



POLICY REPORT · JULY 2026

From Friction to Flow 2.0

Leveraging Technology and Smart Regulation to Unlock
SME Cross-Border Payments: **Case Studies**

APPENDIX 2

Reform experiences to fuel cross-border payments

Each case identifies a specific source of cross-border payment friction and shows the regulatory or infrastructure design used to reduce it, while preserving the control that made the friction defensible in the first place. The table summarizes the thirteen cases by Index pillar; full narratives follow.

PILLAR	CASE	REFORM	LESSON LEARNED
1 · Compliance	Argentina	Dismantling the “cepo”: import payment waiting period cut from 30 days to zero (Apr 2025); MiPyMEs gained sight-payment rights. A 90-day cross-restriction was reinstated in Sep 2025.	<i>Make foreign exchange access predictable.</i>
1 · Compliance	Brazil	Law 14,286/2021 consolidated decades of FX instruments into one statute; Art. 28 repealed 15 instruments in full, Resolution BCB 277 revoked 47 more.	<i>Simplify the legal architecture.</i>
1 · Compliance	Indonesia	POJK 8/2023 permits CDD reliance on supervised third parties — including foreign ones — with liability staying with the relying institution.	<i>Reuse verification without transferring responsibility.</i>
2 · Technology	Pakistan	The Single Window fused customs declarations and the FX payment leg into one digital chain, replacing consignment-level forms with a standing banking profile.	<i>Integrate banks and eliminate the redundant document, not merely digitise it.</i>
2 · Technology	European Union	Regulation 2024/886 mandates universal instant euro transfers at no premium, free Verification of Payee, and daily customer screening in place of per-transaction checks.	<i>Mandate reach and common safeguards where voluntary interoperability stalls.</i>
2 · Technology	AU · KR · MY · SG	Project Mandala encoded jurisdiction-specific rules into machine-readable checks, with cryptographic compliance proofs travelling with the payment.	<i>Make regulatory requirements machine-readable and compliance evidence portable.</i>
3 · Innovation governance	Singapore	A staged AI governance stack: FEAT (2018), Veritas, 2025 AI risk-management consultation, 2026 MindForge toolkit, and the SAFR runtime-safeguards white paper.	<i>Specify progressively; govern the action, not only the model.</i>
3 · Innovation governance	Multi-jurisdiction	Stablecoin market cap ~US\$320B (May 2026), but filtered real-economy payments are ~US\$350–550B — under 1% of global flows.	<i>Fixing the settlement leg does not fix the payment chain.</i>
4 · Identity	India	Aadhaar e-KYC, video KYC (V-CIP), and the Central KYC Registry made identity a legally valid, reusable basis for remote onboarding.	<i>Digitising identity removes presence; reusing it removes duplication.</i>
5 · Interoperability	Chile	Two-phase ISO 20022 migration of the LBTR system (Nov 2024, Sep 2025), completed ahead of the global SWIFT deadline.	<i>Adopting the standard is not the same as using it.</i>
5 · Interoperability	Nigeria	FX Code and electronic matching, ISO 20022 National Payment Stack, simplified low-value PAPSS documentation, and remote diaspora onboarding (NRBVN).	<i>Reform every layer, or the friction simply moves.</i>
5 · Interoperability	India	UPI internationalisation via FEMA liberalisation, the UPI–PayNow linkage and Nexus membership, plus PA-CB licensing for cross-border aggregation.	<i>A rail is not a corridor; rules, connection and intermediaries must all align.</i>
6 · Competition	UK · Singapore · Brazil	Opening direct settlement and instant-payment access to non-bank providers, ending banks’ gatekeeper position — conditional on authorisation and resilience.	<i>Make access depend on function and risk, not on charter.</i>

1 · Argentina: dismantling the cepo and freeing import payments

LESSON: MAKE FOREIGN EXCHANGE ACCESS PREDICTABLE.

Argentina entered 2025 with a highly restrictive foreign exchange regime. The cepo combined import approvals, mandatory payment schedules, restrictions on access to the official foreign exchange market and transaction-specific conditions and limits. Payment friction was a policy tool, not simply an administrative by-product.

WHAT ARGENTINA DID

The unwinding came in stages.

The import approval layer went first. SIRA was replaced in December 2023 by SEDI, a declaration-based regime that removed the SIRA economic-approval mechanism administered by the Secretariat of Commerce while leaving ordinary customs, tax, sanitary and other controls intact.¹ SEDI itself was repealed in February 2025, eliminating the separate pre-import statistical filing.²

The payment regime opened next. Communication “A” 8226 was issued by the Central Bank on 11 April 2025 and took effect on 14 April.³ It formed part of phase three of the government’s economic programme, launched alongside a new USD 20 billion IMF arrangement and other external financing intended to strengthen reserves and the Central Bank balance sheet.⁴

For goods registered with customs from 14 April 2025, the waiting period for access to foreign exchange fell from 30 days to zero. Earlier entries remained subject to the old schedule. MiPyMEs gained access to sight payments for qualifying goods shipped from origin from that date, while advance-payment limits for capital goods were also relaxed.⁵

For services supplied or accrued from 14 April, payments to unrelated counterparties became eligible from the date of supply or accrual. Payments to related counterparties remained subject to a 90-day delay.⁶

Resident individuals were again allowed to access the official foreign exchange market to purchase foreign currency for savings or deposits without prior BCRA approval, and the USD 200 monthly limit was removed. Several transaction conditions remained, including account-based settlement, registration and evidence of income or assets consistent with the purchase.⁷

Companies also regained access to foreign exchange to remit dividends to non-resident shareholders, although only for distributable profits from audited financial years beginning on or after 1 January 2025.⁸

The wider package eliminated the dólar blend export settlement mechanism and introduced a managed exchange-rate band initially ranging from ARS 1,000 to ARS 1,400 per dollar, with the floor and ceiling moving one per cent per month in opposite directions.⁹

The IMF’s first review in July 2025 concluded that the transition to greater exchange-rate flexibility and the easing of most foreign exchange restrictions had proceeded smoothly.¹⁰

Legacy obligations remained on a separate track. In April 2025 the Central Bank approved BOPREAL Series 4, up to USD 3 billion, to address retained dividends generated through 2024, specified related-party debt service and older commercial debts.¹¹

OUTCOMES AFTER THE REFORM

Imports rose sharply in 2025. Goods imports reached USD 75.8 billion, up 24.7 per cent from 2024, driven primarily by a 30.5 per cent rise in volumes. Consumer-goods imports increased 54.0 per cent, capital goods 51.3 per cent and passenger vehicles 97.6 per cent.¹²

These are outcomes after reform, not estimates of its causal impact. Import procedures, foreign exchange access, the exchange rate and domestic demand all changed during the year.

PRESSURE AND SELECTIVE RE-TIGHTENING

The framework was tested within months. Following the Buenos Aires provincial election on 7 September 2025, the peso moved to the top of the exchange-rate band. The Central Bank sold USD 53 million on 17 September, USD 379 million on 18 September and USD 678 million on 19 September, or USD 1.11 billion over three sessions.¹³ Gross reserves stood at USD 39.8 billion after the first intervention.¹⁴

The government then acted on both dollar supply and demand. On 22 September it temporarily reduced export duties to zero on specified agricultural products, conditional on rapid settlement of export proceeds. The USD 7 billion quota was exhausted within days.¹⁵

On 26 September, Communication “A” 8336 reinstated a 90-day cross-restriction for individuals accessing the official FX market for external asset formation. The measure did not restore the broader cepo or impose a new dollar-purchase cap. It reintroduced one important restriction that had been removed in April.¹⁶

Additional U.S. bilateral support followed. In October 2025 the U.S. Treasury established a swap facility of up to USD 20 billion with the Central Bank.¹⁷ Argentina drew USD 2.5 billion in October and repaid it in December; a separate transaction supplied USD 872 million against SDRs.¹⁸

The exchange-rate band was subsequently redesigned. From 1 January 2026, both the floor and ceiling began moving each month by the latest published monthly inflation rate, with a two-month lag, replacing the previous one-per-cent adjustment rule.¹⁹ By early 2026 the Central Bank had returned to net purchases of foreign currency.²⁰

The reintroduced cross-restriction persisted. In February 2026 Central Bank sources indicated that its removal for individuals was not under consideration, while remittances of dividends from financial years before 2025 remained restricted.²¹ Communication “A” 8417 of April 2026 extended the cross-restriction to certain transfers of foreign currency to accounts abroad while liberalising other parts of the export settlement regime.²²

LESSONS

Argentina shows that leaving exchange controls is fundamentally a sequencing problem. The government first removed the import approval regime, then shortened payment delays, and then shifted to a managed exchange-rate band. A dated cut-over gave firms a clear transition point.

The reform also treated smaller firms differently. MiPyMEs gained access to sight payments that larger firms did not receive, reducing one source of disproportionate burden on small importers.

Separating legacy obligations from current transactions was equally important. BOPREAL kept old dividend and commercial-payment claims from immediately entering the spot foreign exchange market.

The September episode provides the main qualification. Exchange-rate liberalisation remains vulnerable when reserve buffers are thin. Defending the regime required reserve sales and was followed by accelerated export settlements, a selective re-tightening of FX rules and additional external support.

The deeper lesson is institutional. Argentina did not reverse the April 2025 liberalisation wholesale. But important access conditions remained capable of being changed quickly through BCRA communications. For firms, therefore, the relevant question is not only how open the foreign exchange regime is today, but how rapidly the rules governing payment can change when reserve pressure returns.

2 · Brazil: legal consolidation of the foreign exchange regime

LESSON: SIMPLIFY THE LEGAL ARCHITECTURE.

Brazil’s 2021 foreign exchange reform was less a liberalization than a legal consolidation. Law 14,286 of 29 December 2021 replaced a fragmented body of foreign exchange and capital-flow rules with a single framework statute.²³

Brazil was not opening a closed regime. The free foreign exchange market had been consolidated in 2005, and mandatory conversion of export proceeds ended in 2008.²⁴ The 2021 law instead reduced legal fragmentation, codified broad principles and shifted much of the operating detail to Central Bank regulation.

WHAT BRAZIL DID

The law entered into force on 30 December 2022.²⁵ The Central Bank completed the principal implementing framework immediately thereafter through Resolutions BCB 277–281, dated 31 December 2022, covering the foreign exchange market, foreign capital and reporting, Brazilian capital abroad, residency definitions and investment conversions.^{26,23}

The scale of consolidation is visible in the repeal provisions. Article 28 of Law 14,286 repealed fifteen instruments in full and specified provisions of numerous others, including legislation dating from the 1930s and 1940s.²⁷ At the regulatory level, Article 86 of Resolution 277 revoked 47 instruments.²⁸

The substantive framework is comparatively simple. Foreign exchange transactions may be carried out freely, without a statutory value limit, subject to legislation, National Monetary Council guidelines and Central Bank regulation, with exchange rates freely negotiated between authorised institutions and customers.²⁹ Transactions must pass through institutions authorised by the Central Bank.³⁰ Customers are responsible for classifying the purpose of transactions, while authorised institutions must provide guidance and technical support where needed.³¹

The law also facilitates cross-border business. Banks may execute payment orders in reais to and from abroad through accounts held by appropriately regulated foreign institutions.³² Non-resident real accounts generally receive the same treatment as resident accounts, subject to Central Bank requirements.³³ Within this framework, foreign capital is accorded the same legal treatment as national capital on equal terms.³⁴

Commentators have viewed the reform as moving Brazil closer to OECD practices, including by giving financial institutions greater flexibility in allocating funding raised domestically or abroad.³⁵ This is an external assessment rather than an objective stated in the statute.

CHANGES FOR FIRMS

Several reductions in regulatory friction are directly visible in the legal texts.

Payments under intellectual-property and technology contracts were simplified. Article 9 of Law 4,131 now requires proof only of income tax payment where applicable, while several legacy registration and remittance provisions were repealed.³⁶ The law also repealed provisions that had restricted or conditioned certain royalty and technology-related payments, including transactions involving foreign related parties.³⁷

Classification requirements were simplified for smaller transactions. Under Resolution 277, operations up to USD 50,000 use the shorter classification list in Annex III, while larger transactions remain subject to the more detailed Annex IV.³⁸

Foreign-currency pricing became lawful in specified domestic transactions, including certain contracts linked to foreign trade, non-residents and infrastructure concessions. Outside the statutory exceptions, foreign-currency payment clauses remain prohibited.³⁹

Settlement channels were also broadened. Resolution 277 permits the reais leg of qualifying foreign-exchange and cross-border payment transactions to be settled through authorised institutions and, in specified circumstances, payment institutions participating in the Brazilian Payment System through Pix.⁴⁰

Two smaller provisions reduce transaction costs directly. Occasional, non-professional purchases and sales of foreign banknotes between individuals up to USD 500 fall outside the law.⁴¹ Authorised institutions also may not require information or documents they already hold or can obtain from widely accessible databases.⁴²

These changes establish what firms are legally required to do. They do not by themselves establish realised reductions in compliance costs, which would require firm-level or transaction data.

WHAT THE REFORM DID NOT DO

Brazil retained an administered foreign exchange regime. The Central Bank continues to define products and operating conditions, supervise authorised institutions and impose differentiated requirements according to transaction value, risk and other characteristics.⁴³ Anti-money-laundering and counter-terrorist-financing obligations remain in place.⁴⁴ Reporting for official macroeconomic statistics remains a statutory requirement.⁴⁵

The legal framework also preserves emergency intervention powers. Under Article 4 XVIII of Law 4,595 of 1964, the National Monetary Council may grant the Central Bank a monopoly over foreign exchange operations where a serious balance-of-payments imbalance exists or is considered imminent. Law 14,286 repealed the Council's broader rulemaking power in Article 4 XXXI but left this emergency authority intact. The Central Bank also retains powers under Article 11 III to intervene for the orderly functioning of the exchange market and balance-of-payments stability.⁴⁶

The regulatory framework continues to evolve. Resolution 277 has been amended by Resolutions 337 of 2023, 401 of 2024, 521 of 2025 and 574 of 2026. The 2025 amendments brought specified virtual-asset services within the foreign exchange framework, while Resolution 574 further amended reporting requirements; reporting on relevant transactions begins in November 2026.⁴⁷

LESSONS

Brazil shows the value of consolidating decades of overlapping rules into a short framework statute. The reform did not eliminate regulation; it reduced legal fragmentation and moved operating detail into a regulatory framework that can be updated without reopening the statute.

That flexibility has costs. The bill spent more than two years in Congress, the law had a one-year implementation period, and much of the practical detail emerged through consultations and implementing resolutions.⁴⁸ Consolidation therefore delivers predictability more slowly than a rapid administrative cut-over.

The broader lesson is institutional. Brazil retains substantial foreign exchange policy discretion, but routine discretion now operates within a comparatively stable statutory architecture. For firms, the relevant question is not only whether foreign exchange is available today, but how quickly the rules governing access and payment can change.

3 · Indonesia: regulated reliance on third-party customer verification

LESSON: REUSE VERIFICATION WITHOUT TRANSFERRING RESPONSIBILITY.

Customer due diligence can create duplicative costs in cross-border finance when several institutions verify the same customer independently. Indonesia offers one model for reducing that duplication without formally recognising another country's AML regime.

Under POJK 8 of 2023, an OJK-supervised financial services provider may use identification and verification results already performed by a third party for a prospective customer who is already that party's customer.⁴⁹ The model is therefore regulated reliance, not mutual recognition.

WHAT INDONESIA DID

POJK 8 of 2023 replaced the earlier 2017 framework, as amended in 2019, and applies across OJK-supervised financial services providers, including banks, securities firms, lending platforms and financial technology providers.⁵⁰

Article 46 permits a provider to use identification and verification results produced by another party.⁵¹ But responsibility remains with the relying institution.⁵² It must still understand the purpose and intended nature of the relationship and meet the customer and beneficial-owner identification and verification requirements referenced in the regulation.⁵³

Reliance is subject to five main safeguards. The provider must have a written agreement with the third party; obtain the relevant identification and verification information directly and immediately; ensure supporting documents can be supplied promptly; establish that the third party is subject to AML, CFT and counter-proliferation requirements and competent supervision; and consider the risk of the country in which the third party is located.⁵⁴

Reliance on a third party located in a high-risk country is more restricted. It is permitted only within the same financial conglomerate, where group-wide CDD, record-keeping and AML controls meet FATF standards and are subject to competent supervision.⁵⁵

The rule expressly excludes outsourcing and agency relationships.⁵⁶ That distinction matters. Article 46 concerns reliance on work performed by another institution for its own customer. Separate provisions govern the use of third-party technology or systems to perform verification on behalf of the provider.⁵⁷

Breaches of the Article 46 requirements can trigger administrative sanctions, including warnings, fines and restrictions on business activities.⁵⁸

A narrower rule applies to beneficial ownership. Where another financial services provider acts for a beneficial owner, verification may in specified circumstances rely on a written confirmation from that provider. For foreign providers, the applicable AML framework must be at least equivalent to the Indonesian requirements; otherwise full identification and verification is required.⁵⁹

WHAT THE MODEL ACHIEVES

The regulatory gain is straightforward. An OJK-supervised institution does not necessarily have to rebuild an identification and verification record from zero when another supervised institution has already performed the work. It can use those results, provided the Article 46 safeguards are satisfied.

But the rule does not transfer responsibility or eliminate CDD. The relying institution remains accountable for compliance and must be able to obtain the underlying information and documents. Indonesia has therefore reduced potential duplication while keeping regulatory responsibility with the institution establishing the customer relationship.

There is no evidence in the cited sources on uptake or realised savings. They do not show how frequently institutions use Article 46 or how much it reduces onboarding time or cost.

LIMITS

The most important limitation lies outside the OJK framework.

Non-bank payment and money-changing providers fall under a separate Bank Indonesia supervisory regime. Bank Indonesia Regulation 10 of 2024 replaced the previous AML/CFT regulation for institutions under BI supervision.⁶⁰ The specific third-party reliance provisions of that regulation have not been established here and should not be inferred from POJK Article 46.

This distinction matters because FATF continues to rate Indonesia Largely Compliant with Recommendation 17 on third-party reliance. The outstanding deficiency concerns non-bank payment and money-changing providers, for which FATF found no specific obligation to ensure that a third party within the same financial group applies record-keeping requirements and maintains an AML/CFT programme.⁶¹ This is a weakness in the broader Indonesian framework, but not evidence of a deficiency in OJK Article 46 itself.

A second limitation concerns beneficial ownership. FATF continues to identify inconsistencies in Indonesia's definition and verification requirements for beneficial owners.⁶² Reliance cannot fully solve weaknesses in the underlying information being relied upon.

Indonesia's June 2026 FATF follow-up report upgraded Recommendation 6 to Compliant. It continued to report Recommendation 17 as Largely Compliant and stated that Indonesia would no longer report back under the fourth-round follow-up process.⁶³

LESSONS

Indonesia shows that cross-institution CDD reliance does not require mutual recognition between governments. A jurisdiction can permit reuse unilaterally and manage the risk through conditions on the relying institution and the third party.

Three design features stand out.

First, liability stays with the relying institution. Reliance does not become delegation of regulatory responsibility.

Second, the rule is conditional on trust that can be verified: supervision of the third party, access to supporting records, country-risk assessment and, for high-risk jurisdictions, group-wide controls.²²

Third, reliance should be distinguished from outsourcing. Reusing verification performed by another regulated institution is different from hiring a vendor to perform verification, and Indonesia regulates the two separately.

The model is therefore best understood as regulated reuse of CDD work, not recognition of a foreign AML regime. Its potential value is lower duplication without weakening supervisory accountability. Its main implementation challenge is consistency across regulators and sectors, particularly where cross-border payments fall outside the OJK framework.

4 · Pakistan: integrating the payment leg into the single window

LESSON: INTEGRATE BANKS AND ELIMINATE THE REDUNDANT DOCUMENT, NOT MERELY DIGITISE IT.

Most trade single windows digitise customs declarations, permits and certificates while leaving foreign exchange documentation with banks. Pakistan went further. Its Single Window links traders, Customs and commercial banks acting as Authorized Dealers through a common digital process.

The key reform was narrow but important. For traders using banks integrated with the Pakistan Single Window (PSW), the old consignment-level Electronic Import Form and Electronic Form-E were replaced by electronic banking profiles and real-time data exchange between banks and PSW.⁶⁴

WHAT PAKISTAN DID

The Pakistan Single Window Act, 2021 established the legal framework and designated Pakistan Single Window Company as the system's operating entity. It also requires Customs and scheduled government agencies to align their procedures and information requirements with PSW.⁶⁵

Before PSW, traders generally had to obtain an EIF or EFE from an Authorized Dealer before filing the relevant customs declaration. Under PSW, the trader instead associates a bank account with its PSW profile and the bank verifies the relationship electronically. Financial instruments such as letters of credit, advance-payment arrangements and collection or contract arrangements can then be associated electronically with customs declarations. Open-account transactions do not require a financial instrument.⁶⁶

This does not eliminate the underlying banking or trade-finance relationship. It removes the separate consignment-level EIF/EFE step for transactions processed through integrated banks.

The State Bank amended its Foreign Exchange Manual accordingly. FE Circular No. 05 of 2021 revised the export rules to remove the Electronic Form-E requirement for exports through PSW.⁶⁷ Chapter 13 on imports similarly provides that functions performed and information exchanged through EDI with PSW are treated, for foreign exchange purposes, as having been performed by the Authorized Dealer itself.⁶⁸

That provision is central to the reform: electronic data exchange legally substitutes for a separate bank document.

WHAT CHANGED FOR FIRMS

For covered transactions, a recurring bank-document step was replaced by a standing banking profile and electronic association of payment information with the customs declaration. Information can move in real time among the trader, Authorized Dealer, Customs and State Bank.⁶⁹

The system is now operating at substantial scale. For FY2024/25, PSW reported more than 93,000 subscribers, 1.25 million trade declarations and 797,000 licences, permits, certificates and other documents processed through the system. It also reported 173 business processes digitised and 104 redundant processes eliminated.⁷⁰

PSW also reports larger economic gains, including transaction-time reductions exceeding 50 per cent and expected annual trade-transaction-cost savings of about USD 430 million.⁷¹ These figures should be treated cautiously. They are PSW estimates rather than independently measured causal effects. Likewise, Pakistan's improvement in the UN Global Survey on Digital and Sustainable Trade Facilitation reflects reforms across government and cannot be attributed to PSW alone.⁷²

The same infrastructure also supports compliance. Pakistan's trade-based money-laundering framework predates PSW: the State Bank introduced it in 2019 and revised it in 2025.⁷³ Under PSW-based import processing, Authorized Dealers remain responsible for customer due diligence and other controls under that framework.⁷⁴ PSW therefore digitises the transmission and application of existing controls rather than replacing them.

LIMITS

Implementation remains incomplete across government.

PSW's FY2025/26 monitoring report records 32 government agencies integrated into the system against an overall target of 77.⁷⁵ PSW's submission to the UNECE Single Window Repository identifies several reasons for slow integration: agencies still operating manually, uneven technical capacity, frequent personnel transfers and delays in securing institutional approval to integrate.⁷⁶

Bank coverage is more advanced but still matters. The State Bank's import rules retain the EIF process for banks that are not integrated with PSW, meaning the document step has not disappeared universally.⁷⁷

Independent research also suggests that digitisation has not removed all trade frictions. Survey-based research published in 2025 found that users generally viewed PSW positively but still reported usability and implementation problems, while other research identified continuing gaps in inter-agency coordination, risk management and customs practices.⁷⁸

The reform should therefore be understood as an infrastructure and process reform, not evidence that Pakistan has eliminated trade or foreign exchange controls.

LESSONS

Pakistan offers three useful design lessons.

First, put banks inside the single window. Digitising customs forms alone leaves a major source of trade friction untouched if traders must still complete a separate bank process before filing.

Second, change the regulation as well as the technology. PSW could remove the EIF/EFE step because State Bank rules gave electronic data exchanged through the platform legal effect. Without that regulatory change, the platform could have added another digital channel without eliminating the old requirement.

Third, reuse data rather than digitising the same form. The main innovation is not an electronic EIF. It is replacing a consignment-level form with a reusable banking profile and transaction data exchanged directly between institutions.

The remaining challenge is interoperability across the full government ecosystem. The system becomes more valuable as banks and regulatory agencies join it, but integration requires institutional change as much as technology.

The broader lesson is that a single window can reach beyond customs into the payment leg. But its effect depends on the rules built around it. The same infrastructure can make legitimate trade faster while allowing banks and regulators to apply foreign exchange, AML and other controls more systematically.

5 · European Union: making instant euro payments universal and safer

LESSON: MANDATE REACH AND COMMON SAFEGUARDS WHERE VOLUNTARY INTEROPERABILITY STALLS.

SEPA had already harmonised euro credit transfers across Europe, and the SEPA Instant Credit Transfer scheme had operated since November 2017. But instant payments remained voluntary, unevenly available and sometimes more expensive than ordinary transfers.⁷⁹

Regulation (EU) 2024/886 of 13 March 2024 changed that model by making instant euro transfers a required service for payment service providers that already offer euro credit transfers.⁸⁰

WHAT THE EU DID

Implementation is staggered. For euro area providers, the requirement to receive instant euro transfers, and the prohibition on charging more for them than for comparable standard transfers, applied from 9 January 2025. The requirement to offer sending, and to provide verification of payee, applied from 9 October 2025. Providers in non-euro area member states follow from 9 January 2027 for receiving and 9 July 2027 for sending and verification of payee, with electronic money institutions and payment institutions on their own dates, and a final deadline of 9 June 2028 for sending outside business hours from accounts denominated in national currency.⁸¹

The core obligation is simple. A provider that offers the sending and receiving of euro credit transfers must also offer the sending and receiving of instant euro credit transfers.⁸² Charges for instant transfers may not exceed charges for other credit transfers of corresponding type.⁸³

Verification of payee adds a fraud control layer. Before a euro credit transfer is authorised, the payer's provider checks whether the payee name supplied by the payer corresponds to the account identifier held by the payee's provider, and returns a result of match, close match, no match or other. The service applies to both standard and instant euro credit transfers and must be provided to the payer free of charge.⁸⁴

The regulation also changes sanctions screening. Rather than screening each instant payment individually against targeted financial restrictive measures, providers offering instant credit transfers must verify periodically, and at least daily, whether any of their payment service users are subject to those measures. The purpose is to stop transaction by transaction screening from obstructing near-instant execution.⁸⁵

On the infrastructure side, the Eurosystem itself offers a verification of payee service, built on solutions developed by Banco de Portugal and Latvijas Banka in accordance with the European Payments Council scheme, available both for instant payments settled in TARGET Instant Payment Settlement and for SEPA credit transfers.⁸⁶

WHAT CHANGED

The reform removes three barriers to wider instant payment adoption: incomplete reach, premium pricing and uncertainty over the identity of the payee.

For SMEs, this means a euro payment to a supplier elsewhere in the covered area can be sent around the clock, settle within seconds and cost no more than the equivalent standard credit transfer. The payer also receives a name and account check before authorising the transfer.⁸⁷

The regulation does not require customers to use instant payments. It requires providers to make them available on broadly equivalent terms to standard euro transfers.

IMPLEMENTATION CHALLENGES

The mandate required significant operational change. Providers had to support continuous processing, near-immediate settlement, liquidity management and fraud controls, rather than systems built around batch processing and banking hours. The staggered deadlines in the regulation reflect that.

Verification of payee created a second implementation challenge, and the timing was tight. The European Payments Council's verification of payee rulebook, approved in October 2024, entered into force on 5 October 2025, four days before the regulatory deadline for euro area providers.⁸⁸

Problems surfaced after launch. Following a December 2025 public consultation on urgent change requests identified by its verification of payee working group, the Council published version 1.1 of the rulebook on 16 March 2026, together with revised API specifications and a revised API security framework, all effective from 20 September 2026. A further consultation on a version 2.0 ran from April to June 2026.⁸⁹

Name matching is also inherently imperfect. Differences between registered names and trading names, spelling variations and account structures can produce close match, no match or other results even where the intended payee is legitimate. The scheme therefore has to specify matching rules and how results are communicated to payers.⁹⁰

Verification of payee addresses only one fraud mechanism. It helps detect cases where the account identifier does not correspond to the intended payee. It cannot prevent fraud where a criminal controls an account whose name correctly matches the payment instruction.

LESSONS

The EU case shows that interoperability alone may not deliver universal adoption. SEPA Instant existed for eight years before regulation imposed common reachability, pricing and implementation deadlines.

It also shows that faster payments need accompanying fraud controls, and that those controls have to be designed so they do not defeat the speed. Both the verification of payee obligation and the shift from transaction level to daily sanctions screening are attempts to hold those two goals together.

The sequencing lesson is less comfortable. The scheme rulebook underpinning verification of payee entered into force days before the legal deadline, and needed urgent amendment within months. A mandate can create reach faster than the supporting standards can mature.

For regional blocs, the broader lesson is not simply to build a faster rail. A common rulebook, common service obligations, interoperable verification and coordinated implementation deadlines can make payments across several national markets behave more like payments within one.

6 · Project Mandala: programmable compliance for cross-border payments

LESSON: MAKE DIFFERENT REGULATORY REQUIREMENTS MACHINE-READABLE AND COMPLIANCE EVIDENCE PORTABLE.

Cross-border payments face different sanctions, capital flow and reporting requirements in each jurisdiction. Compliance checks are therefore repeated across institutions and often involve manual verification.

Project Mandala tested whether some of those requirements could instead be encoded into the payment process itself. The proof of concept report was published by the BIS Innovation Hub on 28 October 2024.⁹¹

WHAT MANDALA TESTED

The first phase was a proof of concept run by the BIS Innovation Hub Singapore Centre with the Reserve Bank of Australia, the Bank of Korea, Bank Negara Malaysia and the Monetary Authority of Singapore, with significant contributions from the Bank of France and with participating commercial banks. The BIS describes the project as purely experimental and states that it does not indicate any intention by the participating banks to deploy the system.⁹²

Mandala did not harmonise national regulation. It preserved the existing framework, encoding jurisdiction-specific requirements such as sanctions screening and capital flow management measures into machine-readable rules, and maintained the model in which financial institutions remain responsible for interpreting and applying official measures.⁹³

Its decentralised architecture gives every participant a node with three components: a peer-to-peer messaging element, a rules engine and a proof engine. The rules engine determines which regulatory requirements apply to a transaction. The proof engine performs the checks and generates cryptographic evidence that they were completed.⁹⁴

The proof can then travel with the transaction. The proof of concept integrated compliance proofs both with the wholesale central bank digital currency developed in Project Mariana, deployed on a testnet, and with Swift, by embedding a compliance check identifier in an ISO 20022 credit transfer message in Swift's experimental sandbox.⁹⁵

DATA AND PRIVACY

Mandala also tested common external data sources. For basic entity information it used the Legal Entity Identifier database. For sanctions screening it connected to OpenSanctions, which consolidated the official sanctions lists of the four participating jurisdictions.⁹⁶

Privacy-preserving techniques allowed participants to demonstrate that a check had been satisfied without sharing the underlying data. Where one party held the confidential data, checks were implemented through zero-knowledge proofs. Where both parties held commercially sensitive data, they were implemented through secure multi-party computation.⁹⁷

USE CASES

The proof of concept tested two cross-border financing cases.

The first involved lending from Singapore to Malaysia. Mandala demonstrated how sanctions screening and Malaysian capital flow management requirements, including the limit on foreign currency external borrowing from unrelated non-residents, could be checked during pre-validation, with compliance proofs generated before settlement.⁹⁸ It also explored how a central bank could use the same architecture for more timely monitoring of that compliance.⁹⁸

The second involved a Korean entity financing an Australian company through the acquisition of unlisted debt securities. Mandala tested automated checks against Korean capital flow management thresholds and netting reporting requirements, together with sanctions screening.⁹⁹

These tests demonstrated technical feasibility. They did not establish realised cost or processing time savings in production. The BIS states that there is potential to reduce compliance costs but that more analysis is needed to substantiate that, and it excluded identity solutions, customer onboarding, beneficial ownership information, governance, legal liability, cybersecurity, commercial viability and full integration with real-time gross settlement and commercial bank systems from the proof of concept.¹⁰⁰

WHY IT MATTERS

Mandala demonstrates a different approach to regulatory interoperability. Rather than asking countries to harmonise their underlying rules, it creates a common technical layer capable of applying different national rules to the same transaction.

That can move compliance earlier in the payment chain. A transaction can be checked before settlement, and evidence that the required checks were completed can accompany the payment instead of each institution reconstructing the compliance process separately.

The model is most relevant where capital controls, sanctions or reporting obligations differ materially across jurisdictions.

But the proof of concept does not show that a regulator would accept another institution's cryptographic proof as satisfying its legal obligations in production. Governance, liability, data quality and regulatory recognition remain the central implementation questions, and the BIS placed the first three outside the scope of this phase.

PHASE 2

In November 2025 the BIS moved Mandala into a second phase focused on programmable compliance for digital assets and broader use cases. Phase 2 is led by the BIS Innovation Hub Singapore Centre with the Reserve Bank of Australia, the Bank of France, the Reserve Bank of India, the Central Bank of Kuwait, the Central Bank of Malaysia, Bangko Sentral ng Pilipinas and the Monetary Authority of Singapore.¹⁰¹⁵⁴

The stated focus is on evaluating potential benefits empirically, expanding the range of use cases, and assessing utility for other platforms and projects.¹⁰²

LESSONS

Mandala's main lesson is that regulatory interoperability does not necessarily require regulatory harmonisation. Different national rules can be translated into a common machine-readable compliance layer while each jurisdiction keeps its own rules.

Second, pre-validation matters. Checking regulatory requirements before settlement can avoid discovering a compliance problem only after a payment has entered the chain.

Third, proof can substitute for repeated disclosure. Privacy-preserving techniques allow one institution to demonstrate that a test was satisfied without transmitting the underlying data, which is the same problem the Indonesian reliance rule addresses through regulation rather than cryptography.

The important qualification is that Mandala remains experimental. It demonstrates technical feasibility, not a production-ready cross-border compliance regime. Its value will depend on whether regulators and financial institutions agree on governance, legal responsibility, data standards and recognition of the compliance proofs it produces.

7 · Singapore: governing AI and agentic finance

LESSON: SPECIFY PROGRESSIVELY; GOVERN THE ACTION, NOT ONLY THE MODEL.

AI in financial services is moving from models that support decisions toward systems that can take actions. Agentic systems therefore raise an additional governance question: not only whether a model performs appropriately, but what actions it is permitted to take and what controls apply before execution.¹⁰⁴

WHAT SINGAPORE DID

Singapore developed financial sector AI governance progressively. MAS introduced the FEAT principles in 2018 and subsequently worked with industry through Veritas to develop methods for assessing AI systems against those principles.¹⁰⁵ MAS then used thematic reviews and Project MindForge to translate broad principles into more operational risk management practices.¹⁰⁶

The framework has since expanded to generative and agentic AI. MAS consulted on specific AI Risk Management Guidelines in November 2025 and released the MindForge AI Risk Management Toolkit with industry in March 2026.¹⁰⁷ On 3 July 2026 the Safeguards for Agentic Finance at Runtime framework, or SAFR, was published as an industry white paper jointly developed by financial institutions and FinTechs under MAS' BuildFin.ai initiative. It proposes controls that validate, constrain and record the actions of AI agents before execution. The paper states expressly that it does not constitute regulatory guidance or supervisory expectations.¹⁰⁸

WHAT THE CASE SHOWS

Singapore demonstrates a model of progressive specification: principles first, then assessment methods, supervisory review, operational tools and more specific guidance as technology and market practice develop.¹⁰⁹ SAFR adds a further lesson for agentic finance. Governance must extend from model characteristics to the authority given to an agent and the controls around its actions at the moment it acts.¹¹⁰

The evidence is institutional rather than quantitative. The cited sources establish the governance framework and supervisory practices. They do not establish that these measures have independently reduced fraud, increased payment volumes or expanded financial inclusion.¹¹¹

8 · Stablecoins and cross-border payments

LESSON: FIXING THE SETTLEMENT LEG DOES NOT FIX THE PAYMENT CHAIN.

Stablecoins are increasingly used as dollar-denominated digital settlement assets, but their importance in cross-border payments is considerably smaller than headline transaction volumes suggest.¹¹²

WHAT THE EVIDENCE SHOWS

Stablecoin market capitalisation was around USD 320 billion at end-May 2026, and approximately 99 per cent of supply is denominated in US dollars. The BIS notes that the market remains dwarfed by the trillions of US dollars held in bank deposits.¹¹³

Most volume is not ordinary payments. Estimates of gross stablecoin transfer volume for 2025 vary widely with methodology, from roughly USD 28 trillion upward, because raw on-chain totals include bot activity, protocol mechanics such as minting and bridging, and intermediary routing. Filtered estimates of genuine real-economy payment activity are far smaller, in the range of roughly USD 350 to 550 billion, a small fraction of gross volume and well under one per cent of global payment flows.¹¹⁴

Stablecoins can nevertheless address particular cross-border frictions. Their digital settlement leg can operate continuously and without traditional correspondent bank chains.¹¹⁵ But the blockchain leg is only part of the transaction. Users still need on-ramps, off-ramps, foreign exchange conversion, liquidity and regulatory compliance. Once those costs are included, an end-to-end stablecoin transfer can cost as much as, or more than, a conventional bank transfer.¹¹⁶

THE POLICY TRADE-OFF

Dollar-pegged stablecoins can also increase currency substitution, weaken capital flow restrictions and move activity outside traditional regulatory channels, particularly in emerging markets.⁴⁸ The BIS observes that stablecoin inflows were broadly similar in economies with and without capital flow restrictions, and that blocking domestic intermediaries from handling unapproved tokens is likely to remain imperfect given bearer-like features and unhosted wallets.¹¹⁷ Regulation therefore increasingly focuses on issuer authorisation, reserve quality, redemption at par, custody, disclosure, anti-money laundering obligations and the treatment of foreign-issued tokens.¹¹⁸

WHAT THE CASE SHOWS

Stablecoins can make one part of a cross-border payment faster, but they do not remove the rest of the payment chain. Their usefulness depends on the cost and legality of entering and exiting the token, exchanging currencies and satisfying regulatory requirements.¹¹⁹

The relevant policy question is therefore not simply whether to permit stablecoins. It is how to place them inside a supervised payments and foreign exchange perimeter, and how their performance compares with alternative reforms, including fast payment interlinking and tokenised forms of regulated money.¹²⁰

9 · India: digital KYC and reusable customer identity

LESSON: DIGITISING IDENTITY REMOVES PRESENCE; REUSING IT REMOVES DUPLICATION.

Customer identification creates friction when each financial institution must collect and verify the same information independently. India addressed this through legally recognised remote verification channels and infrastructure that allows existing KYC records to be reused.¹²¹

WHAT INDIA DID

RBI rules recognise several remote identification routes, including Aadhaar-based methods where permitted, equivalent electronic documents and the Video-based Customer Identification Process, or V-CIP.¹²² V-CIP is a live, consent-based audio-visual process conducted by an authorised official and, when performed in accordance with RBI requirements, is treated as equivalent to face-to-face identification.¹²³

India also uses the Central KYC Records Registry. Where a valid record exists, a regulated entity can retrieve it using the customer's KYC identifier and consent rather than requiring the customer to resubmit the same documents, subject to updating or additional due diligence requirements where necessary.¹²⁴

WHAT THE CASE SHOWS

Digital identity removes the need for physical presence. Reusable identity removes duplication.¹²⁵ The second step is the important one. Simply digitising KYC still leaves multiple institutions repeating the same process, while a reusable registry allows verified information to move with the customer subject to consent and regulatory controls.¹²⁶

The trade-off is control. RBI retains requirements governing liveness, auditability, data security, enhanced due diligence and the circumstances in which additional verification is required.¹²⁷

This case therefore supports a narrow conclusion. Legally recognised remote verification and reusable KYC records can reduce procedural onboarding requirements. It should not be used to claim that electronic KYC alone caused India's growth in UPI or in digital finance.¹²⁸

10 · Chile: phased ISO 20022 migration

LESSON: ADOPTING THE STANDARD IS NOT THE SAME AS USING IT.

ISO 20022 provides a common format for richer and more structured payment data. Its value is not simply a new message format, but a common data standard that can support interoperability and more automated processing.¹²⁹

WHAT CHILE DID

Banco Central de Chile migrated its high-value payment system to ISO 20022 in two phases. Phase 1 went live on 25 November 2024 and Phase 2 on 8 September 2025, following a programme begun in 2022 with banks and financial market infrastructures.¹³⁰

The phased migration required changes not only at the central bank but also in participating institutions' transactional systems, operating procedures and contingency arrangements.¹³¹

WHAT THE CASE SHOWS

Common messaging standards are a prerequisite for richer data to move consistently between payment systems and institutions, but adopting the standard is not the same as using its full capabilities.¹³² CPMI has noted that Chile initially implemented elements on a like-for-like basis and that some richer ISO 20022 functionality remained for later implementation.¹³³

The practical lesson is therefore two-stage. First, migrate the system with common deadlines, testing and operating rules. Second, ensure institutions actually use the additional structured information rather than reproducing legacy messages in a new format.¹³⁴

The evidence supports interoperability and richer data as capabilities of the reform. It does not establish that Chile's migration has already lowered payment prices, reduced anti-money laundering costs or preserved correspondent banking relationships.¹³⁵

11 · Nigeria: reforming several layers of the payment chain

LESSON: REFORM EVERY LAYER, OR THE FRICTION SIMPLY MOVES.

Nigeria's recent reforms illustrate that cross-border payment friction can arise from several layers at once: foreign exchange, payment infrastructure, documentation and customer access.¹³⁶

FOREIGN EXCHANGE

The Central Bank of Nigeria introduced the Nigerian FX Code and electronic interbank matching arrangements to strengthen conduct, price discovery and transparency in the foreign exchange market.¹³⁷ These are reforms to market structure. The cited sources do not by themselves establish lower spreads or greater foreign exchange availability for smaller firms.

PAYMENT INFRASTRUCTURE

NIBSS launched the ISO 20022-based National Payment Stack as a successor to existing domestic payment infrastructure, with the first live transaction reported in November 2025.¹³⁸ Because the infrastructure is new, claims about realised effects on cross-border prices, fraud or SME payment performance would be premature.¹³⁹

REGIONAL PAYMENTS AND DIASPORA ACCESS

In April 2025 the Central Bank simplified documentation for qualifying low-value PAPSS transactions. Basic know your customer and anti-money laundering documentation applies up to USD 2,000 per month for individuals and USD 5,000 for companies, and banks may source foreign exchange for PAPSS transactions through the official market.¹⁴⁰

In May 2025 the Central Bank and NIBSS launched the Non-Resident BVN platform, enabling Nigerians abroad to obtain a Bank Verification Number remotely and use it for access to regulated financial services.¹⁴¹

WHAT THE CASE SHOWS

Nigeria's experience makes the case for multi-layer reform. A faster payment rail cannot by itself solve frictions arising from foreign exchange access, documentary requirements or customer onboarding, so Nigeria has targeted those layers separately.¹⁴²

The scale of alternative channels reinforces the point. IMF analysis estimates approximately USD 59 billion in Nigerian crypto-asset inflows between July 2023 and June 2024 and finds that Nigeria has accounted for roughly 60 per cent of stablecoin inflows into sub-Saharan Africa since 2019.¹⁴³ The IMF identifies inflation, currency depreciation, constrained foreign exchange access, remittances and payments to overseas suppliers among the drivers of that use.¹⁴⁴

The defensible lesson is not that Nigeria's reforms have already solved these frictions. It is that reforming the rail without reforming access to foreign exchange, documentation and identity leaves major sources of cross-border payment friction untouched.¹⁴⁵

12 · India: connecting currency rules, payment rails and intermediaries

LESSON: A RAIL IS NOT A CORRIDOR; RULES, CONNECTION AND INTERMEDIARIES MUST ALL ALIGN.

India's cross-border payment strategy operates through three separate layers: rules governing permissible currency transactions, links between payment systems, and regulation of payment intermediaries.¹⁴⁶

CURRENCY RULES

In January 2025 RBI amended foreign exchange regulations to widen the permissible use of rupee and foreign currency accounts in specified cross-border transactions.¹⁴⁷ The changes facilitate settlement. They do not make the rupee generally convertible.

PAYMENT RAILS

India already operates the UPI and PayNow linkage with Singapore. It also joined the multilateral Nexus initiative to establish a common framework for connecting domestic fast payment systems.¹⁴⁸

Nexus has since moved beyond its original BIS Innovation Hub phase. Nexus Global Payments was incorporated in Singapore in March 2025 by the central banks and instant payment system operators of India, Malaysia, the Philippines, Singapore and Thailand, and announced on 3 April 2025, to operationalise and manage the scheme. Bank Indonesia and the European Central Bank continued as special observers, and Indonesia joined as the sixth participating jurisdiction in 2026.¹⁴⁹

The model reduces the need for a separate technical integration between every pair of participating domestic systems. Each system connects through the common framework.¹⁵⁰

INTERMEDIARIES

RBI's Payment Aggregator Cross Border framework subjects entities facilitating qualifying import and export payments to a dedicated authorisation and compliance regime, including account, know your customer, anti-money laundering and transaction requirements.¹⁵¹

WHAT THE CASE SHOWS

A domestic instant payment system does not become an international payment system merely by connecting it to another rail. Three things must align: the transaction must be legally permissible, the systems must be technically connected, and regulated intermediaries must be able to serve the customer.¹⁵²

India's reforms illustrate all three layers. They do not establish that every cross-border UPI payment is as fast or as inexpensive as a domestic UPI transaction, and that broader claim should be avoided.¹⁵³

13 · United Kingdom and Singapore: opening payment infrastructure to non-banks

LESSON: MAKE ACCESS DEPEND ON FUNCTION AND RISK, NOT ON CHARTER.

Non-bank payment providers have historically depended on banks to reach core payment infrastructure. The United Kingdom and Singapore show how that dependence can be reduced without eliminating licensing, supervisory or operational requirements.¹⁵⁴

UNITED KINGDOM

In 2017 the Bank of England made regulated non-bank payment service providers eligible to apply for settlement accounts in the real-time gross settlement system, enabling qualifying firms to participate directly in payment systems that settle in central bank money.¹⁵⁵ TransferWise, now Wise, became the first non-bank payment service provider to participate directly in Faster Payments with an RTGS settlement account, in 2018.¹⁵⁶

The Bank framed the reform in terms of competition, innovation, diversification and financial stability.¹⁵⁷ Direct access nevertheless remained conditional on authorisation, risk management and system requirements. It was eligibility to participate, not an unconditional right to settlement access.¹⁵⁸

SINGAPORE

MAS similarly opened FAST and PayNow access to eligible major payment institutions from 2021 through an interface-based gateway.¹⁵⁹ This allowed participating non-bank payment providers to connect directly to interoperable retail payment infrastructure rather than relying exclusively on closed-loop wallet arrangements.¹⁶⁰

WHAT THE CASES SHOW

The common policy principle is provider-neutral access subject to risk controls. A firm does not need to be a bank merely because it performs payment functions, but access remains conditional on the institution being appropriately regulated and technically capable of participating safely.¹⁶¹

The cases establish that authorities can reduce mandatory dependence on bank sponsorship. They do not, without additional empirical evidence, establish the size of any resulting reduction in prices or increase in competition.¹⁶²

For cross-border policy, the narrower lesson is that domestic infrastructure designed around functional and risk-based participation rules is less institutionally dependent on incumbent bank intermediation.¹⁶³

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56. POJK 8/2023, Article 46(2). OJK identifies the treatment of outsourcing and agency relationships as a feature of the revised framework. <https://ojk.go.id/apu-ppt/id/peraturan/pojk/Pages/POJK-8-2023-.aspx>
57. POJK 8/2023, Articles 21 and 22, governing electronic and non-face-to-face verification and use of third-party hardware and software.
58. POJK 8/2023, Article 64(1), including breaches of Article 46(3), (5) and (6).
59. POJK 8/2023, Article 33(9)–(11).
60. Peraturan Bank Indonesia Nomor 10 Tahun 2024 on AML, CFT and counter-proliferation financing requirements for parties regulated and supervised by Bank Indonesia, replacing PBI 19/10/PBI/2017. <https://peraturan.bpk.go.id/Details/313425/peraturan-bi-no-10-tahun-2024> The specific third-party reliance provision of PBI 10/2024 has not been verified here.

61. FATF, Anti-money laundering and counter-terrorist financing measures: Indonesia, Enhanced Follow-up Reports, 2025 and 2026. Recommendation 17 remains rated Largely Compliant. FATF identifies the outstanding deficiency as the absence of a specific requirement for non-bank payment and money-changing providers to ensure that a third party within the same financial group applies record-keeping requirements and maintains an AML/CFT programme. <https://www.fatf-gafi.org/en/publications/Mutualevaluations/Indonesia-fur-2025.html> and <https://www.fatf-gafi.org/content/dam/fatf-gafi/fur/indonesia-fur-2026.pdf.coredownload.inline.pdf>
62. FATF, Indonesia follow-up report, 2026, Annex, Recommendation 10, identifying the lack of a consistent definition of beneficial owner and the resulting gaps in identification and verification requirements. <https://www.fatf-gafi.org/content/dam/fatf-gafi/fur/indonesia-fur-2026.pdf.coredownload.inline.pdf>
63. FATF, Indonesia, 3rd Enhanced Follow-up Report & Technical Compliance Re-Rating, June 2026. Recommendation 6 was upgraded from Partially Compliant to Compliant; Recommendation 17 remains Largely Compliant; the report states that Indonesia will not report back to Plenary under its fourth-round follow-up process. <https://www.fatf-gafi.org/content/dam/fatf-gafi/fur/indonesia-fur-2026.pdf.coredownload.inline.pdf>
64. Pakistan Single Window, Elimination of EIF and EFE, describing replacement of consignment-wise Electronic Import/Export Forms with electronic banking profiles and real-time EDI between PSW and Authorized Dealers. <https://www.psw.gov.pk/elimination-of-eif-efe>
65. Pakistan Single Window Act, 2021, Act III of 2021, promulgated 13 April 2021, available through the Pakistan Code database maintained by the Ministry of Law and Justice at <https://pakistancode.gov.pk>. The Act provides the statutory framework for PSW and requires Customs and scheduled government agencies to align their procedures and information requirements. On section 3(3) see the Research Society of International Law (<https://port.rsilpak.org/pakistan-single-window/>) and Business Recorder, 22 June 2022 (<https://www.brecorder.com/news/40181619>). The direct Pakistan Code locator for Act III of 2021 should be inserted before circulation.
66. Pakistan Single Window, Elimination of EIF and EFE, including the banking-profile and financial-instrument workflow, supported payment modes and treatment of open-account transactions. <https://www.psw.gov.pk/elimination-of-eif-efe>
67. State Bank of Pakistan, FE Circular No. 05 of 2021, Revision of Foreign Exchange Regulations on Exports: Chapter 12 of the Foreign Exchange Manual, 2 July 2021. <https://www.sbp.org.pk/epd/2021/FEC5.htm>
68. State Bank of Pakistan, Foreign Exchange Manual, Chapter 13 (Imports), providing that for all foreign exchange related purposes, functions performed and information shared through electronic data interchange with the PSW system are construed as performed by the Authorized Dealer itself. The chapter was published at https://www.sbp.org.pk/fe_manual/pdf/2020/Chp-13.pdf, which now redirects to the State Bank homepage; the current location should be confirmed through the State Bank archive at <https://archive.sbp.org.pk> before circulation. Footnotes 74 and 77 cite the same chapter.
69. Pakistan Single Window, Elimination of EIF and EFE, on real-time information exchange among traders, Authorized Dealers, Customs and the State Bank. <https://www.psw.gov.pk/elimination-of-eif-efe>
70. Pakistan Single Window, Annual Report Summary FY2024-25, reporting more than 93,000 subscribers, 1.25 million trade declarations, 797,000 licences, permits, certificates and other documents, 173 digitised business processes and 104 redundant processes eliminated. Published at <https://www.psw.gov.pk>. The direct report URL should be inserted before circulation, as these are exact numerical claims.
71. Pakistan Single Window, Transforming Trade Facilitation in Pakistan, reporting transaction-time reductions exceeding 50 per cent and expected annual trade-transaction-cost savings of approximately USD 430 million. These are PSW-reported estimates. <https://www.psw.gov.pk/knowledge-base/pakistan-single-window-transforming-trade-facilitation-pakistan>
72. UN Global Survey on Digital and Sustainable Trade Facilitation, which measures implementation across a broad range of trade-facilitation measures and institutions rather than PSW alone. <https://www.untsurvey.org/>
73. State Bank of Pakistan, FE Circular No. 04 of 14 October 2019, establishing the Framework for Managing Risks of Trade Based Money Laundering and Terrorist Financing (<https://www.sbp.org.pk/epd/2019/FEC4.htm>); FE Circular Letter No. 08 of 2025, revising the framework and requiring compliance with the revised requirements by 31 October 2025 (<https://www.sbp.org.pk/epd/2025/FECL8.htm>).
74. State Bank of Pakistan, Foreign Exchange Manual, Chapter 13, requiring Authorized Dealers to apply customer due diligence and KYC requirements in accordance with the trade-based money-laundering framework.
75. Pakistan Single Window, Annual Monitoring and Evaluation Report FY2025-26, reporting 32 government agencies integrated with PSW against an overall target of 77. Published at <https://www.psw.gov.pk>. The direct report URL should be inserted before circulation, as this is an exact numerical claim.
76. UNECE, Single Window Repository: Pakistan, 2024, recording PSW's assessment of change-management, technical-capacity, staff-turnover and agency-approval challenges. https://unece.org/sites/default/files/2024-09/Pakistan_2024.pdf
77. State Bank of Pakistan, Foreign Exchange Manual, Chapter 13, retaining EIF issuance by Authorized Dealers where the relevant bank is not integrated with PSW.
78. Evaluating the Impact of Custom Procedures on Trade Facilitation in Pakistan (2025), survey of 102 importers, exporters, manufacturers and logistics providers (<https://www.scrip.org/journal/paperinformation?paperid=147229>); and An Analysis of the Challenges Faced by Customs for Trade Facilitation in Pakistan (2025) (<https://contemporaryjournal.com/index.php/14/article/view/1140>).
79. European Payments Council, SEPA Instant Credit Transfer (SCT Inst) scheme. SCT Inst has operated since November 2017 as a voluntary scheme rather than a universal statutory requirement. <https://www.europeanpaymentscouncil.eu/what-we-do/sepa-instant-credit-transfer>
80. Regulation (EU) 2024/886 of the European Parliament and of the Council of 13 March 2024, amending Regulation (EU) No 260/2012 and Regulation (EU) 2021/1230 as regards instant credit transfers in euro, and amending Directives 98/26/EC and (EU) 2015/2366. <https://eur-lex.europa.eu/eli/reg/2024/886/oj/eng>
81. European Central Bank, Instant Payments Regulation, Table 1. Receiving instant payments and equality of charges: euro area 9 January 2025, non-euro area 9 January 2027, electronic money institutions and payment institutions 9 April 2027. Sending instant payments and verification of payee: euro area 9 October 2025, non-euro area 9 July 2027. Sending outside business hours from accounts denominated in national currency in non-euro area member states: 9 June 2028. https://www.ecb.europa.eu/paym/retail/instant_payments/html/instant_payment_s_regulation.en.html
82. Regulation (EU) 2024/886, Article 5a as inserted into Regulation (EU) No 260/2012: payment service providers offering the sending and receiving of credit transfers shall also offer the sending and receiving of instant credit transfers.
83. Regulation (EU) 2024/886, Article 5b as inserted into Regulation (EU) No 260/2012: charges for sending and receiving instant credit transfers shall not exceed charges for other credit transfers of corresponding type.
84. Regulation (EU) 2024/886, Article 5c as inserted into Regulation (EU) No 260/2012. The service applies to both standard and instant euro credit transfers and must be offered free of charge to the payer. European Central Bank, Instant Payments Regulation, describing the result set communicated to the payer as match, close match, no match or other. https://www.ecb.europa.eu/paym/retail/instant_payments/html/instant_payment_s_regulation.en.html

85. Regulation (EU) 2024/886, Article 5d as inserted into Regulation (EU) No 260/2012: payment service providers offering instant credit transfers shall verify periodically, and at least daily, whether any of their payment service users are persons or entities subject to targeted financial restrictive measures.
86. European Central Bank, Instant Payments Regulation, on the Eurosystem verification of payee service built on solutions developed by Banco de Portugal and Latvijas Banka in accordance with the European Payments Council VOP scheme, available for instant payments including those settled in TARGET Instant Payment Settlement and for SEPA credit transfers. https://www.ecb.europa.eu/paym/retail/instant_payments/html/instant_payment_s_regulation.en.html
87. European Payments Council, Verification Of Payee scheme. The scheme allows the payer's provider to send the payee's provider a request to verify the IBAN and the name of the payee as given by the payer, and potentially an identification code such as a VAT number or Legal Entity Identifier. <https://www.europeanpaymentscouncil.eu/what-we-do/other-schemes/verification-payee>
88. European Payments Council, Verification Of Payee Scheme Rulebook version 1.0, approved 10 October 2024 and entered into force on 5 October 2025, four days before the regulatory deadline for euro area providers. <https://www.europeanpaymentscouncil.eu/document-library/rulebooks/verification-payee-scheme-rulebook-0>
89. European Payments Council, Verification Of Payee Scheme Rulebook Updates, 16 March 2026. Following a December 2025 public consultation on urgent change requests identified by the Verification Of Payee Working Group after deployment of the service, the EPC launched version 1.1 of the rulebook, version 1.1.1 of the API specifications and version 2.1 of the API Security Framework, all effective 20 September 2026. A further public consultation on change requests for version 2.0 ran from 1 April to 30 June 2026. <https://www.europeanpaymentscouncil.eu/news-insights/news/verification-payee-scheme-rulebook-updates-0>
90. European Payments Council, Verification Of Payee Scheme Rulebook version 1.1, 16 March 2026, on the scheme rules, practices and standards for verifying payment account numbers and names of payment counterparties between participants prior to initiating a payment within SEPA. https://www.europeanpaymentscouncil.eu/sites/default/files/kb/file/2026-03/EPC218-23%20v1.1%202026%20Verification%20Of%20Payee%20Scheme%20Rulebook_0.pdf
91. BIS Innovation Hub, Project Mandala: streamlining cross-border transaction compliance, published 28 October 2024. <https://www.bis.org/publ/othp87.pdf>
92. Ibid., Our partners: a collaboration between the BIS Innovation Hub, Reserve Bank of Australia, Bank of Korea, Bank Negara Malaysia and Monetary Authority of Singapore, with significant contributions from the Bank of France and with participating commercial banks. The report states that the project is purely experimental and does not indicate that any involved commercial or central bank intends to deploy the Mandala system.
93. Ibid., Compliance by design: the project preserves the existing regulatory framework, encoding existing jurisdiction-specific requirements such as sanctions screening and capital flow management measures into the system, and maintains the model in which financial institutions are responsible for interpreting and applying official regulatory measures.
94. Ibid., Sections 2.3 and 3: each participant runs a Mandala node consisting of three core components, a peer-to-peer messaging element, the rules engine and the proof engine.
95. Ibid., Sections 5.1 and 5.2. The compliance proof was integrated with the wholesale central bank digital currency developed in Project Mariana, deployed on the Sepolia testnet, and with Swift by embedding a compliance check identifier in an ISO 20022 credit transfer message using the transaction manager simulator in Swift's experimental sandbox environment.
96. Ibid., Section 6.1: the proof of concept uses the Legal Entity Identifier database for basic identity information and the OpenSanctions database, which includes the official sanctions lists of the four participating jurisdictions.
97. Ibid., Section 3.3: non-interactive checks implemented through zero-knowledge proofs where one party holds the confidential data, and interactive checks implemented through secure multi-party computation where both parties hold commercially sensitive data.
98. Ibid., Section 4.1: cross-border lending from a Singapore-based entity to a Malaysia-based entity, enabling provable sanctions screening and capital flow management checks during pre-validation, including the Malaysian limit of MYR 100 million equivalent on foreign currency external borrowing from unrelated non-residents, and an extension illustrating central bank monitoring of capital flow management compliance.
99. Ibid., Section 4.2: a South Korea-based entity financing a capital investment by an Australia-based entity through the acquisition of unlisted debt securities, testing checks against Korean capital flow management thresholds of USD 5,000 and USD 100,000 and netting reporting requirements, alongside sanctions screening.
100. Ibid., Section 2.2 and Section 7. Identity solutions, customer onboarding, beneficial ownership information, enhanced due diligence, governance models, cybersecurity, full integration with existing systems such as real-time gross settlement and commercial bank systems, legal liability and commercial viability were out of scope. The report states that there is potential for the Mandala system to reduce compliance costs, but that more analysis is needed to substantiate this hypothesis.
101. BIS, Project Mandala: shaping the future of cross-border payments compliance, update of November 2025. Phase 2 is led by the BIS Innovation Hub Singapore Centre together with the Reserve Bank of Australia, the Bank of France, the Reserve Bank of India, the Central Bank of Kuwait, the Central Bank of Malaysia, Banko Sentral ng Pilipinas and the Monetary Authority of Singapore. <https://www.bis.org/about/bisih/topics/cbdc/mandala.htm>
102. Ibid., stating that Phase 2 focuses on evaluating potential benefits empirically, expanding to broader use cases, and utility to other platforms and projects.
103. Composite. Synthesis drawn from the thirteen cases in this document and the sources cited in footnotes 1 to 102 and 104 to 163. The proposition is an organising claim about the cases rather than a separate empirical finding.
104. MAS, Safeguards for Agentic Finance at Runtime, white paper version 1.0, published 3 July 2026, on agentic systems that plan intermediate steps, select tools and initiate actions without continuous human direction, and on the resulting need for runtime governance of financial action. <https://www.mas.gov.sg/publications/monographs-or-information-paper/2026/safeguards-for-agentic-finance-at-runtime>
105. Monetary Authority of Singapore, FEAT Principles (2018) and the Veritas initiative developing assessment methodologies against those principles.
106. MAS, Artificial Intelligence Model Risk Management: Observations from a Thematic Review, 2024; and Project MindForge.
107. MAS, consultation on AI Risk Management Guidelines, November 2025; MAS and industry, MindForge AI Risk Management Toolkit, March 2026.
108. MAS, Safeguards for Agentic Finance at Runtime, 3 July 2026. SAFR is an industry white paper jointly developed by financial institutions and FinTechs under MAS' BuildFin.ai initiative. The paper states that it does not constitute regulatory guidance or supervisory expectations. <https://www.mas.gov.sg/news/media-releases/2026/mas-partners-industry-to-develop-safeguards-for-ai-agents-in-finance>
109. Synthesis from the sequence of MAS initiatives described in footnotes 105 to 108.

110. MAS, Safeguards for Agentic Finance at Runtime, on defining how agent actions are authorised, how human oversight is activated and what is recorded at the point of every decision, with proposed actions evaluated before execution and resolved to denial, escalation or execution. <https://www.mas.gov.sg/-/media/mas-media-library/development/fintech/ai-safr/safr.pdf>
111. The MAS thematic review and SAFR materials report governance practices and proposed safeguards rather than causal estimates of downstream financial outcomes.
112. BIS, Annual Economic Report 2026, Chapter III, Anchoring trust in money: innovation beyond stablecoins. <https://www.bis.org/publ/arpdf/ar2026e3.htm>
113. Ibid.: stablecoin market capitalisation was around USD 320 billion as of end-May 2026, and remains dwarfed by trillions of US dollars in bank deposits. <https://www.bis.org/publ/arpdf/ar2026e3.pdf> Approximately 99 per cent of stablecoin supply is denominated in US dollars.
114. Estimates of gross stablecoin transfer volume for 2025 vary widely with methodology, from roughly USD 28 trillion upward. Filtered estimates of genuine real-economy payment activity are far smaller, in the range of roughly USD 350 to 550 billion. See BIS Working Paper No 1359, The anatomy of stablecoin transactions, June 2026 (<https://www.bis.org/publ/work1359.pdf>), and BCG, Stablecoin Payments: The Truth Behind the Numbers, January 2026 (<https://www.bcg.com/assets/2026/white-paper-stablecoin-payments-truth-behind-numbers.pdf>).
115. BIS, Annual Economic Report 2026, Chapter III, on faster and programmable payments as potential benefits of tokenisation.
116. Ibid., discussion of end-to-end costs including on-ramps and off-ramps.
117. Ibid., on dollarisation, capital flow and financial integrity risks, particularly for emerging market economies. The report notes that stablecoin inflows were broadly similar in economies with and without capital flow restrictions, and that blocking domestic intermediaries from handling unapproved stablecoins is likely to remain imperfect given bearer-like features and unhosted wallets.
118. Financial Stability Board, High-level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements: Final Report, 17 July 2023. Principal jurisdictional frameworks include Regulation (EU) 2023/1114 on markets in crypto-assets (MiCA), Titles III and IV, and the United States Guiding and Establishing National Innovation for US Stablecoins Act of 2025.
119. Synthesis from the BIS evidence on settlement benefits and on the costs of entering and exiting the token.
120. BIS, Annual Economic Report 2026, Chapter III, arguing for regulated forms of tokenised money and payment system improvements as alternatives to reliance on unregulated stablecoins.
121. RBI, FAQs on Master Direction on Know Your Customer, June 2025.
122. RBI Master Direction on KYC and the associated FAQs, recognising digital KYC, Aadhaar-related routes, equivalent electronic documents and the Video-based Customer Identification Process subject to specified conditions.
123. RBI KYC FAQs and Master Direction on the Video-based Customer Identification Process.
124. RBI KYC FAQs on retrieval from the Central KYC Records Registry and use of existing KYC records.
125. Synthesis from the RBI rules on V-CIP and the Central KYC Records Registry.
126. RBI KYC FAQs.
127. RBI Master Direction on KYC and the associated FAQs, prescribing controls around digital and video-based identification.
128. The cited RBI materials establish KYC procedures. They do not establish a causal effect on UPI adoption or on digital finance more broadly.
129. Banco Central de Chile, Recuadro III.3, Adopción del nuevo estándar ISO 20022, describing ISO 20022 as a common language for financial transactions supporting clearer and more detailed data exchange, greater interoperability and more automated processing, and setting out the SWIFT convergence period. <https://www.bcentral.cl/documents/33528/4387881/RIII.3.pdf/98b145bf-c358-4d53-7a46-5a5d376e665b>
130. Banco Central de Chile, Banco Central de Chile culmina implementación de nuevo estándar de mensajería financiera, recording that implementation was carried out in two stages, the first concluding on 25 November 2024 and the second on 8 September 2025, and that Chile is the second country in Latin America to adopt the standard in full. <https://www.bcentral.cl/en/content/-/detalle/implementacion-nuevo-estandar-mensajeria-financiera> Implementation dates were notified to participants in Carta Circular Bancos No 735 for Phase 1 (<https://www.bcentral.cl/contenido/-/detalles/carta-circular-735>) and Carta Circular Bancos No 749 for Phase 2 (<https://www.bcentral.cl/en/content/-/detalles/carta-circular-749>). The programme timetable dates from Carta Circular Bancos No 683 of 9 June 2022, as revised by Cartas Circulares No 700, 718 and 734.
131. Banco Central de Chile, Carta Circular Bancos No 734 of 12 September 2024, setting out the message standard, usage identifiers and operational flows for the second migration phase in both the peso and US dollar LBTR systems (<https://www.bcentral.cl/documents/d/banco-central/carta-circular-734-pdf?download=true>); Cartas Circulares Bancos No 739 and No 752, updating the operational continuity procedures of the LBTR system for Phase 1 and Phase 2 messaging respectively (<https://www.bcentral.cl/en/content/-/detalles/carta-circular-739> and <https://www.bcentral.cl/contenido/-/detalle/carta-circular-752>); and Circular 3013-972, amending the operating regulations of the peso and US dollar LBTR systems in Chapters III.H.4.1.1 and III.H.4.2.1 of the Compendio de Normas Financieras for the ISO 20022 implementation (<https://www.bcentral.cl/contenido/-/detalle/circular-3013-972>).
132. Synthesis from Banco Central de Chile, Recuadro III.3, and from the staged implementation documented in footnotes 130 and 131.
133. CPMI, Fostering the harmonisation of ISO 20022: follow-up report, Bank for International Settlements, 2026. The paragraph recording like-for-like implementation in Chile should be pinpointed to the published report before circulation.
134. Synthesis from the Chile migration sequence and the CPMI implementation findings.
135. The cited official materials describe capabilities and implementation rather than causal estimates of costs or correspondent banking outcomes.
136. Central Bank of Nigeria, CBN Reforms and Initiatives, listing the PAPSS documentation circular of 28 April 2025 and the Non-Resident BVN platform launch of 13 May 2025 among other measures. <https://www.cbn.gov.ng/AboutCBN/Reforms.html>
137. Central Bank of Nigeria, Nigeria Foreign Exchange (FX) Code, January 2025 (<https://www.cbn.gov.ng/Out/2025/CCD/Nigeria%20FX%20Code%20.pdf>), formally launched on 28 January 2025 (https://www.cbn.gov.ng/FeaturedArticles/2025/FX_Code_Launch.html). The Governor described it as an enforceable framework, following the launch of the Electronic Foreign Exchange Matching System in December 2024.
138. NIBSS unveiled the National Payment Stack on 17 June 2025 as the successor to NIBSS Instant Payments, built on the ISO 20022 messaging standard. NIBSS reported the first live transaction at 11:56 on Friday 7 November 2025, between PalmPay and Wema Bank. See the NIBSS statement of 9 November 2025 as reported in Nairametrics (<https://nairametrics.com/2025/11/09/palmpay-wema-bank-complete-first-live-transaction-on-nibss-national-payment-stack/>) and The Cable (<https://www.thecable.ng/nibss-executes-first-live-transaction-on-national-payment-stack/>). The primary NIBSS statement should be linked directly before circulation.

- 139.** The National Payment Stack entered live operation in late 2025. The cited materials describe launch and design rather than measured downstream effects.
- 140.** Central Bank of Nigeria, Circular TED/FEM/PUB/FPC/001/006 of 28 April 2025, simplifying documentation for PAPSS transactions. Basic know your customer and anti-money laundering documentation applies up to USD 2,000 per month for individuals and USD 5,000 for corporates, with full foreign exchange documentation required above those thresholds, and Nigerian commercial banks may source foreign exchange for PAPSS transactions through the official market. See Central Bank of Nigeria, CBN Reforms and Initiatives. <https://www.cbn.gov.ng/AboutCBN/Reforms.html>
- 141.** Central Bank of Nigeria in collaboration with NIBSS, Non-Resident Bank Verification Number platform, launched 13 May 2025, enabling Nigerians in the diaspora to obtain a BVN remotely without physical presence in Nigeria. The platform sits within a wider framework including the Non-Resident Ordinary Account and the Non-Resident Nigerian Investment Account. <https://www.cbn.gov.ng/AboutCBN/Reforms.html>
- 142.** Synthesis from the separate foreign exchange, infrastructure, PAPSS and identity reforms documented above.
- 143.** IMF, Stablecoins in Nigeria: A Growing Cross-Border Channel, June 2026, estimating approximately USD 59 billion in Nigerian crypto-asset inflows between July 2023 and June 2024 and finding that Nigeria has accounted for roughly 60 per cent of stablecoin inflows into sub-Saharan Africa since 2019.
- 144.** Ibid., on the drivers and uses of stablecoins in Nigeria, including inflation, currency depreciation, constrained foreign exchange access, remittances and payments to overseas suppliers.
- 145.** Synthesis from the Central Bank of Nigeria reform package and the IMF evidence on remaining demand for alternative channels.
- 146.** Synthesis from the RBI foreign exchange reforms, the UPI and Nexus linkages and the Payment Aggregator Cross Border framework described below.
- 147.** RBI notifications dated 14 January 2025: Foreign Exchange Management (Deposit) (Fifth Amendment) Regulations, 2025, FEMA 5(R)(5)/2025-RB; Foreign Exchange Management (Foreign Currency Accounts by a Person Resident in India) (Fifth Amendment) Regulations, 2025, FEMA 10(R)(5)/2025-RB; and the amendment to the Mode of Payment and Reporting of Non-Debt Instruments Regulations, FEMA 395(3)/2025-RB. Overseas branches of authorised dealer banks may open Special Non-Resident Rupee accounts for persons resident outside India for all permissible current and capital account transactions, the previous seven year limit on holding such accounts is removed, units in International Financial Services Centres may open such accounts with authorised dealers in India, balances in repatriable rupee accounts may be used for foreign investment in non-debt instruments, and Indian exporters may open foreign currency accounts overseas. Summarised in EY India, Liberalization of FEMA Regulations for encouraging settlement of cross-border transactions in Indian Rupee. https://www.ey.com/en_in/technical/alerts-hub/2025/03/liberalization-of-fema-regulations-for-encouraging-settlement-of-cross-border-transactions
- 148.** BIS, Project Nexus completes comprehensive blueprint for connecting domestic instant payment systems globally and prepares for work towards live implementation, press release, 1 July 2024. <https://www.bis.org/press/p240701.htm> See also the BIS press release of 23 March 2023 on the Nexus prototype linking the test systems of the Eurosystem, Malaysia and Singapore. <https://bis.org/press/p230323.htm>
- 149.** Nexus Global Payments was established on 26 March 2025, and its incorporation in Singapore as a company limited by guarantee was announced on 3 April 2025 by the Reserve Bank of India, Bank Negara Malaysia, Bangko Sentral ng Pilipinas, the Monetary Authority of Singapore and the Bank of Thailand, together with their domestic instant payment system operators. Bank of Thailand press release No 13/2025, 3 April 2025 (<https://www.bot.or.th/en/news-and-media/news/news-20250403.html>); Nexus Payments documentation (<https://docs.nexusglobalpayments.org/>). Indonesia joined as the sixth participating jurisdiction in 2026 (<https://www.nexusglobalpayments.org/about-nexus/>).
- 150.** Bank of Thailand press release No 13/2025, 3 April 2025: rather than an instant payment system operator building custom connections for every new country to which it connects, the operator makes only one connection to Nexus, which allows it to reach all other countries in the network. <https://www.bot.or.th/en/news-and-media/news/news-20250403.html>
- 151.** RBI, Regulation of Payment Aggregator - Cross Border (PA - Cross Border), circular CO.DPSS.POLC.No.S-786/02-14-008/2023-24, 31 October 2023. The direct link on the RBI notifications database should be added before circulation.
- 152.** Synthesis from footnotes 147 to 151.
- 153.** The cited materials establish legal changes, institutional connectivity and regulatory arrangements. They do not establish universal domestic-equivalent cross-border performance.
- 154.** CPMI, Improving access to payment systems for cross-border payments: best practices for self-assessments, Bank for International Settlements, May 2022, on transparent and risk-based access criteria for payment systems, including access by non-bank payment service providers. <https://www.bis.org/cpmi/publ/d202.htm>
- 155.** Bank of England, Bank of England extends direct access to RTGS accounts to non-bank payment service providers, 19 July 2017, publishing a revised Settlement Account Policy under which non-bank payment service providers became eligible to apply for a settlement account, enabling direct access to the sterling payment systems that settle in central bank money, including Faster Payments, Bacs, CHAPS, LINK and Visa. <https://www.bankofengland.co.uk/news/2017/july/boe-extends-direct-access-to-rtgs-accounts-to-non-bank-payment-service-providers>
- 156.** Bank of England, First non-bank payment service provider (PSP) directly accesses UK payment system, 18 April 2018, recording that on 13 April 2018 TransferWise, an FCA-regulated payment service provider, became a direct participant in Faster Payments. <https://www.bankofengland.co.uk/news/2018/april/non-bank-psp-access-to-the-payments-system-announcement>
- 157.** Bank of England, 18 April 2018: wider access is expected to bring financial stability benefits through increasing the proportion of settlement in central bank money, diversifying the number of settlement firms and driving greater innovation in risk-reducing payments technologies. <https://www.bankofengland.co.uk/news/2018/april/non-bank-psp-access-to-the-payments-system-announcement> In 2024 the Bank noted that it was the first G7 central bank to offer settlement accounts to non-bank payment service providers. <https://www.bankofengland.co.uk/paper/2024/dp/reviewing-access-to-rtgs-accounts-for-settlement>
- 158.** Eligibility criteria and policies for admitting account holders into RTGS are specified in the Bank of England published Settlement Account Policy, which is reviewed periodically; non-bank payment service providers are eligible subject to meeting appropriate standards of resilience. It is eligibility to apply, not an unconditional right of access. Bank of England, Self-assessment of RTGS and CHAPS against the Principles for Financial Market Infrastructures. <https://www.bankofengland.co.uk/payment-and-settlement/rtgs-and-chaps-2022-pfmi-self-assessment>

- 159.** Monetary Authority of Singapore, media release of 30 November 2020, Non-Bank Financial Institutions to have Access to FAST and PayNow, announcing that eligible non-bank financial institutions, being licensed major payment institutions, would have direct access from February 2021. The direct MAS URL should be added before circulation.
- 160.** MAS described the reform as enabling transfers between bank accounts and participating non-bank e-wallets through FAST and PayNow.
- 161.** Synthesis from the United Kingdom and Singapore access conditions in footnotes 155 to 160.
- 162.** The official sources state the intended competition and interoperability benefits but do not provide causal estimates of their magnitude.
- 163.** Synthesis from the direct access mechanisms documented in the two jurisdictions.