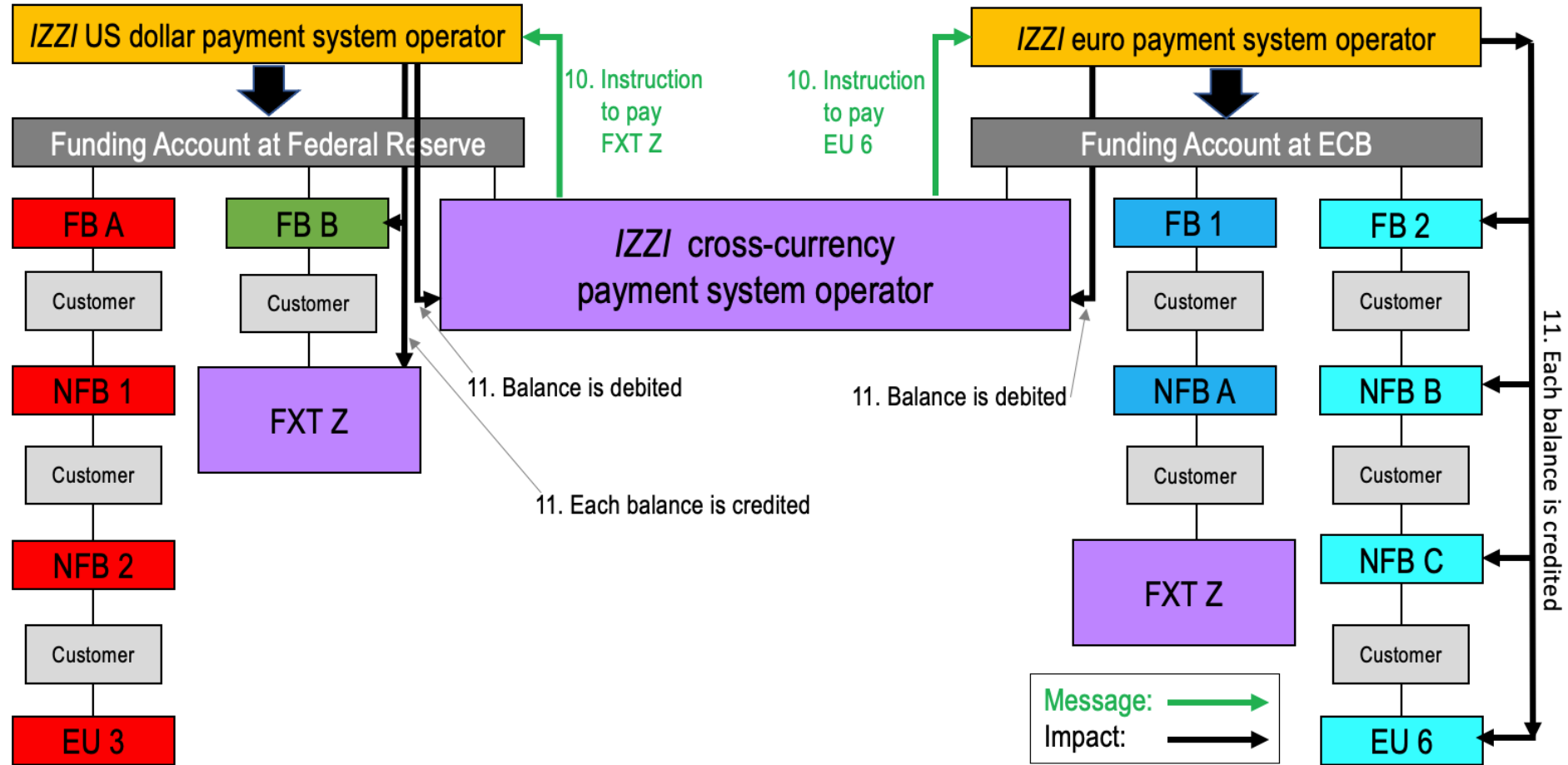
Cross-currency payments are coordinated by the *IZZI* cross-currency payment system operator (XC operator). The XC operator authorizes FX Traders (FXTs) to sell one currency for another. In this example, EU 3 has US dollars and wishes to pay euro to EU 6. NFB 2 requests a locked-in FX rate from the XC operator. The XC operator identifies FXT Z as having the best offer rate and requests each single-currency operator to verify the end-to-end permissibility of the payment across the correspondent chains that connect EU 3, EU 6, and FXT Z. If confirmed, the XC operator instructs the euro operator to transfer the euro from FXT Z to the XC operator. The XC operator then provides the locked-in rate to NFB 2 for EU 3.

# Making a cross-currency *IZZI* payment: Part 2



If EU 3 does not accept the rate, the XC operator returns the euro to FXT Z. If, as in this example, EU 3 accepts the locked in rate, NFB 2 transfers the required dollars from EU 3 to the XC operator. The XC operator's receipt of the required dollars from EU 3 serves as EU 3's authorization and confirmation of both the cross-currency payment and the FX trade. Composability then allows the XC operator to integrate the cross-currency payment and the associated FX trade into a single, atomically executed and settled transaction.

# Making a cross-currency *IZZI* payment: Part 3



By receiving and holding FXT Z's euro and EU 3's dollars as a trusted intermediary, the XC operator provides an end-to-end payment-versus-payment atomic settlement mechanism that ensures the final transfer of the payer's currency to the FX trader occurs on the payer's ledger if and only if the final transfer of the FX trader's currency to the payee takes place on the payee's ledger. Of note, this process enables any bank/PSP to offer cross-currency payment services to its customers without the need to fund, to trade, or to manage the risks of handling multiple currencies. Alternatively, if a bank/PSP participates directly in multiple single-currency *IZZI* payment systems, it can offer cross-currency payments directly at in-house FX rates without using the *IZZI* cross-currency payment system.

# Centralized enforcement of KYC/AML/CFT compliance

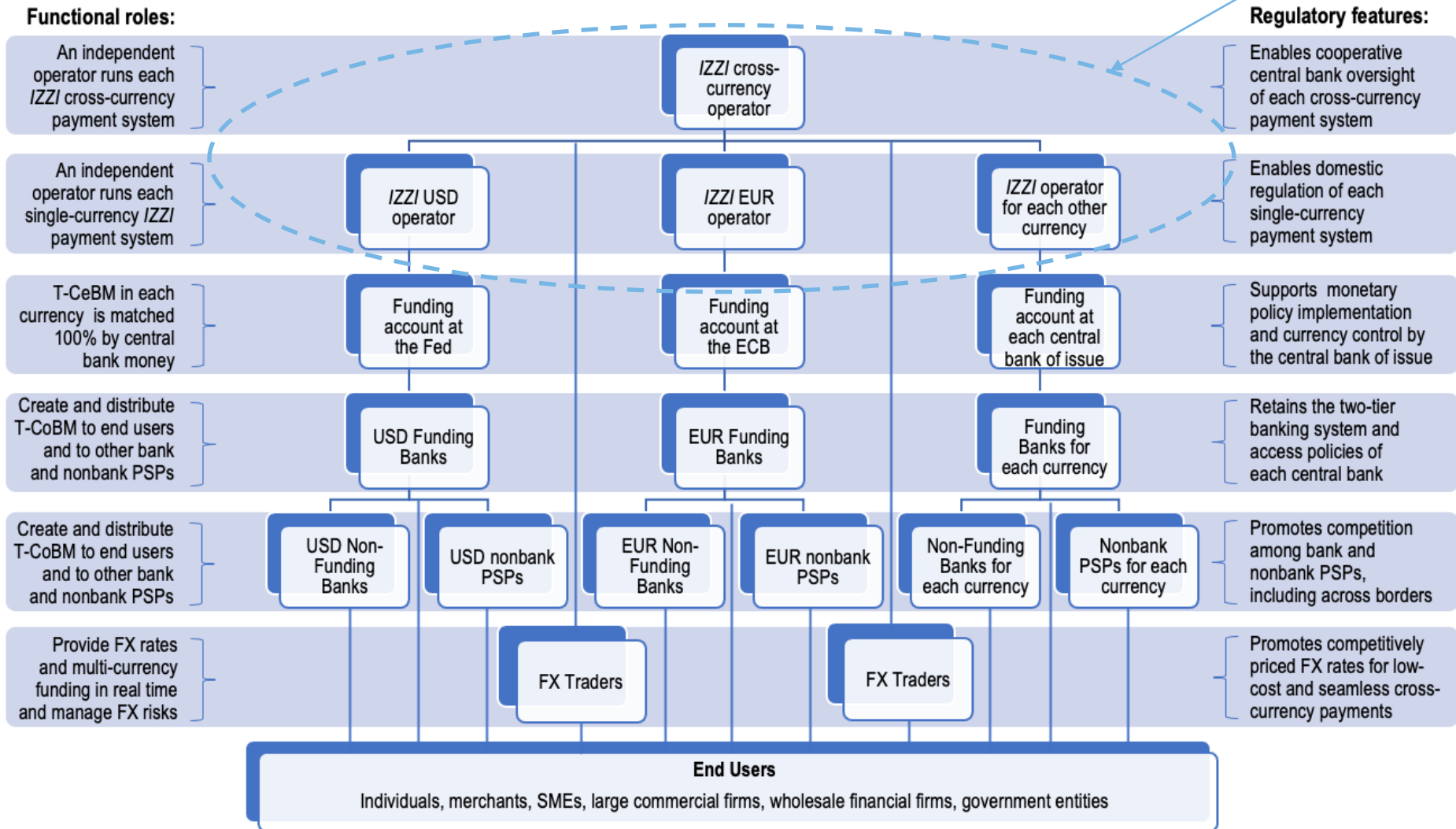
- The programmable payment process provides real-time, on-ledger enforcement of all applicable system-wide and bank/PSP-customized rules and restrictions on behalf of every party in the correspondent chain between payer and payee.
  - Each bank/PSP remains solely responsible for determining and for updating as necessary its customized rules and restrictions.
  - Each bank/PSP is also responsible for providing the single-currency operator with its customized payment rules and restrictions and for providing the operator with updates as necessary.
- Each single-currency operator will establish and update as necessary a system-wide minimum identity standard (i.e., a set of identity fields) for all payments in its currency.
  - The minimum identity standard will be set to enable on-ledger screening against all system-wide and bank/PSP-customized rules and restrictions.
  - The minimum identity standard can differ by currency.
  - Each bank/PSP must pre-validate and make available in real time the required identity information for each currency for which its customers wish to send or receive payments.
- When a single-currency or cross-currency payment is initiated, the programmable operation will:
  - Identify all banks/PSPs in the correspondent chain across all relevant currency partitions/ledgers that connects the payer to the payee (and to the FX trader(s) for a cross-currency payment).
  - Access the payer's and payee's identity information.
  - Screen and condition settlement upon verification of the end-to-end permissibility of the payment against all applicable system-wide and bank/PSP-customized rules and restrictions on each currency's partition/ledger.
- Most notably, no bank/PSP in the correspondent chain needs to screen either a single-currency or a cross-currency payment instruction.



# The *IZZI* interbank payment ecosystem

Summary of the functional roles and regulatory features of the entities in the ecosystem of the *IZZI* interbank payment infrastructure

The *IZZI*-based network of interoperable payment ledgers





**IZZI™**

Contact:

[info@izzi.global](mailto:info@izzi.global)

*IZZI, Inc*

Copyright © 2025, *IZZI, Inc*