Shaping the Future of Finance In Asia: AI-driven FinTech, Digital Currencies, And The Evolution Of Financial Infrastructure



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Shaping the Future of Finance in Asia: AI-driven FinTech, Digital Currencies, And The Evolution Of Financial Infrastructure

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https://english.seoul.go.kr/

Seoul Metropolitan Government's (SMG) represents Seoul as an international financial centre, amongst other dimensions of the Korean capital city. SMG's overarching objectives are to create a global city of professionals with an emphasis on the finance sector. Simultaneously the SMG will maintain Seoul as a global city of investment and entrepreneurship with an appropriate ecosystem; as well as supporting emerging industries and securing future growth engines. In addition, SMG aims to lead the process of Seoul becoming a global city of sustainability.

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Shaping the Future of Finance in Asia: AI-driven FinTech, Digital Currencies, And The Evolution Of Financial Infrastructure

Foreword

Since its designation as a global financial hub, Seoul has pursued the key vision of “Seoul, Asia’s Financial City” and has focused on strengthening its digital finance capabilities centered on AI and FinTech. Seoul has achieved significant progress in four key areas: building a growth ecosystem for the financial industry, enhancing digital finance capabilities, improving the business environment, and strengthening its brand as a financial city.

The Seoul Metropolitan Government (SMG) has supported a total of 409 companies through the Seoul Fintech Lab, helping them attract investments amounting to hundreds of billions of Korean won. It is also driving the growth of the digital finance industry by fostering talent through the Graduate School of Digital Finance and the Seoul Fintech Academy, while providing infrastructure and employment subsidies through the Seoul Financial Hub.

Seoul is gaining strong global recognition and demonstrating its immense potential. In the 39th Global Financial Centres Index (GFCI), Seoul ranked 8th among 137 financial centres worldwide. The city’s advanced ICT infrastructure and highly skilled human capital in digital finance have played a pivotal role in elevating Seoul as a leading global financial hub.

The Seoul Metropolitan Government commissioned Z/Yen to publish a report that analyses and forecasts the future of Asian financial markets, anticipating Asia’s financial trends and exploring innovative policy directions. This report delivers insights into the current landscape and the future direction of Asian financial markets, which are being rapidly reshaped by AI.

Today, Asian financial markets are playing a critical role in advancing global finance through innovation and emerging technologies that go beyond the mere digitalisation of existing products and fundamentally redesign the infrastructure, business models, and customer interfaces underpinning financial service delivery. In particular, the innovation demonstrated by SWIFT, which is leading real-time cross-border payments and data standardization while evolving into a globally inclusive financial platform, together with the examples of various Asian countries that are expanding financial inclusion and integrating payment networks through technology, offer highly valuable and meaningful insights.

We hope that the insights and recommendations in this report will offer practical guidance to global companies and stakeholders planning to expand into Asian financial markets, including Seoul, and inspire a new dimension of innovation. Seoul will continue to stand as a steadfast partner to global financial companies. We will build a world-class AI and digital finance ecosystem drive sustainable growth across Asia.



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Hugh Morris has spent over 40 years in financial services, mostly working in the City of London. He is an author and commentator on financial centres around the world. Hugh conducts analytical research on the performance of global financial centres to enable them to increase their competitiveness. His previous publications include 'To Know, To Have, To Be' (Z/Yen) on digital identity and 'The Net Effect: The Impact of the Internet on the Nation State' (Fabian Society). As well as his research and publication activities, he is also a speaker on the relative competitiveness of financial centres and related subjects.



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Executive Summary

Purpose

This report evaluates the state of FinTech, AI-driven FinTech, digital currencies, and the evolution of financial infrastructure in Asia in 2026. Asia is defined as the Asia/Pacific region used by Z/Yen in our Global Financial Centres Index (GFCI), and other indices, excluding Australasia. Its scope is to summarise current trends and developments across major Asian financial centres such as Seoul, Singapore, Hong Kong, Tokyo, Shenzhen, and others where innovation thrives and AI-centric financial services are becoming the norm. The outcome of these initiatives is the wholesale transformation of finance and financial services across Asian geographies. For instance, McKinsey anticipates the transformational effect of 'agentic AI'[1] in banking in Asia:

> *"Multiagentic systems are transforming operations, combining the power of technology, processes and people to deliver outsized impact for banks in Asia[2]."*

What is also noticeable is that different financial centres and/countries in Asia are taking different routes to transforming finance. The overall Asian picture of development is one of heterogeneity across the region. The report highlights the major trends across and differences between major Asian financial centres.

The report answers the following three questions:

1. **What is driving Asia's financial transformation?**
   - The report evaluates how AI-driven FinTech, tokenisation (including CBDCs and tokenised deposits/assets), and upgraded infrastructure (ISO 20022, instant-payment rails, cross-border links) are reshaping both retail and wholesale finance. It also considers how regulators are enabling this with sandboxes and both AI and data-governance frameworks.
2. **How are digital currencies and tokenisation likely to change cross-border payments and capital markets?**
   - It also looks at the roles of retail and wholesale CBDCs, stablecoins, and tokenised assets in delivering faster settlement with completion certainty and what this means for trade, treasury, liquidity and market structure across Asian centres.
3. **What should institutions and policymakers do next to compete and stay safe?**
   - The report delivers recommendations for financial institutions, FinTech firms and for regulators around the world as to how to respond to the innovations transforming finance in Asia.

[1] 'Agentic AI' is defined as a type of artificial intelligence that can plan and deliver optimised processes thus enabling businesses to get work done faster, cheaper and to a higher quality standard. AI agents can make decisions, plan and adapt to achieve defined results - with little or no human intervention.

[2] Reimagining banking in Asia through agentic AI | McKinsey

This report should be read by practitioners and senior management in financial institutions. It should also be read by board members and investors shaping strategy for Asian and global finance as well as regulators, supervisors, and policymakers designing frameworks for AI, tokenisation, CBDCs, and cross-border payments. Technology leaders and architects building financial infrastructure should also read it together with ecosystem players in financial centres. Whether readers are located in Asia or elsewhere around the world, developments in Asia will impact finance in whatever centre you are located. Those who grasp these trends earliest will achieve a competitive advantage.

Lessons From Asia

The overall conclusions from the current developments in FinTech and AI FinTech in Asia are threefold:

1. **The primary drivers of transformation in finance in Asia are a combination of digitisation and tokenisation[3] supported by underlying blockchain technologies** This is leading to structures where international settlements for micro-transactions are becoming available at an affordable cost (the '**what**' of finance).
2. **AI is primarily being used to reduce the friction for transactions and their surrounding processes, such as AML / KYC**. Agentic AI is also starting to impact the entire operational lifecycle of finance in Asia affecting primarily risk, compliance and operations (the '**how**' of finance). AI is also becoming used by regulators as well as participants.
3. **The rest of the world should take note**. Asia is a hotbed of experimentation and innovation which other regions should observe, develop, and adopt.

Overall, the region is demonstrating global leadership as to how FinTech and AI FinTech can reshape the entire finance sector in both wholesale and retail domains.

Current Asian Regional Landscape

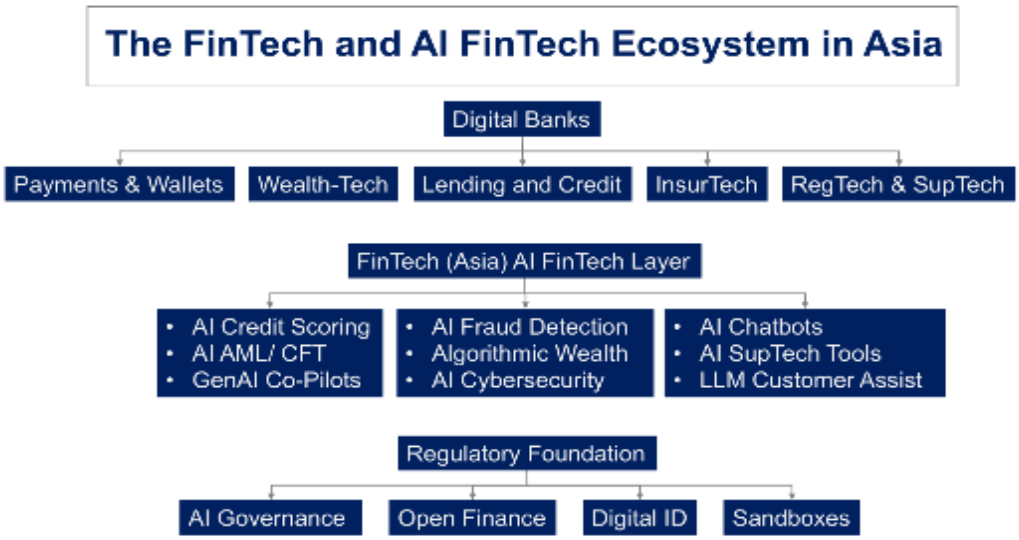
Banking and financial services in Asia are being transformed by a combination of scale, digitisation, and regulatory experimentation. The region includes some of the world's most sophisticated financial centres alongside large underbanked populations, so its financial systems are evolving on two tracks at once: advanced markets are pushing into FinTech and AI FinTech, tokenisation, and cross-border infrastructure; while emerging markets are still expanding access to basic payments, credit, and savings. This has made Asia a major testing ground for new financial models, especially mobile-first banking, embedded finance, and faster retail payments. Regulatory institutions are trying to balance innovation with resilience, consumer protection, and financial stability.

A second major theme is the rapid rise of FinTech and AI FinTech inside mainstream finance rather than at its edges. Banks, insurers, wallets, and digital platforms are using AI for fraud detection, credit scoring, customer service, compliance, and operational efficiency, while regulators in places like Singapore and Hong Kong are building sandboxes and risk-

[3] 'Tokenised' or 'tokenisation' describes a recording and infrastructure method: where a digital token is created on a programmable ledger (blockchain) that represents a claim on an asset, cash flow, or legal right.

management frameworks to support responsible deployment. At the same time, many leading Asian FinTech firms are changing how consumers experience finance by embedding it into applications such as e-commerce, ride-hailing, messaging, and super-app ecosystems. This means finance is becoming less branch-based and more continuous, personalised, and app-native. Figure 1 shows the taxonomy of the FinTech and AI FinTech ecosystem in Asia.

Figure 1 | FinTech and AI FinTech Ecosystem in Asia



Payment interoperability and cross-border connectivity are another defining trend. Domestic instant payment systems are spreading, and several Asian countries are linking them across borders to lower the cost and friction of remittances and retail payments. Alongside this, market infrastructures are modernising through ISO 20022[4] migration, interoperability projects, and experiments with tokenised money, digital assets, and new settlement models. These developments matter because they affect the basic rails[5] of finance: how quickly money moves, how transparently it is tracked, and how efficiently institutions can settle obligations across jurisdictions.

Asia's financial sector is likely to become more integrated, programmable, and data-driven, but also more complex. Traditional banks are being pushed to modernise core systems, while FinTech and AI FinTech firms are moving deeper into regulated financial activity. Simultaneously, policymakers are dealing with new risks around cyber resilience, AI governance, digital assets, and fragmented regulation across markets. The broad direction is clear - Asian finance is both digitising old products and redesigning the infrastructure, business models, and customer interfaces through which banking and financial services are delivered.

[4] ISO 20022 is an international standard for financial messaging that enables richer, structured, and more interoperable data exchange across financial transactions. Its implementation in Asia is being driven by organisations like SWIFT.

[5] 'Rails' are the technical, legal and institutional infrastructure used to execute financial transactions, such as to transfer and settle funds or assets between parties, usually through banks, payment systems, central banks, or market infrastructures.

Innovation and technology have become central to the development of banking and financial services because they improve reach, speed, efficiency, and resilience at the same time. Across Asia and globally, digital infrastructure is changing how money moves, how customers are onboarded, how risks are assessed, and how financial services are delivered. The sector is no longer evolving mainly through branch expansion or product diversification; it is being reshaped through mobile banking, instant payments, cloud infrastructure, AI, and digital identity verification systems. In Asia especially, technology has become a development tool as well as a commercial tool, helping financial systems serve both advanced urban markets and large underserved populations.

One of the clearest reasons technology matters is financial inclusion. Digital channels reduce the cost of serving customers who were previously uneconomic for banks to reach through traditional branches. Mobile wallets, interoperable payment systems, online onboarding, and digital remittance platforms make it easier for households and small businesses (SMEs) to store value, to make payments, to borrow, and to receive transfers. In Asia, this matters because many markets still combine fast digital adoption with uneven access to formal finance (previously researched by Z/Yen[6]).

Technology is also important because it changes the economics and quality of financial intermediation. AI is now being used in lending, onboarding, fraud detection, mobile banking, AML/KYC (anti money laundering/know your client) processes, customer service, and supervisory technology. In Asia, lending is the most frequent AI use case, followed by client onboarding and mobile banking, showing that AI is no longer peripheral but increasingly embedded in core banking operations. This can improve decision-making, reduce manual errors, accelerate service delivery, and make finance more responsive to real-time data. At the same time, it creates new governance needs around AI model risks, AI model bias, explainability, cyber risk, and AI accountability, which is why regulators such as Financial Services Commission in Korea[7] and the Monetary Authority of Singapore (MAS) [8] are building guidance and shared frameworks for responsible adoption. In general, regulators are becoming more wary as AI deployment spreads, especially concerning retail investors[9].

The broader significance is that innovation now shapes both customer experience and the underlying architecture of finance. Around the world and especially in Asia, banking and financial services are being rebuilt through faster payment rails, data-rich compliance tools, cloud-native systems, and experiments in tokenisation and programmable finance. The World Economic Forum argues that AI is becoming a strategic capability across financial services, not just an efficiency layer, while policymakers increasingly see innovation as essential to competitiveness and system resilience[10]. Technology matters because it determines which institutions can scale, which markets can widen access, and which financial systems can remain secure and relevant in a more digital global economy

[6] https://www.zyen.com/publications/professional-articles/international-financial-centres-facilitating-financial-inclusion-digitalisation/
[7] Press Releases - Financial Services Commission
[8] Artificial Intelligence
[9] How AI is changing stock trades for retail investors - Nikkei Asia
[10] WEF_Artificial_Intelligence_in_Financial_Services_2025.pdf

Digital Currencies In Asia

Digital currencies in Asia have evolved into a broad ecosystem spanning central bank digital currencies (CBDCs), cryptocurrencies, and tokenised financial assets, each serving different economic and strategic roles. CBDCs (such as China's digital yuan CBDC known as e-CNY, India's digital rupee and the multi-CBDC mBridge[11] and BIS-led Agora[12] projects) aim to modernise payment infrastructure, increase monetary sovereignty, and support cross-border settlement. Cryptocurrencies remain widely adopted in markets like Vietnam, India, and the Philippines, while Japan, Singapore, and Hong Kong maintain some of the most mature regulatory frameworks for digital-asset trading. Tokenisation has become a major institutional trend, with initiatives like Singapore's Project Guardian[13] and Hong Kong's tokenised green bonds demonstrating the region's leadership in next-generation capital-market infrastructure.

Regulation across Asia is diverse but generally proactive. Mainland China promotes a tightly controlled system centred on the digital yuan while restricting private cryptocurrency markets. Singapore balances innovation with rigorous licensing and AML/KYC rules. Korea pursue strict consumer protection measures alongside CBDC experimentation while Hong Kong has reopened its market to regulated retail trading of digital assets and advancing CBDC pilots. Japan enforces some of the world's clearest stablecoin laws and Southeast Asian regulators are building frameworks for tokenisation, exchange licensing, and cross-border payment integration. South Asia displays cautious but rapidly evolving policy environments, supported by national digital-payments rails.

Consumer adoption of digital currencies varies widely. China's e-CNY is gaining traction through integration with transport, social programmes, and retail apps, while a UPI-driven payments culture in India is creating fertile ground for digital-rupee expansion. Southeast Asian consumers (especially in Vietnam, Indonesia, and the Philippines) are global leaders in cryptocurrency adoption and stablecoin use for remittances. In more advanced financial centres like Singapore, Japan and Korea, consumers gravitate toward regulated digital-asset platforms, tokenised products and advanced digital-banking ecosystems.

The potential benefits and risks of digital currencies are distributed across stakeholders. Consumers gain cheaper payments, better inclusion, and programmable financial tools, but face privacy, cybersecurity, and volatility concerns. Financial institutions benefit from real-time settlement, automated compliance, and new revenue streams, while managing transition risks and competition from FinTech businesses. Regulators gain more transparent

[11] mBridge is a multi-CBDC initiative for international wholesale settlement which has just reached minimum viable product (MVP) status. Currently five entities are jointly developing mBridge. They include the Hong Kong Monetary Authority, the Bank of Thailand, the Central Bank of the United Arab Emirates, the Digital Currency Research Institute of the People's Bank of China and the BIS Innovation Hub Hong Kong Centre. The Saudi Central Bank joined in June 2024.

[12] Project Agora is another international project, led by the Bank for International Settlements which includes eight central banks including the Bank of Korea and the Bank of Japan to demonstrate that tokenised central bank reserves and commercial bank deposits can settle across international borders in a fraction of a second, The prototype was launched in May 2026. Project Agorá Explained: How the BIS and 40 Banks Are Building a Unified Global Payment Ledger - Bankinfobook

[13] Project Guardian - Open and Interoperable Networks

monetary systems and enhanced policy tools but must navigate stability, privacy, and governance challenges.

Importantly, CBDCs (especially the e-CNY) hold transformative potential for cross-border trade, enabling faster settlement, reducing reliance on dollar-based correspondent banking, and supporting new payment corridors across the Belt and Road network. Projects like mBridge demonstrate that CBDCs could reshape regional and global settlement architectures as they move from pilots into production.

Financial Infrastructure In Asia

Asia's financial infrastructure has shifted from fragmented, branch-centric systems to integrated digital ecosystems that now set global benchmarks for speed, inclusion, and resilience. This transformation spans real-time retail payments, cloud-native banking, tokenised capital markets, and cross-border integration. These developments are anchored by progressive regulation and public digital infrastructure. Flagship examples include India's UPI achieving massive instant-payment scale, China's near-universal wallet adoption via Alipay and WeChat Pay, Singapore's sandboxing and data-portability frameworks, and ASEAN's linked QR/payment networks. Collectively, these advances have elevated financial infrastructure from a back-office utility to a strategic lever for economic integration, monetary sovereignty, and regional competitiveness.

At the core, payment systems are leading the modernisation wave, with instant settlement rails linking across borders for remittances and small-value commerce. Banking infrastructure is being rebuilt around cloud operation, APIs, and embedded finance, while digital banks in Hong Kong, Singapore, and Korea pressure incumbents to deliver mobile-first, low-cost experiences. Capital markets are upgrading settlement, connectivity, and tokenisation. Hong Kong and Singapore are piloting distributed-ledger-based issuance and Japan is moving on tokenised deposits and digital securities. Cross-border infrastructure is converging as projects like mBridge, Agora, and SWIFT's ISO 20022 modernisation increase interoperability, data richness, and programmability both nationally and across jurisdictions.

Technology pillars enabling this shift include trusted digital identity (Aadhaar, SingPass / SGFinDex) that streamlines AML/KYC and consent-based data sharing, distributed ledgers that power trade finance, tokenised securities and CBDC experiments, cloud and microservices that deliver scalability, and partner integration and advanced cybersecurity. AI augments all layers of infrastructure operation including fraud detection and AML/KYC, onboarding. Zero-trust[14] models, threat-intelligence sharing, and real-time monitoring will aim to protect always-on networks.

Yet challenges persist. The need to integrate legacy infrastructure, inconsistent ISO 20022 implementations, and vendor/platform interoperability continue to provide obstacles to progress. Across borders, regulatory fragmentation, divergent QR and data standards, capital controls, and non-fungible licensing regimes all add friction to the inherent challenges of regional scale.

[14]Zero trust is a cybersecurity strategy where no user, device, or system is trusted by default, and every access request is continuously verified based on identity, device health, and context.

Asia Success Stories

Across Asia, there are many success stories. As a financial centre, Seoul has led a plethora of FinTech and AI FinTech initiatives. Seoul has built a tightly co-ordinated FinTech and AI-finance ecosystem that blends policy ambition, talent pipelines, and proximity to incumbents. The city's seven-point AI strategy has a target of creating 10,000 specialists a year, a dedicated 'Seoul AI Tech City', subsidised GPU computing power, and a KRW 500 billion fund which is aimed at compressing the path from research to commercialisation in high-impact verticals such as payments, identity, wealth, and risk analytics. Anchored in Yeouido's financial district, startups, banks, and regulators iterate development whilst benefitting from proximity, accelerating trust and deployment. The Seoul FinTech Lab network functions as a full-lifecycle platform. Since 2018, it has supported hundreds of startups with regulatory sandbox navigation and specialised mentoring/investor access. Its 2023 expansion added initiatives in biometric security, generative AI for financial workflow, and privacy-preserving data operations.

Seoul's talent strategy has matched the Korean Advanced Institute of Science and Technology (KAIST) with the Seoul Metropolitan Government to create the Graduate School of Digital Finance to produce both deep specialists and 'translators' who can align risk, product, and engineering. Abundant computing power and applied research partnerships mitigate processing bottlenecks as AI models ingest text, voice, images, and behavioural biometrics. The city's frontier work clusters around identity verification/trust, risk and compliance, and investment intelligence.

In identity verification, Seoul-based businesses are combining facial recognition with 'silent' signals (keystroke, device motion) and privacy-enhancing techniques (known as PETs and notably involving masking, tokenisation, and synthetic data) to harden onboarding against deepfakes and forgeries while keeping audits and explainability intact. In risk management, these same institutions are shifting from rules to graphic and text-driven anomaly detection to catch mule accounts[15] and co-ordinated abuse; and matching detection accuracy with guardrails (notably counterfactuals[16], human-in-the-loop reviews, and feedback loops) to protect individuals and SMEs. On investment desks, AI speeds research drafting, scenario analysis, order execution advice, and policy pre-checks, with LLM outputs constrained by vetted data and confidence thresholds.

Seoul has also lowered the barriers for foreign entrants with grants, rent support, soft-landing services in the Seoul Financial Hub, and co-funded R&D. This package of measures is useful in a market with demanding users and rigorous supervision. Looking forward, three frontiers define Seoul's trajectory. First, privacy-preserving finance (driven by federated learning, secure processing, and differential privacy). Second, the ability to prove cross-border identity (abstracting over heterogeneous AML/KYC requirements with explainable outcomes). Third,

[15] A 'mule account' is a bank account used to receive, transfer, or launder illegally obtained funds on behalf of c riminals, often without the account holder's full knowledge.

[16] 'Counterfactuals' convert black-box identity verification decisions into explainable, fixable outcomes by identifying the smallest realistic changes that would alter a pass/fail decision. They improve user experience, compliance defensibility, and AI model quality without compromising security

the adoption of real-time financial safety techniques (which include GPU-enabled, millisecond scoring, on-device liveness, and dynamic limits).

Competition from Singapore, Tokyo, and Chinese hubs, plus computing capacity and talent constraints together with rising AI-safety expectations, remain real. Even so, Seoul's 'urban-planning-as-innovation' approach, which has turned Yeouido into an AI-aware financial campus and Yangjae into an applied research district, creates a compelling base for prototyping, governing, and scaling AI-first financial services.

In parallel, there is notable innovation occurring in financial infrastructure in Asia. SWIFT is evolving from a messaging utility to an execution-oriented global infrastructure for always-on cross-border payments, digital assets, and AI-enabled services. Building on its scale and neutrality (over 11,500 organisations) and faster delivery (a large share of payments is credited within minutes), SWIFT's ISO 20022 migration elevates data quality ahead of the 2026 structured-address milestone. The roadmap adds a shared ledger for 24/7 programmable settlement with smart-contract enforcement and interoperability across legacy correspondent rails and tokenised ecosystems.

Trials have shown that tokenised bonds and synchronised events across chains and fiat rails can be supported by SWIFT. On the AI front, SWIFT is piloting PETs and federated learning with banks to strengthen fraud defences without sharing raw data. SWIFT has released open-source neuro-linguistic programming code to help meet ISO 20022 requirements. It is also modernising its platform with API-first microservices and cloud to scale up its analytics/machine learning capabilities.

The lessons for Asia's financial sector from SWIFT are that it is important to design for interoperability from day one, to elevate data governance as product infrastructure, to embrace privacy-preserving collaboration, to prioritise execution assurance over mere connectivity, to adopt cloud-native delivery, and to co-create with clients and regulators through industry programmes.

Asia is accelerating toward interoperable, programmable finance, with near-term leadership expected in cross-border digital currency settlement capabilities, tokenised real-world assets, AI-enabled risk/compliance, and open finance that extends beyond banking data. Multi-CBDC projects such as mBridge are reaching the level of minimum viable product maturity and are likely to progress into limited-production implementations for trade and treasury flows among select East and Southeast Asian markets.

In parallel, tokenisation initiatives, such as Singapore's Project Guardian, are poised to evolve into standardised, regulated infrastructure spanning issuance, distribution, and lifecycle events, enabling secondary liquidity for tokenised fixed income and funds. Open finance frameworks and account aggregators in India, Singapore, and parts of ASEAN will broaden user-consent controlled data sharing across deposits, investments, pensions, and utilities. These developments will accelerate the introduction of embedded credit and personalised protections while linked instant-payment systems (e.g., PayNow–PromptPay connectivity and UPI payment channels) and QR interoperability will expand low-cost, real-time cross-border retail payments.

Operationally, AI is set to become a utility across credit, compliance, and customer operations. Anticipated outcomes include sharper fraud detection and prevention across systems, materially fewer AML/KYC false positives, and faster case resolution. Market structure seems certain to professionalise stablecoins under prudential regimes while anchoring wholesale settlement in CBDC rails where programmability and intraday liquidity can be assured.

To navigate fragmented rules and local data storage constraints, a new category of 'compliance orchestration' platforms is expected to emerge, routing workflows to compliant venues and codifying jurisdictional controls. Behind the scenes, cloud-native, microservice-based financial market infrastructure (with sovereign controls, confidential computing, and zero-trust security) may well become standard, enabling elastic scaling of AI and tokenisation workloads and faster rule and product iteration.

Looking Ahead

Four trends will most likely define Asia's next phase of financial infrastructure evolution. First, AI-native infrastructure with agentic systems automating risk, compliance, and operations will dominate. Second, widespread tokenisation and programmable money (CBDCs and tokenised deposits) will become commonplace enabling conditional, automated finance. Third, sustainability will probably become embedded into rails through real-time carbon data, verified green instruments, and transition-finance tooling. Fourth, deeper regional co-ordination will become more widespread which will harmonise identity verification, payment processing, and digital-asset standards.

The predicted outcomes are faster, cheaper, and safer cross-border flows, institutional-grade tokenised markets, materially improved financial inclusion via multilingual, AI-driven interfaces, and globally influential standards shaped by Asia's execution at scale. The remaining obstacles of co-ordination, harmonisation, and resilience are significant but tractable, as evidenced by the region's recent record of turning ambitious pilots into production-grade infrastructure.

Success by the late 2020s would feature near-real-time cross-border SME payments with transparent FX and pre-validation, institutional tokenised assets trading with settlement completion certainty, automated corporate actions across interoperable venues, and AI that significantly reduces AML/KYC friction and speeds up investigations. In addition, sustainability-linked instruments which integrate real-world sensor and satellite data into pricing and coupons is likely to emerge.

Verifiable credentials would let consumers and SMEs onboard across markets with minimal friction, as super-apps distribute services and banks provide balance sheet, risk, and compliance 'as infrastructure'. To get to this destination, institutions should build natively to ISO 20022 and event-driven architectures. They should also invest in model governance, PETs and federated learning together with upgrading custody and corporate actions for tokenised products with chain-agnostic design.

Institutions should also participate in multi-stakeholder pilots to shape standards and implement compliance orchestration layers thereby encoding multi-jurisdictional rules and

accelerating cross-market deployment. In parallel, they need to mitigate risks in settlement completion certainty, cyber resilience, AI model governance, and interoperability debt between different infrastructures and actively be able to demonstrate consumer protection.

Asia's financial system is being rebuilt around interoperable digital rails, high-integrity data, and privacy-preserving AI. What started as separate initiatives deploying instant payments, digital identity verification, AI for credit scoring and fraud prevention, tokenised assets, and CBDC pilots have now merged into a region-wide re-engineering of market infrastructure. Linked fast-payment systems and emerging CBDC platforms point to settlement architectures that cut time and errors while increasing transparency and finality. ISO 20022, APIs, and verifiable identity are moving data from afterthought to core infrastructure, enabling automation and embedded finance.

Meanwhile, federated learning and PETs are allowing institutions to share intelligence against fraud without exposing sensitive data whilst raising safety standards across the network. Case studies highlight how strategy becomes execution. Seoul shows the compounding effect of proximity, policy, and talent pipelines through implementing a full-lifecycle FinTech lab model, making abundant computing power available, and close regulator–industry collaboration compressing the path from research to deployment.

Governance by design makes AI usable in supervised settings. At the network scale, SWIFT's shift from messaging to execution assurance via a shared ledger, tokenised asset lifecycle orchestration and programmable execution demonstrates evolution without sacrificing reach, neutrality, or resilience. The shared lessons are to design for interoperability first, to treat data quality as product infrastructure, to make privacy-preserving collaboration a core risk discipline, and to build for deterministic execution so that speed can also mean safety.

There are also new or enhanced risks arising from cyber exposure from always-on systems, AI-enabled attacks, cross-rail failure modes, and 'interoperability debt' from inconsistent regimes. To address these issues requires zero-trust designs, confidential computing, engineered kill-switches, and standards-driven conformance.

Policymakers should prioritise public digital infrastructure, evidence-driven sandboxes, and SupTech (technology for market and participant supervision). Institutions should adopt ISO 20022 at capture, event-driven microservices, chain-agnostic tokenisation, and robust AI safety. FinTech businesses should be infrastructure-native and governance-ready.

Success by the late 2020s based on current trends should include rapid settlement in minutes with settlement completion certainty, fewer exceptions driven by right-first-time data, shared-intelligence fraud prevention, credible sustainability transition finance, and seamless, multilingual onboarding with portable credentials. For maximum effectiveness, these outcomes should be delivered by FinTech and AI FinTech applications that move from instant to intelligent.

Introduction

Overview Of Banking And Financial Services In Asia 2026

Asia's banking and financial services sector is becoming more digital, more platform-based, more regulated, and more unevenly distributed across markets. The region includes highly advanced financial centres such as Seoul, Singapore, Hong Kong, and Tokyo, giant state-influenced banking systems in China, and fast-growing inclusion-driven markets across India and Southeast Asia. That mix makes Asia less a single banking market than a set of overlapping models: incumbent universal banking, mobile-first consumer finance, embedded FinTech, and state-backed digital infrastructure.

A core feature of the current landscape is that Asia is no longer just catching up in financial innovation. In several areas, notably instant payments, mobile wallets, super-app finance, and some forms of tokenisation as well as digital-currency experimentation, the region is helping define where global finance is heading. The Asian Development Bank's 2025 integration report[17] highlights the growing role of digital financial services, remittances, and stronger regulatory frameworks in making finance more accessible while balancing AML/KYC, security and consumer protection concerns.

Even in this rapidly digitising environment, traditional banking still matters. Large commercial banks remain central to credit creation, corporate finance, trade finance, deposits, and wealth management across the region. But those banks are under pressure to modernise their technology stacks, improve data capabilities and respond to customer expectations shaped by FinTech firms. This has recently been highlighted by McKinsey's report into the impact of AI and AI FinTech on traditional banks, where the challenge is fundamentally to re-design the entire set of customer journeys[18]. In many Asian markets, consumers now expect payments to be instant, onboarding to be digital, fraud controls to be real-time, and financial services to appear inside ecommerce, messaging, and mobility apps rather than only inside bank channels.

Current Trends in Asia

One of the clearest region-wide shifts is the rise of digital payments infrastructure. Instant-payment systems and QR-based payments have expanded rapidly, particularly in Southeast Asia and India. These systems are increasingly linked across borders, reducing the friction and cost of retail remittances and small-value international payments. Asia's progress in payment interlinkages is tied to a broader policy push for faster, cheaper and more transparent cross-border payments, including experiments with linking domestic instant-payment systems and improving interoperability across national infrastructures[19].

[17] Asian Economic Integration Report 2025: Harnessing the Benefits of Regional Cooperation and Integration
[18] Rewiring banks for excellence in customer care | McKinsey
[19] ibid

Another defining trend is the integration of FinTech into everyday consumer life. In parts of Asia, the most important financial distributors are not always banks; they are wallets, marketplaces, ride-hailing apps, and social platforms. This has changed the way credit is assessed and offered. Instead of relying only on bureau files or branch relationships, lenders may use transaction histories, merchant sales, mobility patterns, or e-commerce behaviour as proxies for creditworthiness. These developments have expanded access for underbanked consumers and small businesses, although the ubiquity of these apps also raises questions about data governance, explainability, and fair treatment.

AI is now becoming the next major layer on top of the increasing digital base. Across Asia, financial institutions are moving from experimentation to production use in areas such as fraud detection, customer service, anti-money-laundering monitoring, credit analytics, and internal productivity tools. The IMF's 2025 *Regional Economic Outlook: Asia and Pacific*[20] notes that AI is becoming an important emerging challenge and opportunity for the region's policymakers and financial systems. In practice, AI adoption is strongest where institutions already have strong digital rails, high volumes of transaction data, and clear commercial use cases - especially payments, retail banking, and compliance.

The region is also seeing a stronger push into digital assets, tokenisation, and digital currency infrastructure, though progress varies sharply by jurisdiction. Singapore and Hong Kong have positioned themselves as regulated hubs for tokenisation, digital asset services, and market experimentation. China has continued to develop and promote its e-CNY digital currency work and broader public-sector involvement in digital infrastructure.

Cross-border finance is especially important in Asia because the region combines large trade flows, complex supply chains, migrant remittance corridors, and multiple major currency zones. This environment creates strong demand for improved trade finance, foreign exchange services, treasury management, and payment connectivity. Financial institutions are therefore investing both in in customer-facing apps and also in messaging standards, compliance technology, sanctions screening, fraud analytics, and liquidity management. Improvements in these back-end systems are less visible to consumers, but they are critical to making regional finance faster and more resilient.

Wealth management and insurance are also evolving. Rising middle-class incomes and aging populations are increasing demand for savings, investment, retirement, and protection products. In wealth management, digital onboarding, robo-advice, portfolio tools, and tokenised investment products are becoming more common, especially in major financial centres. In insurance, InsurTech models are using AI and digital distribution to improve underwriting, claims handling and embedded insurance offerings. The broader pattern is that financial services are moving toward continuous digital engagement, rather than episodic interactions centred on branches or paper forms.

Regulation and Supervision

At the same time, regulation is becoming more sophisticated. Asian regulators are generally trying to avoid a false choice between innovation and control. Instead, many are building sandbox models, AI guidance, digital asset rulebooks, and open-finance frameworks that

[20] Regional Economic Outlook: Asia and Pacific, October 2025 -- Navigating Trade Headwinds and Rebalancing Growth

encourage experimentation while preserving financial stability and consumer trust. The OECD's 2025 work on Asian capital markets and innovation facilitators[21] shows that Asia has become a major centre for regulatory sandboxes and innovation hubs, with Seoul, Singapore, Hong Kong, Tokyo, and others incorporating FinTech and increasingly AI-related use cases into formal supervisory structures.

Across Asia, policymakers are exploring how tokenised deposits, stablecoins, wholesale CBDCs, and programmable settlement systems (typically using blockchain 'smart contracts'[22]) might improve cross-border payments and capital markets efficiency. These efforts are not replacing traditional banking infrastructure yet, but they are starting to influence how market participants think about settlement, liquidity, and interoperability.



Financial Services Landmarks In Asia

Challenges And Risks Ahead

Despite all the trends to integration and interoperability, Asia's financial landscape remains highly fragmented and uneven. Seoul and Tokyo operate in mature, highly banked markets with strong incumbents and advanced infrastructure. China combines enormous scale with close state involvement and a powerful domestic platform economy. Singapore and Hong Kong function as international hubs with outsized roles in regulation, capital markets, and cross-border finance. India and much of Southeast Asia are defined more by inclusion, scale, and infrastructure leapfrogging. That means the same terms (for instance, FinTech, AI FinTech, digital bank, open finance, or tokenisation) can imply very different business models depending on the market.

The main risks are also becoming clearer. Cybersecurity threats are growing. AI can improve fraud detection, but it also equips attackers. Rapid digitalisation can create operational

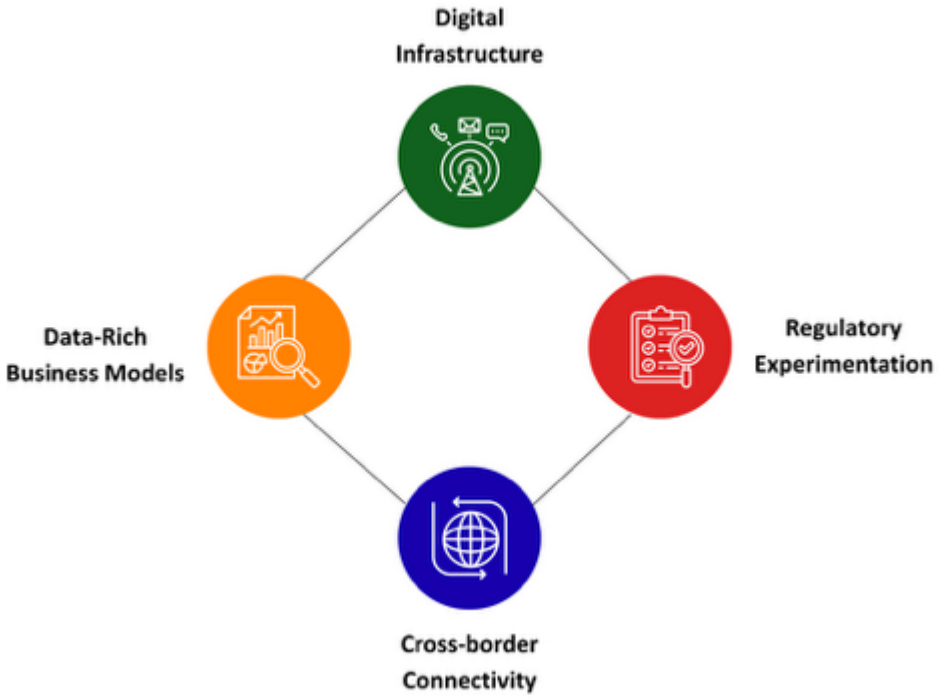
[21] AI innovation facilitators in Asia: Asia Capital Markets Report 2025 | OECD

[22] A 'smart contract' is a self-executing digital agreement stored on a blockchain that automatically enforces its terms when predefined conditions are met.

concentration risks if too much activity depends on a small set of cloud, data, or platform providers. Digital assets may improve settlement efficiency, but they also raise legal and prudential regulation questions. Asia's banking systems are therefore modernising in an environment where innovation capacity and risk-management capacity have to grow together.

The Importance Of Innovation And Technology As Drivers Of Development In Asia And The Rest Of The World

Overall, banking and financial services in Asia are being transformed by four linked forces:



As described above, the result is that Asia is a region where incumbent banks remain powerful, but where finance is increasingly delivered through networks, platforms, APIs, (computer-to-computer interfaces), and programmable systems rather than through branches and legacy product silos alone. Asia's importance in global finance comes both from economic size and that it is a region where the future architecture of financial services is being built.

Innovation and technology have become core drivers of development in banking and financial services because they change not just **how** institutions operate, but **what** financial systems can deliver, i.e., broader access, lower costs, faster payments, better risk management, deeper data use, and new products. In both Asia and the rest of the world, the story is no longer about simply 'digitising banking'. Rather, it is about rebuilding financial intermediation around software, data, and increasingly AI. This matters because banking is an infrastructure industry.

When the underlying infrastructure improves, the effects spread widely. Households gain easier access to payments and credit, firms can manage cash and trade more efficiently, regulators gain better visibility, and economies become more financially connected. The Asian Development Bank has argued that stronger financial infrastructure, digital transformation and improved cross-border payments are important to deeper regional integration and more inclusive development[23].

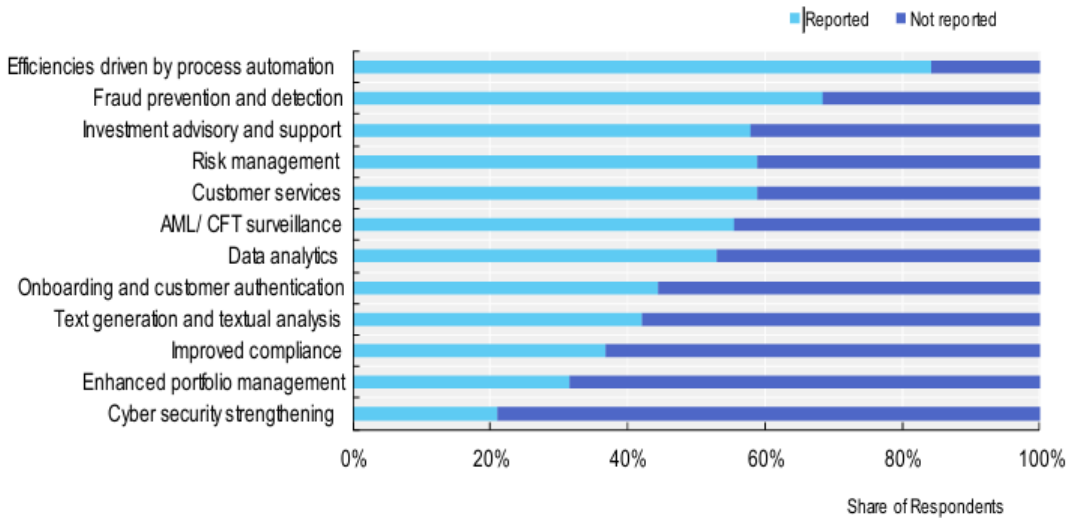
One reason technology matters so much is that financial services have historically been expensive, fragmented, and dependent on manual processes. Traditional banking required dense branch networks, paper-heavy onboarding, slow settlement cycles, and siloed data systems. Innovation reduces those frictions. Digital identity, mobile interfaces, cloud infrastructure, APIs, and automated compliance tools lower the marginal cost of serving customers and make it viable to reach people and businesses that were previously too costly to serve. This is especially important in Asia, where advanced financial centres coexist with large underbanked populations.

Mobile wallets, platform finance, and app-based payments have expanded rapidly because they fit the region's consumer habits and infrastructure realities better than older branch-led models. ADB's 2026 regional report highlights digital payment systems and cross-border payment improvements as part of the region's financial development agenda, including examples such as Cambodia's Bakong platform and the broader push to use digital channels for remittances and inclusion[24].

A second reason innovation is central is that it raises productivity and service quality inside financial institutions. Banks and insurers now use technology both to cut costs and to improve decisions. AI is particularly important here. The OECD finds that in Asia, AI-driven innovation is already supporting a broad range of financial products and services, with lending the most common use case, followed by client onboarding and mobile banking as is shown in Figure 2[25].

[23] Asian Economic Integration Report 2026: Leveraging Regional Cooperation and Integration to Navigate Global Uncertainties
[24] ibid
[25] Artificial intelligence in Asia's financial sector (EN)

Figure 2 | Underlying Uses Of AI In Financial Services In Asia



Note: Based on a total of 19 jurisdictions. Non-exhaustive list.
Source: 2025 OECD Survey on Asian policies for AI in Finance.

The OECD also notes that AI is being adopted for fraud monitoring, customer service, AML/KYC processes, risk analysis, cybersecurity, and supervisory technology by regulators themselves. This is more than a marginal improvement, it is transformational. In lending, for example, AI can process more variables and identify patterns faster than traditional scorecards, which can improve underwriting accuracy and expand credit access for 'thin-file' customers[26] with little conventional credit history. In operations, AI can reduce false positives in fraud systems, speed up case handling, and improve customer response times. In a sector where margins, trust, and compliance all matter, those gains are strategically important.

Impact Of FinTech And AI FinTech On Financial Services

Asia has become one of the clearest demonstration grounds of the impact of FinTech and AI FinTech because the region combines high digital adoption, large transaction volumes, and regulatory experimentation. In several Asian markets, the leap from cash or branch banking to mobile-first finance happened quickly, allowing institutions to build around new rails rather than upgrading old ones. The OECD notes that widespread uptake of mobile banking and digital financial services, especially across ASEAN economies, has helped make banking the leading domain for AI use in the region[27].

Singapore is a positive example of how policy can reinforce this trend. The Monetary Authority of Singapore (MAS) states explicitly that AI can transform financial services and has focused its policy on helping financial institutions adopt AI productively and responsibly, anchoring AI capabilities in Singapore, upskilling the workforce, and issuing guidance on AI

[26] A 'thin-
file customer' is defined as an individual who has a limited or insufficient credit history, often due to having never accessed credit or having very rarely made use of it.
[27] Artificial intelligence in Asia's financial sector (EN)

risk management[28]. That combination of innovation support and governance matters because financial development depends not just on innovation, but, crucially, on trust.

Another major way technology drives development is through payments modernisation, which affects almost every other part of finance. Faster, cheaper, more interoperable payments reduce friction for consumers, merchants, employers, governments, and cross-border trade. Around the world, banks and regulators are upgrading payment systems, adopting richer data standards, linking domestic instant-payment networks, and experimenting with tokenised settlement assets.

In Asia, those changes are especially significant because cross-border remittances, tourism activity, and regional supply chains are of critical importance. Better payment infrastructure improves liquidity management, cash-flow predictability, and merchant adoption of formal financial services. Once payments become digital and real-time, other services often follow. Lending can be embedded at checkouts, SMEs can build transaction histories, and regulators can monitor risks more effectively. ADB's work links improved payment infrastructure directly to stronger regional economic integration, showing why technology in finance should be seen as development infrastructure, not merely as a consumer convenience[29].

Structural Impact of Technology

Technology also matters because it is expanding the range and design of financial products. WealthTech, InsurTech, embedded finance, tokenised assets, and AI-assisted advisory tools are changing what can be offered and to whom. The World Economic Forum's 2025 work on AI in financial services emphasises that the technology's importance extends beyond automation: it can reshape product design, distribution, risk selection, client engagement, and operational control[30].

In practice, this means a bank can tailor savings nudges, a digital insurer can price more dynamically, and a platform lender can use live merchant data rather than old collateral-heavy models. Globally, this increases competition by allowing non-traditional players to enter parts of the value chain. In Asia, it has been especially visible in super-app ecosystems, digital banks, and wallet-led models that combine payments, credit, insurance, and commerce in one interface.

At the same time, innovation is now a driver of resilience and regulatory capacity, not just growth. Financial systems are more exposed than ever to cyber threats, fraud, sanctions risk, and operational shocks. Technology helps here too. AI-based anomaly detection, RegTech, SupTech, automated monitoring, and data analytics can strengthen risk detection and supervisory oversight. The OECD notes that Asian financial authorities are themselves using AI-driven supervisory tools to enhance efficiency, improve risk detection, optimise resources, and support data-driven policymaking[31].

For regulatory authorities to deploy FinTech and AI FinTech is a crucial development. A modern financial system cannot scale safely if regulators are stuck with slower tools than the

[28] Artificial Intelligence
[29] Asian Economic Integration Report 2026: Leveraging Regional Cooperation and Integration to Navigate Global Uncertainties
[30] WEF_Artificial_Intelligence_in_Financial_Services_2025.pdf
[31] Artificial intelligence in Asia's financial sector (EN)

firms they supervise. Innovation therefore has a dual role: it powers private-sector transformation and upgrades the state's ability to govern that transformation.

FinTech and AI FinTech technology is not automatically developmental. It can create new risks, including:

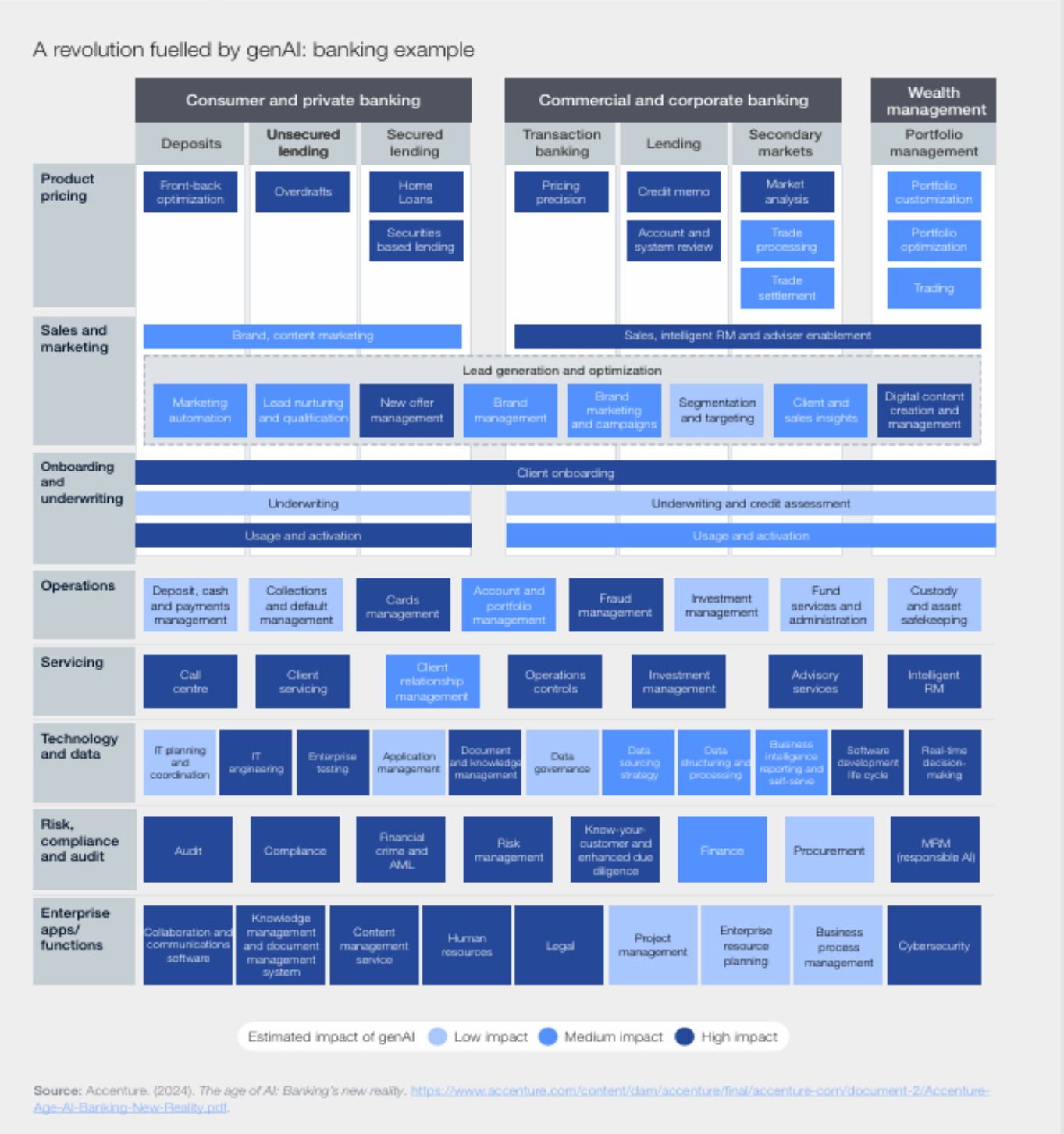
- Algorithmic bias in lending.
- Exclusion through poor data quality.
- Cyber concentration in cloud providers.
- Faster contagion through digital channels.
- Fragmented standards across borders.

The IMF has argued that tokenisation and programmable finance, for example, may produce both major efficiency gains and reallocate trust as well as reshaping settlement, liquidity, and systemic risk in ways that require stronger governance, settlement completion certainty, and safe settlement assets[32].

The same is true for AI. The fact that innovation drives development does not mean every innovation is beneficial by default. It means the institutions that capture the gains are usually those that pair technological change with good governance, sound risk management, workforce adaptation, and consumer protection. Figure 3 shows the World Economic Forum's view of the potential impact of generative AI on banking processes (sourced from Accenture).

[32] Tokenized Finance

Figure 3 | Potential Impact of Generative AI on Banking Processes



Source: Accenture. (2024). *The age of AI: Banking's new reality*. https://www.accenture.com/content/dam/accenture/final/accenture-com/document-2/Accenture-Age-AI-Banking-New-Reality.pdf.

The broader lesson, in Asia and globally, is that innovation and technology are now fundamental to financial development because they shape the speed, reach, intelligence, and resilience of the system itself. They extend access, can improve decision-making, deepen regional and global connectivity, and support new business models. Asia shows this clearly because it contains both frontier financial centres and high-need emerging markets, making it a live laboratory for financial inclusion, payments modernisation, AI deployment, and regulatory adaptation, amongst other developments.

The rest of the world faces the same structural direction of travel, even if at different speeds. Financial systems that innovate well will be more efficient, more inclusive and more competitive. Those systems that do not evolve and adapt risk becoming slower, costlier, and less relevant in an economy increasingly organised around digital networks, data, and intelligent automation.

The Rise Of AI-driven FinTech

Asia has become the world's most dynamic environment for FinTech innovation, driven by its population scale, mobile-first consumer behaviour, high digital adoption, and the presence of both advanced financial centres and rapidly developing economies. The region's FinTech systems encompass sophisticated AI-enabled banks in Korea, Singapore, Hong Kong, and Japan, as well as mobile-wallet-based financial ecosystems in Southeast Asia, India, and mainland China. Regulators across Asia, more than in any other region, are proactively shaping FinTech development through sandboxes, AI governance frameworks and digital-identity-based data-sharing regimes

Defining FinTech In Asia

The Asian Development Bank's 'FinTech Policy Toolkit' defines FinTech as:

> *"Technology-enabled innovation in financial services that could result in new business models, applications, processes or products with a material effect on financial markets and institutions[33]."*

This broad definition captures the diversity of FinTech activity in Asia, which can be organised into seven sub-sectors:

Figure 4 | Sub-sectors of FinTech Activity In Asia



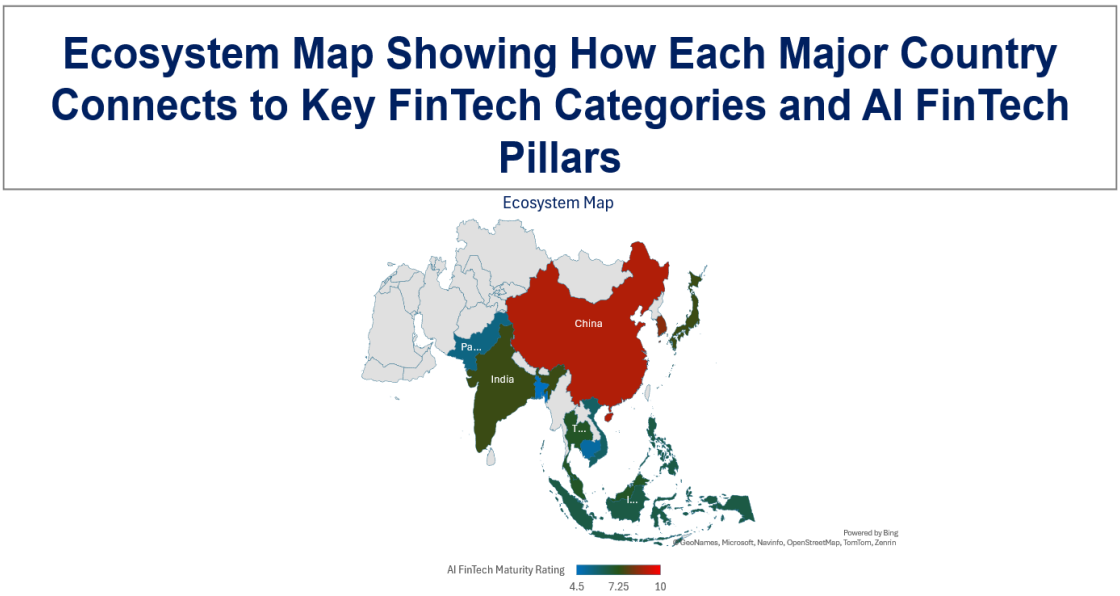
[33] FinTech Policy Tool Kit for Regulators and Policy Makers in Asia and the Pacific

Across Asia, these seven groups are complemented by government digital identity systems, open-data frameworks and real-time payments infrastructure, making FinTech both influential in the financial sector and an essential piece of national economic architecture.

FinTech And AI FinTech In Asia: Area Dynamics

Figure 5 shows country levels of maturity in FinTech and AI FinTech in Asia on a ten-point scale which has been derived from the report's consolidated analysis.

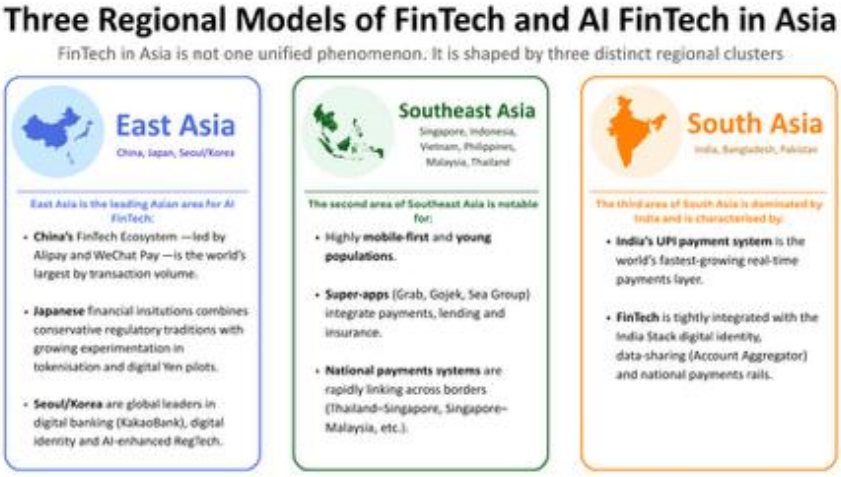
Figure 5 | Levels Of Fintech And AI Fintech By Country In Asia



Singapore 10 |	Hong Kong 9.5 |	China 9 |	South Korea 8.5 |	Japan 7.5 |	India 7.5 |	Malaysia 7
Thailand 7 |	Indonesia 6.5 |	Philippines 6.5 |	Vietnam 6 |	Pakistan 5.5 |	Cambodia 5 |	Bangladesh 4.5

However, FinTech in Asia cannot be understood as one unified phenomenon. Instead, it is shaped by three distinct clusters (individual country summaries can be found in Annex 1 and regional perspectives can be found in Annex 2).

Figure 6 | Regional Models Of FinTech and AI FinTech in Asia



Across all areas, FinTech, and AI FinTech serve as channels for expanding access to formal finance, improving payment connectivity, strengthening inclusion, and supporting SMEs.

Why Asia Has Become The Global Epicentre Of Fintech And AI Fintech

Asia's FinTech and AI FinTech dominance is driven by some key structural advantages. These are endemic to the geographic, population, sectoral, economic and cultural differences across Asia. The drivers for Asia leading the world in FinTech include:

- **Mobile-first adoption**
  - Large segments of Asian consumer populations skipped desktop banking entirely and adopted mobile financial services first.
- **High population density and urbanisation**
  - Densely populated cities (Seoul, Tokyo, Shanghai, Singapore, Hong Kong) have accelerated digital services adoption.
- **Frequent regulatory experimentation**
  - Regulators in Asia have innovated through a variety of mechanisms using:
    - Dedicated AI toolsets, such as the Bank of Korea's Boki[34]
    - Regulatory sandboxes such as Hong Kong's AI Sandbox++
    - Innovation hubs
    - AI-specific risk guidelines (see below)
    - Digital identity frameworks.
  - These innovations have reduced entry barriers while managing risk.
- **Large underserved populations**
  - Hundreds of millions of unbanked or underbanked consumers created strong demand for mobile wallets, micro-lending and alternative credit scoring.
- **Presence of public-private digital infrastructure partnerships**
  - Examples of the prevalence of public-private ventures in infrastructure include India Stack, Singapore's SGFinDex, China's blockchain trade platforms and Southeast Asia's cross-border QR payment integrations.
- **Widespread use of ecosystem-based business models**
  - Asian super-apps (Alipay, WeChat, Grab, GoTo, Sea Group) have embedded finance inside mobile access, commerce and lifestyle products, therefore seamlessly integrating payments and lending into everyday life.

AI has become the primary force reshaping Asia's FinTech ecosystems. The OECD emphasises that AI adoption is continent-wide, spanning both advanced and emerging economies. According to the OECD's 2025 pan-Asian survey[35], AI is most widely used in:

- **Lending & Credit Risk Modelling**
  where AI is used for:
  - Thin-file credit scoring
  - SME lending

[34] Inside the BoK's homegrown AI system, Boki - Central Banking
[35] Artificial intelligence in Asia's financial sector (EN)

  - BNPL underwriting
  - Real-time income analysis
  - Loan monitoring.

  These capabilities expand credit access, especially in Southeast Asia where SME financing gaps are noticeable.
- **Client Onboarding and e-KYC**
  where AI and biometrics streamline:
  - Identity verification
  - Document checks
  - AML/KYC screening.
- **Mobile Banking & Customer Interaction**
  Banks use AI chatbots to respond to millions of enquiries every day.
- **Fraud Detection & Cybersecurity**
  AI models identify anomalous transaction patterns in real time to reduce fraud.
- **Portfolio Management & Algorithmic Trading**
  Algorithmic decision tools are widespread in Korea, Japan and Singapore for trading decisions and managing portfolios.
- **Supervisory Technology (SupTech)**
  Regulators use AI for:
  - anomaly detection
  - risk scoring
  - early-warning systems
  - supervisory analytics.

Regulation And Structural Effects Of Fintech And AI Fintech

Asian regulators have shaped FinTech development through structured innovation frameworks. Many regulators have established regulatory sandboxes to allow FinTech innovation to mature before implementing full regulatory requirements, thus supporting and encouraging innovation in FinTech and AI FinTech. Countries using such sandboxes include:

- Korea
- Singapore
- Hong Kong
- Malaysia
- Indonesia
- Thailand
- India.

In addition, regulatory authorities have also published AI governance frameworks to provide sector guidance on the appropriate/ethical use of AI in FinTech beyond the immediate rules and regulations. Examples of such guidance include:

- Korea's 2021–2024 'AI in the Financial Sector' Guidelines
- Monetary Authority of Singapore (MAS) 'Guidelines on AI Risk Management' (2025 Consultation Paper)
- Hong Kong's AI Sandbox++ and AI Cohort Programme
- Japan's AI Ethics & Governance guidelines
- 2022 Asian Development Bank's 'FinTech Policy Toolkit for Regulators and Policy Makers in Asia and the Pacific'.

These frameworks focus on explainability (how decisions were determined), bias control (to prevent conscious or unconscious discrimination), model governance (within ethical guidelines), data transparency (to enable inspection of AI decisions and actions), and accountability for AI FinTech's actions.

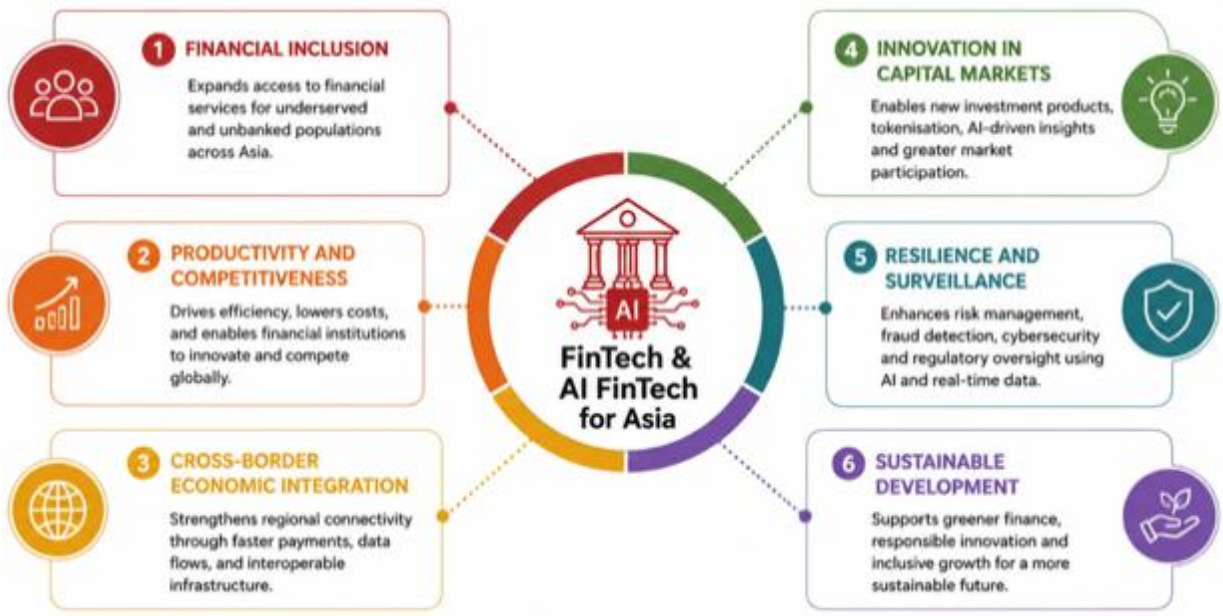
There have been further structural benefits from the rise of FinTech and AI FinTech. Asia's open-finance frameworks have also allowed data-sharing based on customer consent with applications such as India's Account Aggregator, Singapore's SGFinDex, and Australia's Consumer Data Right initiative. FinTech and AI FinTech are showing much greater impacts across Asian financial services markets than simply the immediate applications themselves.

A further impact of FinTech and AI FinTech in Asia has been support for trust initiatives, especially through the use of digital identity verification systems. These systems enable safe onboarding, signatures, and transaction authorisation, for example India's Aadhaar, Singapore's SingPass, and Thailand's NDID. These digital identity applications serve as the backbone of FinTech and AI FinTech scalability.

Why Fintech And AI Fintech Matter For Asia

FinTech and AI FinTech are not just industry developments - they are central to Asia's economic strategy because they drive:

Figure 7 | FinTech and AI FinTech for Asia



Shaping the Future of Finance in Asia: AI-driven FinTech, Digital Currencies, And The Evolution Of Financial Infrastructure

Asia's FinTech and AI FinTech are now entering a 'second phase' moving from pilots and experimentation to operational rollout at scale and characterised by:

- Programmable payments using tokenised money, whether using CBDCs or private digital currencies.
- AI-native operating models inside large banks and insurers.
- Digital-asset market stabilisation and clearer rules for market conduct.
- Cross-border instant payment networks operating at significant volumes.
- AI copilots for banking and insurance operations.
- Generative AI in loan and insurance underwriting, compliance and securities research.
- Regulators adopting AI FinTech to supervise AI FinTech.

Given Asia's scale and diversity, it is likely that the next decade of global FinTech innovation will be defined by Asian experience, regulatory leadership, and consumer behaviours.

Digital Currencies And Tokenisation In Asia

Digital currencies have become central to the transformation of modern financial systems, and this is at its most visible in Asia. The region sits at the intersection of rapid technological adoption, large and youthful populations, mobile-first economies, and state-driven digital innovation. This unique combination has created fertile ground for the rise of CBDCs, cryptocurrencies, and tokenised financial assets, each contributing to a new digital monetary order.

Central Bank Digital Currencies (CBDCs)

CBDCs are digital forms of sovereign money issued and backed by central banks. They come in two variants: retail CBDCs, used by consumers and businesses; and wholesale CBDCs, intended for interbank settlement and large-value transactions. Asia is the global leader in CBDC experimentation.

China stands out with its e-CNY digital yuan which is the world's largest retail CBDC pilot implementation. e-CNY is used for consumer payments, public-sector disbursements, transport fares, e-commerce, and cross-border pilot projects[36]. While uptake is still small compared to China's dominant private wallets, the infrastructure is robust, widely deployed and evolving.

Other economies are also progressing. Korea, together with Japan, have multi-phase CBDC experiments focused on settlement models and tokenised deposits. Hong Kong is piloting an e-HKD, while the Hong Kong Monetary Authority (HKMA), Bank of Thailand, People's Bank of China, and the UAE Central Bank are jointly developing mBridge, which is aimed at cross-border trade settlement and has reached minimum viable product stage[37]. The Bank of Korea and the Bank of Japan are participating in the BIS-led Project Agora for tokenised and other immediate international settlement. Singapore's MAS is exploring purpose-bound money under 'Project Orchid'[38]. India has launched retail and wholesale CBDC pilots, building on the success of the Unified Payments Interface (UPI)[39].

CBDCs across Asia represent far more than technological upgrades to payment systems. They are increasingly being used as strategic tools for monetary sovereignty and economic independence. China's e-CNY exemplifies this approach, serving as a mechanism to reduce reliance on USD-denominated correspondent banking networks and potentially challenge the

[36] Progress of Research & Development of E-CNY, People's Bank of China www.pbc.gov.cn

[37] Project mBridge reached minimum viable product stage

[38] MAS, Project Orchid, Project Orchid

[39] Reserve Bank of India, Concept Note on CBDC. Press Releases - Reserve Bank of India NB. Unified Payments Interface is a real-time digital payment system in India that enables instant money transfers and payments between bank accounts using a smartphone.

dominance of SWIFT in international settlements (see below for discussion on the digital yuan/e-CNY).

This monetary sovereignty dimension extends beyond China, with other Asian central banks viewing CBDCs as ways to maintain control over domestic payment systems and reduce dependence on foreign financial infrastructure that could be subject to sanctions or political pressure[40].

The financial inclusion potential of CBDCs addresses one of Asia's most pressing economic challenges, namely serving the hundreds of millions of unbanked or underbanked people across the region. Unlike traditional banking infrastructure that requires significant physical presence and documentation, CBDCs can leverage existing mobile networks and digital identity verification systems to provide financial services directly to previously excluded populations[41]. India's digital rupee pilots build on the success of UPI and Aadhaar[42] to reach rural communities, while Indonesia and the Philippines see CBDCs as complementary to their thriving mobile wallet ecosystems[43]. The programmable nature of CBDCs also enables targeted social welfare distribution, conditional cash transfers, and micro-lending programmes that would be impossible or prohibitively expensive through traditional banking channels.

Cross-border settlement reform represents perhaps the most transformative application of Asian CBDCs, with projects like mBridge demonstrating the potential for real-world implementation of multi-CBDC platforms. The Bank of Thailand, Hong Kong Monetary Authority, People's Bank of China, and UAE Central Bank have successfully conducted live transactions using wholesale CBDCs for international trade settlement, reducing settlement times from days to minutes while eliminating multiple intermediaries[44].

This infrastructure could revolutionise Asian trade relationships, particularly in the ASEAN grouping where countries are already linking domestic real-time payment systems bilaterally involving Singapore, Thailand, Malaysia and Indonesia[45]. The implications extend beyond efficiency gains to fundamental shifts in trade finance, enabling smaller businesses to access international markets without the complexity and cost barriers of traditional correspondent banking relationships.

The digital sovereignty aspect of Asian CBDCs encompasses both defensive and proactive strategic considerations. Defensively, CBDCs provide central banks with enhanced oversight capabilities, real-time monitoring of financial flows, and tools for implementing monetary policy with unprecedented precision, as observed by the IMF[46]. The Monetary Authority of Singapore's exploration of 'purpose-bound money' through Project Orchid demonstrates how CBDCs can embed policy objectives directly into the currency itself, enabling automatic

[40] Central bank digital currencies for cross-border payments
[41] Financial Inclusion | World Bank Group
[42] Aadhaar means 'foundation' or 'base' in Hindi and serves as India's unique 12-digit identity number for residents.
[43] Reports- Reserve Bank of India
[44] Project mBridge reached minimum viable product stage
[45] Cross-Border QR Payment Linkage Initiatives, Bank of Thailand www.bot.or.th/en
[46] Central Bank Digital Currency and Financial Inclusion

compliance with regulations or targeted economic stimulus measures[47]. Proactively, leading Asian economies view CBDCs as opportunities to export their financial infrastructure and monetary influence. China's e-CNY is the most prominent example of how a CBDC could potentially challenge existing international monetary hierarchies and create new spheres of financial influence which are aligned with Asian economic integration rather than Western-dominated systems.

Cryptocurrencies

Asia is the global hub for cryptocurrency adoption. Retail markets in Vietnam, India, Pakistan, and the Philippines rank among the world's highest in usage according to the Chainalysis Global Crypto Adoption Index. This usage is driven by remittances, investment appetite, and local entrepreneurship[48]. Meanwhile, Korea, Singapore, Hong Kong, and Japan host some of the most mature regulated cryptocurrency markets, emphasising investor protection and AML/KYC compliance.

The regulatory climates vary considerably across Asia. Mainland China bans crypto trading but remains influential through its digital currency strategy and blockchain initiatives. Hong Kong reopened regulated retail access to institutional-grade crypto-exchange platforms. Singapore enforces stringent licensing under the Payment Services Act. Japan leads globally in exchange supervision and stablecoin laws. India taxes cryptocurrency trading aggressively but has not banned it and retail interest remains high. Cryptocurrencies serve multiple functions in Asia from speculative investment to remittance rails to payments in gaming economies and vehicles for Web3 innovation.

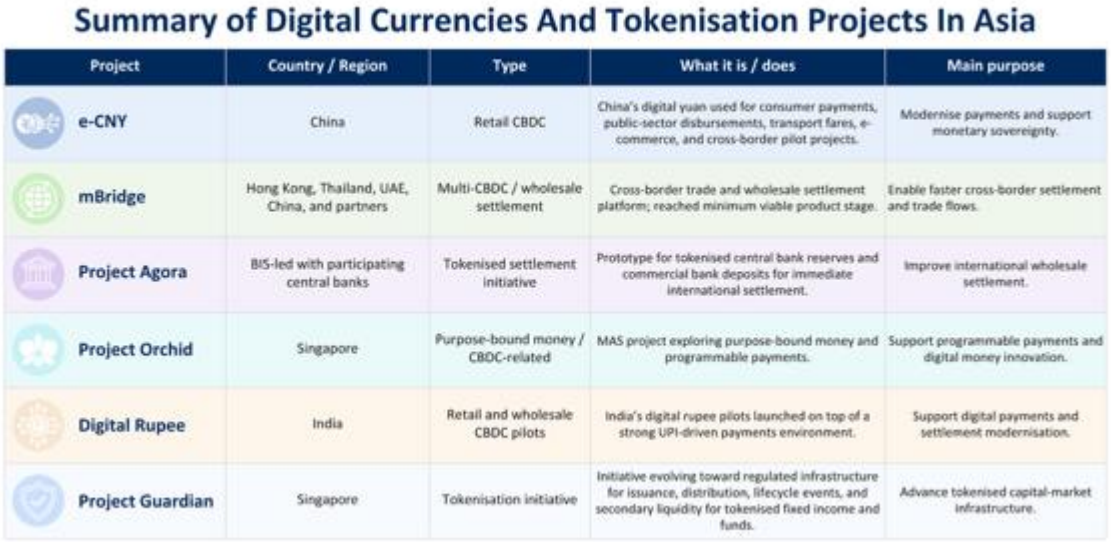
Tokenisation

Tokenisation refers to the digital representation of real-world financial assets such as government bonds, deposits, funds, real estate etc. on distributed ledgers. Asia is pioneering tokenisation across capital markets. Examples include Singapore's Project Guardian which co-ordinates pilots for tokenised treasuries, funds, and bank deposits with regulators around the world, including the UK's Financial Conduct Authority (FCA)[49].

Hong Kong has issued the world's first multi-jurisdiction tokenised green bond[50]. Japan allows banks and trusts to issue tokenised deposits and stablecoins under revised regulations. In addition, China uses blockchain for supply-chain finance and trade documentation, though not for private cryptocurrency assets. Tokenisation promises faster settlement, fractional ownership, improved transparency, and programmable financial workflows. Tokenised assets possess many of the benefits of CBDCs as far as settlement payments are concerned.

[47] MAS, Project Orchid, Project Orchid
[48] Message from Chainalysis
[49] GUARDIAN
[50] Hong Kong Monetary Authority - HKSAR Government's Third Digital Green Bonds Offering

Figure 8| Digital Currencies and Tokenisation Projects in Asia



Summary of Digital Currencies And Tokenisation Projects In Asia

Project	Country / Region	Type	What it is / does	Main purpose
e-CNY	China	Retail CBDC	China's digital yuan used for consumer payments, public-sector disbursements, transport fares, e-commerce, and cross-border pilot projects.	Modernise payments and support monetary sovereignty.
mBridge	Hong Kong, Thailand, UAE, China, and partners	Multi-CBDC / wholesale settlement	Cross-border trade and wholesale settlement platform; reached minimum viable product stage.	Enable faster cross-border settlement and trade flows.
Project Agora	BIS-led with participating central banks	Tokenised settlement initiative	Prototype for tokenised central bank reserves and commercial bank deposits for immediate international settlement.	Improve international wholesale settlement.
Project Orchid	Singapore	Purpose-bound money / CBDC-related	MAS project exploring purpose-bound money and programmable payments.	Support programmable payments and digital money innovation.
Digital Rupee	India	Retail and wholesale CBDC pilots	India's digital rupee pilots launched on top of a strong UPI-driven payments environment.	Support digital payments and settlement modernisation.
Project Guardian	Singapore	Tokenisation initiative	Initiative evolving toward regulated infrastructure for issuance, distribution, lifecycle events, and secondary liquidity for tokenised fixed income and funds.	Advance tokenised capital-market infrastructure.

Government Initiatives And Regulatory Frameworks For Digital Currencies In Asia

Asia's regulatory regimes are diverse but share a common theme of proactive engagement with digital currencies. Many governments see digital currencies as essential to promoting competitiveness, maintaining monetary sovereignty and improving financial infrastructure. Examining the regimes in force can only be done by geography:

Mainland China

China has the most expansive government-led digital currency agenda in the world. The e-CNY is integrated into super-apps, transport, e-commerce, and municipal services. The government prohibits private cryptocurrency trading but invests heavily in blockchain applications for logistics, supply chain finance, and smart contracts. Its regulatory stance reflects priorities including financial stability, capital controls, local data storage, and geopolitical digital independence[51].

Hong Kong

Hong Kong has become a global centre for regulated digital assets. The Securities and Futures Commission (SFC) permits licensed exchanges to offer services to retail investors under strict conditions. The HKMA advances CBDC initiatives including e-HKD and mBridge[52]. Hong Kong aims to maintain its role as a financial hub by combining safety with innovation.

[51] China's Digital RMB Pilot Updates, www.pboc.cn

[52] Virtual asset trading platform operators | Securities & Futures Commission of Hong Kong

Singapore

The Monetary Authority of Singapore (MAS) offers one of the world's most comprehensive and innovation-friendly digital asset frameworks. Key elements include:

- The Payment Services Act (PSA) for cryptocurrency transactions and payments licensing.
- MAS's stablecoin regulatory framework.
- Project Guardian for tokenised finance.
- Project Orchid for programmable money.
- Multiple sandbox regimes.
- Strong AI governance frameworks.

Singapore's regulatory strategy combines emphasising compliance with open experimentation.

Korea

Korea maintain tight investor protections, strict AML/KYC rules for exchanges, and one of the world's most active retail cryptocurrency markets. The Bank of Korea is testing CBDCs for settlement with tokenised deposits and exploring integration into domestic payment rails[53]. It is also participating in the BIS-led Project Agora for frictionless international settlement, including tokenised assets.

Japan

Japan was the first major economy legally to classify and regulate cryptocurrency exchanges. Its updated Payment Services Act permits stablecoin issuance by licensed banks and trust companies[54]. Japan also supports security tokens and tokenised deposits as well as continuing to explore CBDCs through the Bank of Japan's multi-year proof-of-concept phases. The Bank of Japan is also participating in Project Agora.

Southeast Asia

Regulatory maturity varies across jurisdictions in this part of Asia:

- Malaysia has emphasised consumer protection and Islamic finance innovation.
- Thailand has piloted wholesale CBDCs, tokenised bonds and cross-border QR payments.
- The Philippines has implemented an Open Finance Roadmap supporting digital currencies.
- Indonesia has regulated digital exchanges and is actively studying bringing in a digital rupiah.
- Vietnam has been exploring CBDCs cautiously while regulating cryptocurrency lightly.

[53] | Central Bank Digital Currency(목록) | Topics | Bank of Korea

[54] Search result : Financial Services Agency

South Asia

Here, again, there is significant diversity by jurisdiction as to the management of digital currencies:

- India has regulated cryptocurrency transactions through taxation and AML rules while piloting CBDCs.
- Pakistan has enforced strict cryptocurrency transaction restrictions but has at the same time expanded digital payments via RAAST[55].
- Bangladesh restricts cryptocurrency transactions but promotes mobile-money and digital ID platforms.

Figure 9 | Government Initiatives and Regulatory Frameworks for Digital Currencies in Asia



Digital Currency Adoption Rates And Consumer Attitudes Across Asian Economies

Asia exhibits the most diverse and dynamic adoption patterns for digital currencies in the world. Influencing factors include demographics, digital infrastructure, income levels, and regulatory environments. It is impossible to summarise adoption and attitudes amongst consumers across Asia, but some intra-regional conclusions can be drawn.

[55] RAAST, meaning 'direct' in Urdu, is an instant payment system developed by the State Bank of Pakistan (SBP) to facilitate real-time settlement of small value retail payments. It operates on the Pakistan Faster Payment System (PFPS) and allows seamless transactions across banks, digital wallets, and financial institutions - Raast - Wikipedia

China

Digital payments dominate China's consumer economy. Adoption of the e-CNY is growing through use in public transport, welfare programmes, e-commerce platforms and local government pilots[56]. Consumer attitudes are generally pragmatic and view CBDCs as a complement to existing mobile wallets.

Korea

Consumers are technologically sophisticated and entirely capable of using both fiat and digital currencies for financial transactions. Korea have one of the world's highest crypto-investor concentrations, driven by strong trading culture.

Japan

Japan shows interest in regulated exchanges and stablecoins but remains cautious about CBDCs due to the mature banking systems which dominate the financial landscape in the country.

Singapore and Hong Kong

Singapore and Hong Kong are advanced financial markets with high adoption of tokenised investment products and regulated digital-asset services. Retail CBDC adoption is less prevalent, and institutional use remains the focus.

India

India is a global leader in digital payments. India's adoption is driven by UPI, smartphones and strong FinTech and AI FinTech penetration. Cryptocurrency adoption remains high despite strict taxation[57]. CBDC pilots include wholesale settlement for government securities and limited retail use.

Southeast Asia

Vietnam, Indonesia, and the Philippines show high cryptocurrency adoption rates, often driven by:

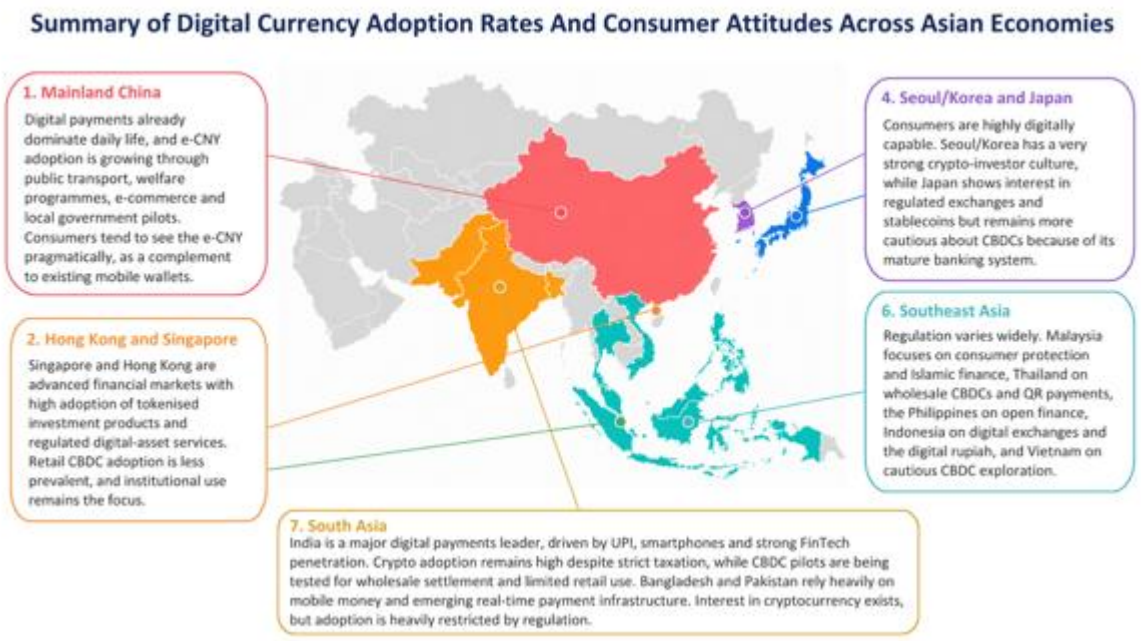
- Remittances, both intra-country and cross-border
- Gaming ecosystems which are popular with consumers
- Speculative trading amongst retail consumers
- Financial inclusion gaps where financial services are uneven or scarce
- Wallets, e.g. GCash, Maya, MoMo, GoPay, OVO which dominate payments.

South Asia

Countries like Bangladesh and Pakistan rely heavily on mobile-money and an emerging real-time payment infrastructure. Cryptocurrency interest exists but is heavily constrained by regulation.

[56] Digital Yuan Pilot Usage Statistics, PBOC, www.pbc.gov.cn
[57] 2024 Global Crypto Adoption Index - Chainalysis - BlockchaneJane

Figure 10 | Digital Currency Adoption Rates and Consumer Attitudes Across Asia



Benefits And Risks Of Digital Currencies And Tokenisation

Digital currencies create opportunities for consumers, financial institutions, regulators, and governments, but they also introduce new categories of risks. CBDCs and stablecoins enable instant, near-zero-cost payments for consumers which are particularly valuable in Southeast Asia's remittance-heavy economies[58]. In addition, future CBDCs may offer features such as conditional payments, automated savings, and targeted subsidies leading to greater flexibility and sophistication of financial infrastructure available to consumers. Also, tokenised assets provide immutable records, reducing information asymmetries between institutions and individuals.

As well as individuals benefitting, there are also benefits for financial institutions. Faster settlement can be enabled since CBDCs and tokenised deposits reduce settlement risk and improve liquidity[59]. There are also benefits in terms of lower compliance costs associated with digital currency transactions not least since smart contracts (programmable money) can embed AML/KYC logic to execute automatically. Furthermore, digital asset custody, tokenised funds, and cross-border CBDC payment solutions create new revenue streams for financial institutions.

At the same time, there are increased risks for consumers. There are privacy concerns around CBDC traceability as well as volatility in the values of cryptocurrencies, which have led to large retail losses in a number of instances. Scams and fraud are growing exponentially, especially

[58] World Bank Document
[59] Tokenisation in the context of money and other assets: concepts and implications for central banks

in loosely regulated markets. There is also consumer confusion between CBDCs, stablecoins, and cryptocurrencies.

In parallel, financial institutions can also face increased risks, such as disintermediation, if retail CBDCs reduce bank deposits. There are also substantial technological investment costs associated with upgrading infrastructure to handle digital currencies and similar instruments. There can also be regulatory risk due to rapidly evolving rules with which financial institutions have to maintain compliance.

There can also be benefits for regulators and governments. Enhanced monetary policy options are supported by CBDCs offering more granular control over money distribution. Regulatory authorities can also sustain improved systemic financial stability through maintaining real-time oversight of capital flows. In addition, there can be reduced reliance on foreign networks such as SWIFT or USD-denominated transactions for major domestic and international payment flows[60].

Equally, there are a number of key risks for regulators and governments. A primary risk is the increasingly challenging nature of maintaining cybersecurity integrity, including nation-state level risks. Interoperability issues across CBDCs have yet to be fully and satisfactorily addressed. There are also geopolitical impacts on currency competition brought on by the adoption of CBDCs.

Potential For CBDCs To Be Used For Trade (Especially The Digital Yuan Or E-CNY)

CBDCs may reshape the infrastructure of international trade. Asia, which is home to the world's most complex trade network, is uniquely positioned to deploy CBDCs for cross-border settlement.

The e-CNY offers several advantages to China for international trade settlement:

Figure 11 | Benefits to China for Using its CBDC for International Trade Settlement



[60] ibid

It is conceivable that other countries in Asia could also perceive benefits for international settlement in e-CNY, especially to reduce dependence on dollar-based transactions and associated correspondent banks. Countries such as Thailand, Malaysia, Singapore, and Indonesia already link QR-based real-time payment systems. The e-CNY and other CBDCs could accelerate this by enabling CBDC-to-CBDC settlement, tokenised trade documentation, and SME-friendly cross-border payments.

India's growing use of rupee settlement for trade, especially with Russia and South Asia, could extend into CBDC-based rails[61]. Singapore and Hong Kong are also running pilots for trade finance settlement using:

- Regulated stablecoins.
- Tokenised bank deposits.
- Smart-contract-based settlement.

What seems certain is that the growth of CBDCs for international settlement and trade finance (especially the e-CNY) is inevitable and will both reshape trade finance international settlements and challenge the US dollar as the dominant currency for international trade - and will do so most notably in Asia.

[61] Reports- Reserve Bank of India

The Evolution Of Financial Infrastructure In Asia

Asia's financial infrastructure has undergone a remarkable transformation over the past decade, evolving from fragmented, branch-heavy systems to integrated digital ecosystems that serve as global benchmarks for innovation and inclusion. This evolution encompasses both technological upgrades as well as fundamental restructuring of how financial services are delivered, accessed and regulated across the region. McKinsey observes how sources of competitive advantage can be turned into infrastructure, especially when combined with AI, delivering a sustainable competitive edge.

> *"The strategic moat comes from turning cognitive work into infrastructure—data pipelines, fine-tuned models, integrated workflows, governance layers—that can scale at very low incremental cost*[62]*."*

The significance of this transformation extends far beyond efficiency gains. Asia's financial infrastructure development has become central to economic integration, monetary sovereignty, financial inclusion, and regional competitiveness in an increasingly digital global economy. From China's comprehensive digital payment ecosystem to Singapore's regulatory sandboxes, from India's public digital infrastructure to Southeast Asia's cross-border QR payment networks, the region is redefining what financial infrastructure can achieve in the 21st century.

Current State Of Financial Infrastructure In Asia

Asia's financial infrastructure landscape in 2026 reflects a mosaic of advanced digital systems, legacy banking networks and emerging technologies operating at different stages of maturity across markets. The current state can best be understood through the dimensions of payment systems, banking infrastructure, capital market connectivity, and cross border infrastructure integration.

Payment Systems Infrastructure Transformation

The most visible transformation has occurred in payment systems, where Asia now hosts the world's most advanced real-time payment networks. India's UPI processes over 10 billion transactions monthly, making it the world's largest instant payment system by volume[63]. China's digital payment ecosystem, dominated by Alipay and WeChat Pay, has achieved near-universal adoption in urban areas and is expanding into rural markets through integration with government services and e-commerce platforms.

[62] Building competitive strategic moats with AI | McKinsey
[63] Publications - Reserve Bank of India

Singapore's PayNow [64], Thailand's PromptPay [65], and Malaysia's DuitNow [66] represent sophisticated real-time payment infrastructures that are now linked across borders, enabling instant retail remittances and small-value commercial payments [67]. The ASEAN Payment Connectivity initiative has created bilateral links between Singapore-Thailand, Singapore-Malaysia, and Singapore-India, with Indonesia and the Philippines joining the network.

Banking Infrastructure Modernisation

Traditional banking infrastructure across Asia is experiencing a parallel transformation. Core banking systems are being replaced with cloud-native architectures that support real-time processing, API connectivity, and embedded finance capabilities. Major banks in Japan, Korea, Singapore, and Hong Kong have completed or are nearing completion of comprehensive digital transformation programmes that include mobile-first customer interfaces, automated lending platforms, and AI-driven risk management systems.

Digital banks have emerged as infrastructure disruptors across the region. Hong Kong's eight virtual banks [68], Singapore's digital full banks and Korea's internet-only banks have demonstrated alternative approaches to banking infrastructure that prioritise speed, cost-efficiency, and customer experience over traditional branch networks.

Capital Markets Connectivity Evolution

Asian capital markets are also undergoing infrastructure upgrades focused on settlement speed, cross-border connectivity, and tokenisation capabilities. The Hong Kong stock exchange has implemented blockchain-based settlement systems for certain asset classes, while Singapore's Project Guardian is testing tokenised bonds, deposits and investment funds on distributed ledgers[69]. Japan's regulatory framework for digital securities and tokenised deposits enables major banks to issue programmable money and digital assets, representing one of the most advanced institutional digital asset infrastructures globally[70].

Cross-Border Infrastructure Integration

Regional financial infrastructure integration has accelerated significantly. The mBridge project represents the world's most advanced multi-CBDC platform for cross-border wholesale settlements. SWIFT continues to modernise through ISO 20022 adoption across Asian markets, improving data richness and interoperability with domestic payment systems.

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[64] PayNow Singapore
[65] PromptPay
[66] DuitNow is a Malaysian money transfer service which allows real time payments between locally registered bank accounts. It is operated by PayNet, which is Malaysia's national payments network. www.paynet.my
[67] Search Results - ASEAN Payment Connectivity
[68] Hong Kong Monetary Authority - Digital Banks
[69] Project Guardian - Open and Interoperable Networks
[70] 02.pdf

The Role Of Technology In Enhancing Financial Infrastructure

Technology serves as both the enabler and driver of Asia's financial infrastructure evolution. Four key technological domains are reshaping the landscape, namely: trust and identity systems, blockchain and distributed ledgers, cloud computing, and scalable architectures and cybersecurity frameworks.

Trust and Digital Identity Systems

Digital identity infrastructure forms the foundation of modern financial services across Asia. India's Aadhaar system serves over 1.3 billion residents and enables instant account opening, automated KYC, and consent-based data sharing through the Account Aggregator framework. Singapore's SingPass digital identity system integrates with SGFinDex to enable seamless financial data portability across institutions.

Biometric authentication and advanced KYC systems have reduced onboarding costs while improving security. Mobile-based identity verification using facial recognition, voice authentication, and behavioural biometrics is enabling financial inclusion for populations without traditional documentation.

Blockchain and Distributed Ledger Technology

Blockchain technology is being deployed across multiple infrastructure layers. Trade finance platforms in China use blockchain for supply chain financing, letters of credit, and cross-border payments. Hong Kong's tokenised green bond programme demonstrates how distributed ledgers can streamline issuance, settlement, and ongoing administration of securities[71].

CBDCs represent the most significant blockchain infrastructure deployment. China's e-CNY utilises a two-tier blockchain architecture that enables offline payments while maintaining centralised monetary control. The mBridge platform uses a purpose-built blockchain that supports multi-currency settlement with transaction-level swap capabilities.

Smart contracts are being integrated into lending platforms, insurance products, and trade finance solutions. These programmable contracts automate compliance, reduce settlement risk, and enable complex financial products that were previously impractical to offer at scale.

Cloud Computing and Scalable Architecture

Cloud-first strategies have become standard across Asian financial institutions. The Monetary Authority of Singapore published comprehensive guidelines for cloud adoption by financial institutions, emphasising security, resilience, and data governance[72]. Major banks across Japan, Korea, and Australia have migrated core systems to hybrid cloud architectures that enable rapid scaling and improved disaster recovery.

[71] Hong Kong Monetary Authority - HKSAR Government's Third Digital Green Bonds Offering
[72] MAS Issues New Guidelines on Outsourcing Risk Management; Introduces Guidance on Cloud Services

Microservices architecture enables financial institutions to build modular, API-driven systems that can rapidly integrate with FinTech partners, government systems, and cross-border networks. This architectural approach supports the embedded finance models that have become prevalent across Asian super-apps and e-commerce platforms.

Edge computing, designed to process data at the source of origin, or as close as possible, is being deployed to reduce latency for real-time payment processing, fraud detection, and mobile banking applications. This is particularly important in Southeast Asia, where mobile network quality varies significantly across markets.

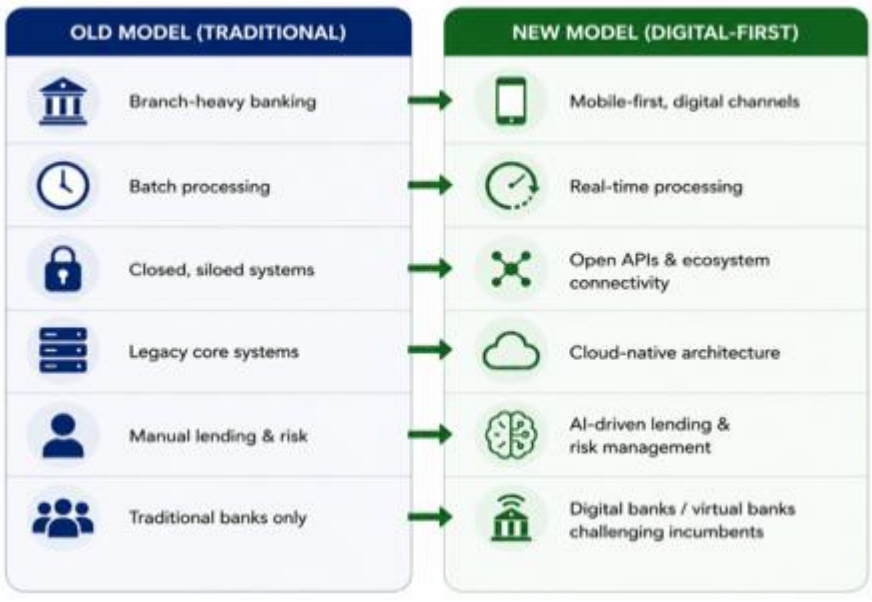
Cybersecurity and Risk Management

Advanced cybersecurity frameworks have become critical infrastructure components as digitisation increases attack surfaces. The Financial Services Agency in Japan and the Hong Kong Monetary Authority have implemented comprehensive cyber resilience frameworks that include threat intelligence sharing, incident response protocols, and regular penetration testing[73].

AI-powered threat detection systems increasingly monitor transaction patterns, identify anomalous behaviour, and respond to potential security incidents in real-time. These systems are particularly important for protecting instant payment networks and digital wallet ecosystems that process millions of transactions daily.

Zero-trust security models are also being adopted across Asian financial institutions, requiring continuous authentication and authorisation for all system access. This approach is key for the effective protection of and support for, employee remote working, third-party integration, and cross-border financial services integration.

Figure 12 | Old Model Versus New Model Financial Services



[73] Policy Approaches to Strengthen Cyber Security in the Financial Sector : FSA

Challenges To Upgrading Asia's Financial Infrastructure

Despite significant progress, Asia faces substantial challenges in modernising the region's financial infrastructure. These challenges span institutional, geographical, and regulatory dimensions, often intersecting in complex ways that require co-ordinated solutions.

Cross-Institution Co-ordination Challenges

Legacy system integration remains one of the most significant infrastructure challenges. Many Asian banks operate core systems that are decades old, written in COBOL or other legacy languages, and deeply integrated with business processes. Replacing these systems while maintaining operational continuity requires careful planning, substantial investment, and risk management capabilities that smaller institutions may lack. Alternatively, institutions could use an AI 'wrapper' acting as intelligent middleware around these legacy systems, which is what many western banks are doing[74].

Data standardisation across institutions creates ongoing friction. While initiatives like ISO 20022 provide common messaging standards, implementation varies significantly across banks, payment processors, and market infrastructures. This variation creates costly reconciliation requirements and limits straight-through processing capabilities.

Interoperability between different technology platforms, cloud providers, and software vendors requires ongoing co-ordination. The proliferation of FinTech partnerships means banks must integrate with dozens of external systems while maintaining stringent security and compliance standards. There is still much work to do to address legacy limitations.

Cross-Geography Integration Complexities

Regulatory fragmentation across Asian markets creates significant compliance burdens for cross-border financial infrastructure. While ASEAN has made progress on payment connectivity, differences in local data requirements, consumer protection standards, and AML/KYC rules create operational complexity.

Currency and settlement mechanisms vary significantly across markets. Creating unified infrastructure for multi-currency transactions requires sophisticated foreign exchange capabilities, hedging mechanisms, and settlement arrangements that can handle different regulatory requirements and time zones.

Divergence in technical standards between markets creates integration challenges. For example, QR code standards vary between countries, requiring payment systems to support multiple protocols for cross-border connectivity.

Cross-Regulatory Regime Challenges

Data governance requirements differ significantly across Asian jurisdictions. China's local data storage rules, India's Personal Data Protection Bill, Singapore's data portability requirements,

[74] What banks are doing with AI - Chris Skinner's blog

and EU GDPR compliance for international operations create complex requirements for regional financial infrastructure.

Capital controls and foreign exchange regulations limit the types of cross-border financial services that can be offered. These restrictions affect the design of regional payment networks, digital asset platforms, and cross-border lending services.

Licensing and authorisation requirements vary significantly. A digital bank licensed in Hong Kong cannot automatically offer services in Singapore or Malaysia without obtaining separate approvals, limiting the scalability of regional financial infrastructure investments.

Future Trends In Asian Financial Infrastructure Development

The future of Asian financial infrastructure will be shaped by several converging trends. These will all have an impact on the development of financial infrastructure across the region. Notable trends to be considered include AI-native architectures, tokenisation and programmable money, sustainability integration, and enhanced regional co-ordination mechanisms.

AI-Native Financial Infrastructure

AI is transitioning from a feature layered onto existing systems to a core architectural component. Future financial infrastructure seems certain to embed AI at the network level, enabling real-time risk assessment, dynamic pricing, automated compliance, and predictive maintenance of system performance.

Agentic AI systems will increasingly manage complex financial processes autonomously, from trade settlement to regulatory reporting. These systems will operate across institutions and jurisdictions, co-ordinating activities that currently require human intervention and manual reconciliation.

Large language models (LLMs) will almost certainly power next-generation customer interfaces, enabling natural language interaction with financial systems across languages and cultural contexts. This capability will be particularly important for financial inclusion in multilingual Asian markets.

Tokenisation and Programmable Money

CBDCs will increasingly move from pilot programmes to production deployment across multiple Asian economies. These CBDCs will enable programmable money features such as conditional payments, automated tax collection, and targeted economic stimulus distribution.

Tokenised deposits issued by commercial banks should provide the foundation for new settlement infrastructures that combine the safety of bank deposits with the programmability of digital assets. Singapore and Hong Kong are leading the development of regulatory frameworks for these instruments[75].

Smart contract infrastructure will automate complex financial processes including trade finance, insurance claims, and cross-border payments. This automation will reduce settlement times and operational costs, and enable new financial products that are currently impractical to offer.

[75] project-guardian-fx-workstream-transaction-banking.pdf

Sustainable Finance Infrastructure

Green finance platforms are very likely to integrate environmental impact measurement into core financial infrastructure. Real-time carbon accounting, green bond verification systems, and sustainability-linked payment rails should become standard components of financial infrastructure.

It seems probable that ESG data integration will enable automated compliance with sustainability reporting requirements and real-time assessment of environmental and social impact for lending, investment, and payment decisions.

Enhanced Regional Co-ordination

Multilateral infrastructure projects seem set to expand beyond payments to include trade finance, securities settlement and regulatory co-ordination. The success of ASEAN payment connectivity and mBridge demonstrates the potential for deeper regional financial integration.

Common technical standards may not be fully implemented, but they are emerging for digital identity, cross-border payments, and digital asset transactions. These standards will reduce compliance costs and enable the introduction of seamless financial services across Asian markets.

Regulatory harmonisation initiatives are intended to create more consistent frameworks for FinTech innovation, data governance, and cross-border financial services, reducing the complexity and cost of Asian regional financial infrastructure development.

Outcomes

The evolution of financial infrastructure in Asia represents one of the most significant transformations in global finance. The region has moved from fragmented, legacy-based systems to integrated digital ecosystems that serve as models for the rest of the world. This transformation has been enabled by strategic technology adoption, supportive regulatory frameworks, and recognition that financial infrastructure serves broader economic and social development goals.

The challenges ahead, particularly around cross-institutional co-ordination, regional integration, and regulatory harmonisation, are material but not insurmountable. The success of initiatives like UPI, ASEAN payment connectivity, and mBridge demonstrate that concerted action can overcome technical and regulatory barriers to create a world-class financial infrastructure for Asia.

It seems inevitable that Asia's financial infrastructure will continue to evolve toward AI-native, programmable systems that enable new forms of financial inclusion, economic integration, and sustainable development. The region's experience in building these systems will most likely influence global standards and approaches to financial infrastructure modernisation around the world.

Challenges And Opportunities For Fintech And AI Fintech In Asia

Asia's FinTech landscape represents the most dynamic and complex financial innovation ecosystem globally, encompassing everything from China's comprehensive digital payment infrastructure to Singapore's regulatory leadership, from India's massive financial inclusion initiatives to Southeast Asia's mobile-first banking transformation. This complexity creates both unprecedented opportunities and multifaceted challenges that require sophisticated solutions spanning regulatory frameworks, cybersecurity architectures, market development strategies, and collaborative governance models.

The region's unique characteristics are made up of diverse regulatory regimes, varying levels of economic development, large unbanked populations, mobile-first consumer behaviour, and rapid technological adoption. Together these factors have created conditions where FinTech and AI-powered financial services can achieve transformative scale while simultaneously facing implementation challenges that are more complex than those encountered in more homogeneous markets.

Regulatory Challenges And Compliance Issues

Fragmented Regulatory Landscapes

One of the most significant challenges facing FinTech and AI FinTech development in Asia is the fragmented nature of regulatory frameworks across jurisdictions. Each Asian market has developed distinct approaches to financial regulation, data governance, consumer protection, and technology oversight, creating a complex patchwork that makes regional scaling challenging.

Singapore has established comprehensive regulatory sandboxes and clear licensing frameworks under the Payment Services Act, emphasising innovation while maintaining strict compliance standards [76]. The Monetary Authority of Singapore's (MAS) approach to AI governance includes specific guidelines for model risk management, algorithmic accountability, and consumer protection that set high standards for AI deployment in financial services.

Hong Kong has reopened its market to retail digital asset trading while maintaining sophisticated investor protection mechanisms. The city's multi-regulator approach, co-ordinating between HKMA, SFC, Insurance Authority and MPFA, creates both comprehensive oversight and regulatory complexity [77]. The recent expansion of Hong Kong's GenAI

[76] MAS Media Release - Clarification Statement on DTSP Regulatory Regime.pdf
[77] Virtual asset trading platform operators | Securities & Futures Commission of Hong Kong

Sandbox++[78] demonstrates proactive engagement with AI technology while maintaining prudential supervision.

China's regulatory approach emphasises state control and financial stability, with clear support for blockchain technology and CBDCs while restricting private cryptocurrency markets. The regulatory framework prioritises data sovereignty, consumer protection and systemic risk management over pure innovation speed[79].

India's regulatory environment reflects the complexity of serving over 1.3 billion people while maintaining financial stability. The Reserve Bank of India's approach to FinTech regulation emphasises gradual liberalisation, with strong local data storage requirements and emerging frameworks for AI governance in financial services[80].

Cross-Border Regulatory Harmonisation Challenges

The lack of consistent standards across Asian markets creates significant compliance burdens for regional FinTech firms. A digital bank licensed in one jurisdiction cannot automatically operate in neighbouring countries, requiring separate authorisation processes that can take years to complete. This fragmentation limits the scalability benefits that should naturally accrue to successful FinTech innovations.

Local data storage requirements vary significantly across markets. China requires comprehensive local data storage, India has strict requirements under its Personal Data Protection framework, Singapore permits data portability with appropriate safeguards, while Hong Kong maintains more liberal cross-border data flows[81]. These differences create architectural challenges for regional FinTech platforms that must simultaneously comply with multiple data governance regimes.

AML/KYC compliance requirements differ substantially in implementation even when based on common Financial Action Task Force (FATF) standards. The result is that regional payment systems, cross-border lending platforms, and digital asset services must implement multiple compliance architectures rather than benefiting from standardised approaches.

AI-Specific Regulatory Challenges

The emergence of AI-powered financial services has created new categories of regulatory challenges that traditional financial regulation was not designed to address. Algorithmic accountability, AI model interpretability, and bias prevention require regulatory frameworks that most Asian jurisdictions are still developing.

AI model governance requirements vary significantly across markets. Singapore's MAS has issued comprehensive AI risk management guidelines that require financial institutions to

[78] Hong Kong Monetary Authority - Regulators launch GenA.I. Sandbox++ to foster A.I. innovation across financial services

[79] Financial Technology Development Plan, People's Bank of China www.pbc.gov.cn

[80] Reports- Reserve Bank of India

[81] Asian Capital Market Development and Integration: Challenges and Opportunities | Asian Development Bank

maintain detailed documentation of AI model development, validation and ongoing monitoring[82]. Other markets are still developing equivalent frameworks, creating uncertainty for regional AI FinTech deployment.

Consumer protection in AI-driven financial services raises complex questions about disclosure, consent, and liability that regulatory frameworks are still addressing. When an AI model makes a credit decision or investment recommendation, questions arise about what information must be disclosed to consumers and what recourse they have if the AI makes errors.

Cybersecurity Concerns In A Digital Finance Landscape

Evolving Threats

Asia's rapid digitisation of financial services has created expanded attack surfaces that cybercriminals are increasingly targeting. The migration from branch-based banking to mobile-first financial services has changed the cybersecurity risk profile for financial institutions across the region.

Mobile banking applications process billions of transactions across Asian markets, making them high-value targets for various forms of cyberattack. The prevalence of mobile payments in markets like China, India, and Southeast Asia creates systemic cybersecurity risks that extend beyond individual institutions to entire payment ecosystems.

Cloud infrastructure adoption by financial institutions has improved scalability and cost efficiency but has also created new categories of security risks. The Monetary Authority of Singapore's guidelines for cloud adoption by financial institutions emphasise the importance of comprehensive security frameworks, but implementation varies significantly across markets and institutions[83].

API security at a systemic level has become critical as FinTech firms increasingly rely on open banking architectures and third-party integrations. The proliferation of API connections between banks, FinTech businesses, and technology providers creates multiple potential points of vulnerability that require sophisticated security orchestration.

AI-Specific Cybersecurity Challenges

The integration of artificial intelligence into financial services has created new cybersecurity challenges that traditional security frameworks, as with regulation, were not designed to address. Adversarial attacks on AI models can manipulate credit decisions, deceive fraud detection systems, and manipulate algorithmic trading platforms in ways that are difficult to detect and prevent.

Model poisoning attacks, where malicious actors attempt to corrupt AI training data, pose particular risks for financial services' AI systems that rely on large datasets for credit scoring,

[82] MAS Guidelines for Artificial Intelligence (AI) Risk Management
[83] Guidelines on Risk Management Practices – Technology Risk

fraud detection, and risk management. The interconnected nature of financial markets means that compromised AI models can have systemic effects extending far beyond the originally targeted institution.

Deepfake technology and synthetic identity fraud represent emerging threats that AI-powered fraud detection systems must evolve to address. Several Asian markets, including Singapore and Hong Kong, have reported increasing sophistication in synthetic identity attacks targeting digital onboarding processes[84].

Regional Cybersecurity Co-ordination Challenges

Information sharing mechanisms for cybersecurity threats remain underdeveloped across Asian markets. While individual countries have established financial sector cybersecurity frameworks, regional co-ordination mechanisms are limited, making it difficult to address threats that span multiple jurisdictions.

The ASEAN Cybersecurity Co-ordinating Committee has made progress on general cybersecurity co-operation, but financial services-specific co-ordination remains limited[85]. This gap is particularly problematic for cross-border payment systems and regional FinTech platforms that operate across multiple regulatory jurisdictions.

Trust And Digital Identity

Digital identity and its verification sits at the heart of trust in AI-enabled FinTech because every automated decision (verification, scoring, transaction approval, or fraud detection) depends on confirming that the user is who they claim to be. Without reliable digital identity infrastructure, even the most advanced AI models face fundamental uncertainty, weakening confidence in the entire financial service. The stakes are high as errors in identity verification can block legitimate users, open the door to fraud, or trigger regulatory scrutiny, all of which directly affect user trust.

A major challenge is the fragmented landscape of identity frameworks across Asia. Some markets, such as Singapore and India, have strong national digital identity systems that integrate biometrics and secure APIs. Others rely on patchwork approaches combining telecommunications registration databases, paper-based credentials and/or inconsistent AML/KYC procedures. For FinTech providers operating regionally, this fragmentation complicates the deployment of AI-driven onboarding and verification, making it harder to ensure consistent, trustworthy identity checks.

The rise of sophisticated synthetic identities further strains trust in AI FinTech systems. As generative tools become more accessible, fraudsters in several Asian markets have begun exploiting them to forge documents, spoof biometrics, and automate large-scale attacks on digital onboarding pipelines. AI models trained to detect fraud must therefore contend with

[84] Hong Kong Monetary Authority - Cybersecurity Fortification Initiative (CFI)
[85] ASEAN CYBERSECURITY COOPERATION STRATEGY

adversaries who also use AI, creating an escalating cycle that challenges both accuracy and user confidence. A single breach involving synthetic IDs can trigger widespread hesitancy among consumers and regulators.

Bias and inclusion issues compound these risks. Many digital identity systems depend on biometric or behavioural analytics, but the reliability of these modalities can vary across demographic groups. In parts of Asia, where rural populations, migrant workers and aging demographics present diverse biometric profiles, false rejections can disproportionately affect vulnerable users. These failures undermine trust both in the AI model and also in the financial institution that deploys it, reinforcing perceptions that digital identity verification systems are uneven or exclusionary.

Regulatory expectations for digital identity verification in AI FinTech continue to evolve, adding another dimension to the trust challenge. Authorities in markets such as Hong Kong, Indonesia, and Malaysia are tightening requirements around data sovereignty, biometric consent, and explainability for automated verification. While these measures aim to strengthen public confidence, they also impose operational burdens and force constant adaptation on institutions and FinTech firms. For providers, building trust requires not just technical robustness but sustained alignment with regional norms, legal frameworks, and cultural expectations surrounding identity and privacy.

Opportunities for Growth in Underserved Markets

Financial Inclusion Through Technology

Asia's FinTech sector has unprecedented opportunities to address financial inclusion gaps that affect hundreds of millions of people across the region. Traditional banking infrastructure has historically struggled to serve rural populations, small businesses and low-income households profitably, creating massive market opportunities for technology-enabled solutions.

Alternative credit scoring using AI and alternative data sources has enabled FinTech firms to serve customers with limited credit histories (‘thin-file’ customers). Businesses across Southeast Asia, India, and China are using mobile phone usage patterns, e-commerce transaction histories, and social network data to assess creditworthiness for populations that traditional banks cannot evaluate effectively.

Mobile-first banking platforms have demonstrated the ability to serve underbanked populations at scale. The success of platforms like Paytm in India, GCash in the Philippines, and various super-app ecosystems across Southeast Asia demonstrates that mobile technology can overcome traditional barriers to financial access.

Micro-insurance and parametric insurance products[86] enabled by AI and Internet of Things (IoT) sensors are creating new markets for risk protection among populations that were previously uninsurable. These products are particularly relevant for agricultural communities and small businesses that face weather-related and other risks that can be automatically monitored and verified.

SME Finance Digitisation

Small and medium enterprises across Asia represent an underserved market for financial services. Traditional banks often find SME lending unprofitable due to high due diligence costs and difficulty assessing risk for businesses with limited formal financial records.

Supply chain finance platforms using blockchain and AI technologies are enabling financial institutions to provide working capital to SMEs based on their relationships with larger corporate customers. These platforms can automatically verify invoices, track shipments, and assess payment probabilities in ways that dramatically reduce the cost of SME lending.

E-commerce-integrated lending platforms are providing point-of-sale financing and working capital loans to small merchants based on their transaction histories and business performance data. This approach has proven particularly successful in markets with large e-commerce ecosystems like China, India, and Indonesia.

Rural and Remote Market Penetration

Agent banking networks enabled by mobile technology are extending financial services into rural areas where traditional bank branches are not economically viable. These networks use local agents equipped with mobile devices to provide basic banking services, loan applications, and insurance purchases.

Satellite connectivity and 5G networks are enabling FinTech services to reach remote areas that were previously inaccessible. This infrastructure development creates opportunities for FinTech firms to serve populations in remote parts of Indonesia, the Philippines, India, and other markets with geographically dispersed populations.

Agricultural finance platforms using satellite imagery, weather data, and AI analytics are creating new opportunities to serve farming communities with both credit and insurance products. These platforms can assess crop conditions, predict yields, and provide automated payouts for weather-related losses.

[86] Parametric insurance is a type of insurance that pays out a pre-agreed amount when a specific, measurable event occurs, rather than reimbursing actual losses.

Opportunities Through Collaboration Between FinTech Businesses, Financial Institutions And Regulators

Regulatory Sandbox Innovation

Asia has become the global leader in regulatory sandbox programmes that enable controlled experimentation with new financial technologies. These programmes have facilitated productive collaboration between FinTech firms, traditional financial institutions, and regulatory authorities.

Singapore's sandbox programmes have enabled over 600 firms to test innovative financial services under relaxed regulatory conditions. The success of these programmes has led to permanent regulatory changes that accommodate new technologies while maintaining consumer protection and financial stability.

Hong Kong's multiple sandboxes across banking, securities, insurance, and pensions demonstrate how co-ordinated regulatory experimentation can accelerate innovation while managing risk. The GenAI Sandbox++ programme specifically addresses the challenges of deploying artificial intelligence in regulated financial services.

Malaysia's regulatory sandbox has focused particularly on Islamic FinTech innovation, creating new models for Shariah-compliant financial technology that are being adopted across Muslim-majority markets in Asia and beyond.

Public-Private Infrastructure Development

A number of digital identity systems represent one of the more successful examples of public-private collaboration in Asian FinTech to address some of the challenges regarding trust. India's Aadhaar system, Singapore's SingPass, and similar initiatives across the region have created digital infrastructure that enables both better financial inclusion and more sophisticated compliance capabilities.

Real-time payment systems developed through public-private partnerships have created the foundation for much of Asia's FinTech innovation. UPI in India, PayNow in Singapore, PromptPay in Thailand, and DuitNow in Malaysia demonstrate how government-led infrastructure investment can create platforms for private sector innovation.

CBDC pilots involve extensive collaboration between central banks, commercial banks and technology providers. The success of these pilots depends on co-ordinating monetary policy objectives with commercial innovation and technology implementation.

Industry-Wide Standards Development

Data standards for open banking and API connectivity are being developed through collaboration between regulators, traditional financial institutions and FinTech firms.

Singapore's SGFinDex[87] platform and India's Account Aggregator framework[88] demonstrate how co-ordinated standards development can enable innovation while protecting consumer data.

Cybersecurity standards for financial services are being developed through industry working groups that include representatives from traditional banks, FinTech firms, technology providers and regulatory authorities. These collaborative approaches ensure that security standards are both technically feasible and commercially viable.

AI governance frameworks are emerging through multi-stakeholder collaboration that includes financial institutions, technology companies, academic researchers and regulatory authorities. The complexity of AI risk management requires expertise from multiple domains that no single organisation possesses independently.

Outcomes And Actions

The FinTech and AI FinTech landscape in Asia presents both unprecedented opportunities and complex challenges that require sophisticated, co-ordinated responses. Regulatory fragmentation across markets creates compliance burdens that limit regional scaling but also enable regulatory experimentation. This has produced some of the world's most advanced frameworks for financial innovation. Cybersecurity risks have evolved along with digital adoption, creating new categories of threats that require both technological solutions and regulatory adaptation.

The challenges and opportunities afforded by digital identity systems in establishing trust between financial institutions and customers are at the heart of current Asian financial services market developments. At the same time, fraudsters are learning to spoof these apps and executing ever-more sophisticated scams. The ‘arms race’ between the legitimate providers of FinTech and AI FinTech apps and threat actors is at its most sophisticated in Asia.

The opportunities for growth in underserved markets remain enormous, with hundreds of millions of people across Asia still lacking access to basic financial services. FinTech and AI FinTech-enabled solutions have demonstrated the potential to address these gaps profitably while creating new economic opportunities for previously excluded populations.

The success of Asia's FinTech and AI FinTech evolution will ultimately depend on continued collaboration between FinTech firms, traditional financial institutions, and regulatory authorities. The region's leadership in regulatory sandboxes, public-private infrastructure development, and industry standards creation provides a foundation for addressing the challenges while capitalising on the opportunities that characterise this sector.

[87] SGFinDex
[88] aboutbajajfinserv.com/ticc/account-aggregator

Success Stories

There are myriad examples of success stories across FinTech and AI FinTech in Asia. Contrasting, but regionally significant, are the developments and in one financial centre and a global financial services network provider. This section describes the achievements of:

- Seoul as a globally leading financial centre.
- SWIFT as a global financial infrastructure provider.

in terms of the innovations that they have introduced and how they are embracing the rapidly evolving FinTech and AI FinTech landscape in Asia.

Seoul

Seoul has emerged as one of Asia's most dynamic laboratories for innovation in FinTech and AI-driven financial services, combining ambitious public investment, co-ordinated talent development, and deepening industry–academia collaboration. The Seoul Metropolitan Government (SMG) has explicitly positioned the city to compete among the world's top AI hubs, anchoring policy around a seven-point plan that includes training 10,000 AI specialists annually, building 'Seoul AI Tech City' in the Yangjae innovation corridor, provisioning GPU-based compute for startups, and catalysing capital through a KRW 500 billion AI Transformation (AX) fund.

This policy stack is geared to compress the time from research to commercialisation, particularly in high-impact verticals like payments, identity, wealth management, and risk analytics, where AI can move the needle on inclusion, productivity, and security. The concentration of programmes in Yeouido (which is home to the Korea Exchange, major banks, and regulators) gives Seoul a uniquely concentrated financial testbed where startups, incumbents, and supervisors interact in proximity to each other, accelerating feedback loops and trust formation.

At the heart of Seoul's FinTech engine is the Seoul FinTech Lab network, which functions as a full-lifecycle platform rather than a traditional incubator. Since 2018, 409 resident startups have cycled through the flagship Lab with cumulative outcomes that include hundreds of billions of KRW in sales and investment raised. What distinguishes the Lab's design is the integration of regulatory sandbox navigation, sector-focused mentoring, and systematic investor relations alongside workspace. This combination recognises that in FinTech the bottleneck is rarely coding alone but compliance readiness, distribution partnerships, and credible governance.

The 2023 launch of Seoul FinTech Lab 2 (shown in Figure 5) added a dedicated landing pad for early-stage FinTech firms and blockchain companies, supplying specialised services in areas like biometric security, generative AI for financial workflows, and privacy-preserving data operations (PETs). Representative residents span freight financing optimisation, AI market

prediction across multi-asset dataset, and synthetic data platforms that retain the statistical 'DNA' of financial records while excising personal identifiers. These are capabilities that directly enable banks and brokers to develop and validate models without exposing sensitive customer data. Together, these facilities form a predictable path from ideation to scale, reducing co-ordination costs for founders and investors.

Figure 13 | Seoul FinTech Lab 2



Seoul's approach recognises that FinTech innovation is ultimately talent-constrained. To that end, the Graduate School of Digital Finance, jointly operated by SMG and the KAIST, offers an applied MBA footprint across AI, data science, and quantitative finance, complementing shorter, additive credentials through the Seoul FinTech Academy. This dual pathway produces both specialist modellers and 'translators' who can align risk officers, product managers, and engineers around deployable solutions.

Thousands of professionals have passed through these programmes, creating a flywheel effect in which each new startup cohort can recruit experienced staff with domain and regulatory skills. In parallel, the city's GPU processing capabilities and research partnerships aim to prevent AI model development from bottlenecking on compute costs, a critical factor as credit and fraud applications migrate to advanced architectures that ingest text, voice, document images, and behavioural biometrics.

The technology frontier in Seoul's FinTech stack is increasingly defined by three clusters: digital identity and trust, risk and compliance automation, and investment intelligence. In identity, startups are combining face verification with 'silent' factors such as keystroke dynamics or device motion to strengthen KYC/AML onboarding without adding friction. The practical challenge these companies address is both addressing resistance to adoption and going to the heart of survivability in Asia's heterogeneous identity regimes. They are operating in an environment where national eID applications (e.g., Korea's PASS-based mobile ID) must coexist with cross-border flows and variable consent standards across regulatory regimes.

Seoul-based FinTech firms and financial institutions have embraced explainable verification pipelines that log AI decision evidence for auditors and are also using PETs to maintain model performance under tightening data minimisation rules. These capabilities matter as threat agents raise the bar with document forgeries and high-fidelity voice or video deepfakes. Robust 'liveness' detection and challenge (response protocols and multi-signal fusion) have become ubiquitous.

In risk and compliance, AI is moving from rules-plus-thresholds to pattern-mining across graph relationships and unstructured text, enabling earlier detection of mule accounts, first-party fraud, and co-ordinated merchant abuse. Seoul's market offers a particularly rich set of capabilities. These include widespread digital payments adoption, active retail trading communities, and real-time settlement platforms which produce telemetry that can feed self-supervised anomaly detection and representation learning. However, institutions have learned that model accuracy must be paired with operational guardrails such as counterfactual explanations for adverse actions, human-in-the-loop review for edge cases, and feedback channels that convert analyst annotations into fresh training data.

Start-ups graduating from the Seoul FinTech Lab increasingly package 'compliance-by-design' modules, including auto-generated AI model cards[89], bias reports classified by protected attributes, and lineage tracking from data source to decision artifact. This is not academic hygiene – in live portfolios such instrumentation reduces regulatory friction and improves time-to-approve for new products.

On the investment side, firms in Seoul are experimenting with AI models that consume multi-asset ticker data, news, corporate filings, and alternative signals to generate risk-aware trade ideas and adaptive hedging strategies. While pure alpha[90] is notoriously elusive, the near-term wins come from workflow acceleration: automating draft research notes, scenario analyses, and client commentary with consistent house style and auditable source attribution.

Integration with trading desk order management systems is also deepening. AI copilots suggest order slicing tactics under liquidity and impact constraints, while compliance layers pre-check notes for promissory language or conflicts of interest. Crucially, the best teams do not treat LLMs as oracles; they integrate outputs from LLM retrieval to information held in vetted data stores and enforce confidence thresholds that route low-certainty cases to human analysts.

As the digital assets infrastructure matures, the same tooling is migrating to data held on distributed ledgers looking for concentration risk through entity clustering, liquidity risk contained in tokenised transaction pairs, and finding anomalies in smart contracts. These are all areas where Korea's developer ecosystem is active and well-networked.

[89]An auto-generated model card is a structured document that describes an AI model's intended use, training data, evaluation results, limitations, and ethical considerations. generated

[90]'Pure Alpha' is a flagship global macro hedge fund strategy created by Bridgewater Associates designed to generate consistent, absolute returns independent of market movements.

Seoul's policy architecture is also aimed at lowering entry barriers for foreign FinTech businesses. Even after Korea ended broad corporate tax holidays for foreign-invested enterprises in 2019, the city and national government maintained a mix of cash grants, rent subsidies via Foreign Investment Zones, and co-funded support for R&D equipment and hiring. The Seoul Financial Hub in Yeouido adds soft-landing services—shared offices, legal and accounting support, and a recruitment channel, which matters for small teams piloting products with Korean banks or securities firms experimenting before committing to larger footprints. These incentives do not substitute for product–market fit, but they compress the Korean localisation curve in a market with demanding consumers, high cybersecurity expectations and rigorous supervision.

Looking ahead, three strategic frontiers will shape Seoul's trajectory:

- **Privacy-preserving Finance**
  - As biometric and behavioural signals proliferate, continued R&D into federated learning, secure enclaves and differential privacy tuned for credit and fraud use cases can be expected.
- **Cross-border Identity Interoperability**
  - With Seoul courting multinational firms and regional capital, startups that abstract over differing eKYC standards, while providing explainable outcomes and audit-ready logs, will unlock multi-market distribution.
- **Real-time Financial Safety**
  - The same GPU-based platforms that power generative AI models can support streaming risk control through such applications as transaction-level scoring with millisecond SLAs, on-device liveness checks and dynamic limit management. All of these capabilities both increase security and improve user experience.

Seoul's formula, comprising policy intent plus institutional proximity plus talent pipelines, cannot guarantee uniform success. Competitive pressures from Singapore, Tokyo, and rising Chinese technology hubs are intense. Compute costs and specialised labour remain global bottlenecks and AI safety expectations are escalating. Yet the city's co-ordinated strategy is distinctive. By turning Yeouido into an AI-aware financial campus and Yangjae into an applied research district with shared compute and housing, Seoul is blurring the line between urban planning and innovation strategy.

For FinTech founders and financial institutions seeking an Asian base where AI can be prototyped, governed and scaled, Seoul offers a compelling combination of market sophistication, regulatory engagement and practical support infrastructure.

SWIFT

SWIFT is in the middle of a transformation from a financial-messaging backbone into a broader, execution-oriented digital financial infrastructure designed to support always-on cross-border payments, digital assets, and AI-enabled services. By pairing the network's scale, neutrality, and compliance-grade resilience with new shared ledgers, data standards like ISO 20022, and privacy-preserving AI, SWIFT enables financial institutions and FinTech firms to innovate without sacrificing interoperability or consumer safety.

SWIFT is currently building on:

- **Global Reach and Reliability as a Foundation**
  - SWIFT connects more than 11,500 organisations in 200+ jurisdictions and has long served as the neutral, secure underlying international payments and securities backbone network That scale and governance model are central to its role as an industry utility, especially as new capabilities move beyond messaging into orchestration.
- **Transaction Speed Improvements via Network Effects**
  - A significant share of cross-border payments already reaches beneficiary banks within minutes, with 75% arriving within 10 minutes, demonstrating how standardisation, richer data, and SWIFT member co-ordination can compress settlement windows even before introducing new digital rails.
- **Standards-driven Data Quality**
  - The global migration to ISO 20022 is much more than a format change. It also underpins automation, compliance and analytics. A near-term milestone is the mandatory shift to structured postal data (e.g., town and country) by November 2026 for specific payment messages, which will reduce ambiguity, rejections and AML/KYC friction.

SWIFT's immediate plans focus on introducing a shared ledger and digital asset interoperability. SWIFT is building a shared execution layer by adding a blockchain ledger which will be initially focused on 24/7, real-time cross-border payments. The ledger is designed to record, sequence, and validate transactions, with rules enforced via smart contracts. This complements existing messaging and APIs, aiming to provide 'execution assurance' across institutions and platforms. Development involves 30+ banks across 16 countries.

In parallel, Swift is also working on interoperability with traditional and emerging rails. The ledger is explicitly designed to interoperate with both today's correspondent banking rails and emerging digital ecosystems, including tokenised transactions. This is vital for phased adoption, minimising fragmentation risk while enabling new utility (e.g., instant cross-border settlement and executing programmable conditions embedded in transactions).

SWIFT has demonstrated delivery-versus-payment for tokenised bonds and co-ordinated asset lifecycle events (interest, redemption) across blockchains and traditional systems, as

well as payment settlement across fiat and digital currencies. These trials show how a neutral orchestrator can align timing and outcomes across heterogeneous networks.

Further, SWIFT is engaged in implementing AI and privacy-preserving collaboration through a number of initiatives:

- **Fraud Reduction via PETs and Federated Learning**
  - Experiments with 13 financial institutions used PETs to exchange fraud intelligence without exposing raw customer data and applied federated learning to anomaly detection. Trained on synthetic flows of 10 million transactions, the collaborative model has doubled effectiveness compared to single-bank training which promises faster, cross-border fraud prevention and detection.
- **ISO 20022 Address Structuring With Open-source AI**
  - To help banks meet the 2026 structured address mandate, SWIFT has released an open-source neuro linguistic programming (NLP) model that extracts town and country from unstructured legacy data, providing confidence scores and suggestions.
- **Platform and Cloud Modernisation to Scale AI**
  - SWIFT's next generation platform employs API-first microservices, containers (Kubernetes [91]) and modern data stores (e.g., NoSQL [92]) and supports deployment in hyperscale clouds, enabling faster development cycles, pre-validation services, analytics and a secure machine-learning environment for in-house and customer-based use cases.

These initiatives are enabling FinTech firms and financial institutions to deploy always-on, programmable cross-border money movement. These movements consist of a shared ledger with smart-contract rule enforcement can support conditional payments, milestone-based disbursements, and synchronised delivery of assets for payments. FinTech firms can build services (pay-ins, payouts, and treasury) that are truly real-time and time-zone agnostic, with visibility into execution states.

SWIFT is also supporting tokenised asset settlement rails that meet institutional requirements. With interoperability across blockchains and legacy systems, institutional DeFi-like[93] products (tokenised deposits, commercial paper, or funds) can plug into existing operations, custody,

[91] 'Kubernetes' is an open-source platform designed for managing containerised workloads and services. It provides a framework for automating deployment, scaling and operations of application containers across clusters of hosts. 'Application containers' or 'containerised workloads' refer to applications or services that are packaged and deployed within 'containers'. Containers encapsulate an application along with its dependencies, libraries and configuration files, enabling consistent execution across various environments.
[92] NoSQL, which stands for 'Not Only SQL' or 'Non-SQL', refers to a category of database management systems that diverge from the traditional relational database model. Unlike relational databases that use tables with predefined schemas, NoSQL databases employ flexible data models that can handle large volumes of unstructured and semi-structured data.
[93] 'DeFi', or decentralised finance, is a blockchain-based financial ecosystem that enables peer-to-peer financial services without traditional intermediaries like banks or brokers.

and compliance processes. This capability reduces operational friction in issuance, settlement, and lifecycle transactions.

In addition, ISO 20022's structured elements, enforced by network-wide practices and aided by AI pre-processing, mean fewer exceptions together with lower numbers of false positives in KYC/AML checks and more straight-through processing. FinTech firms can depend on richer, cleaner data to power finance and analytics embedded in their products.

SWIFT is developing cross-border fraud defence as a network capability. PETs and federated learning create a template for collective risk management. Anomaly models that learn from many institutions without moving sensitive data can be deployed to improve fraud defences. FinTech firms and smaller financial institutions can benefit from network-scale intelligence rather than repeatedly building isolated models.

Another set of innovations being implemented by SWIFT consist of making developer-friendly infrastructure available. Ubiquitous APIs, cloud enablement, and containerised services shorten integration cycles, allowing FinTech businesses to prototype, test, and scale services against a resilient, compliant backbone. This is especially important for regulated innovations like programmable payments and asset tokenisation.

The main practical lessons from SWIFT's innovations that can be deployed across the financial services sector in Asia (and beyond) include:

- **Design for Interoperability First**
  - SWIFT's approach shows that value accrues when new digital components (ledgers, tokens) are interoperable with legacy systems and standards. For product teams, this means building to ISO 20022 natively, supporting both message-based and ledger-based execution paths and planning for multiple custody/settlement venues from day one.
- **Elevate Data Quality to a Strategic Objective**
  - Structured, validated data is a prerequisite for AI, screening and automation. The 2026 address-structuring deadline is a forcing function. This will involve deploying audit data capture pipelines, enriching legacy datasets, and considering open-source NLP tooling to accelerate cleanup and reduce rework. The lesson is to treat data governance as product infrastructure, not an afterthought.
- **Embrace Privacy-preserving AI Collaboration**
  - Fraud patterns often cross borders and institutions. PETs and federated learning enable shared defences without compromising customer privacy. Institutions should prioritise architectures where models travel to the data, not vice versa. AI models require explainability and robust monitoring. It is probably worth starting with synthetic or masked datasets to prove value before scaling up into production.
- **Build for Execution Assurance, Not Just Connectivity**
  - Moving from messaging to a shared execution layer introduces guarantees around ordering, timing, and outcome alignment. Product roadmaps should

factor in programmable conditions, automated reconciliation, and event-driven workflows. These capabilities reduce exceptions and operating cost while improving customer predictability.

- **Leverage Cloud-native, API-first Patterns**
  - SWIFT's modernisation highlights the benefits of microservices, containers, and managed data platforms for rapid iteration and scale. For financial institutions and FinTech firms, standardising on API gateways, adopting containerisation for portability, and investing in CI/CD[94] with compliance guardrails will speed adoption of new network and other services.
- **Co-create with Financial Services Sector Partners**
  - Many of SWIFT's advances (generic protocol interfaces, open-source tools, ledger prototypes) stem from industry co-creation. Financial institutions should seek pilot participation, contribute reference data and market-practice input, and align internal roadmaps to broad sector timelines to capture early benefits and shape standards.

The future of cross-border finance is converging on three pillars, namely: interoperable digital rails, high-integrity data, and privacy-preserving AI collaboration. SWIFT's roadmap embodies this by:

- Extending the SWIFT platform with a shared, blockchain-based ledger for 24/7 payments and programmable execution.
- Operationalising digital asset workflows across heterogeneous environments.
- Elevating data quality through ISO 20022 and open-source AI tooling.
- Scaling network-wide fraud defences via PETs and federated models.

For FinTech firms, this means a more predictable, programmable, and compliant platform on which to build, reducing the 'integration tax' historically associated with cross-border services. For financial institutions, it is a pathway to modernise core capabilities without abandoning the trust, governance, and resiliency that both regulators and customers demand.

The practical lessons from SWIFT's innovative developments are to invest now in standards, data quality, and cloud-native integration. This will enable institutions to be ready to capitalise on shared ledger and AI-enabled services as they move from pilot to production in Asia. SWIFT's experience and strategy indicate that financial institutions which align product and data strategies with financial network evolution will be positioned to deliver instant, transparent, and intelligent service provision at global scale.

[94] 'CI/CD' is Continuous Integration and Continuous Delivery/Deployment. It is a set of practices aimed at automating and streamlining the software development lifecycle, enabling faster and more reliable code releases.

Trends and Future Outlook

Asia is moving faster than any other region to define the next generation of finance. From real-time payments and open banking to digital currencies, tokenised assets, embedded finance, and AI-driven risk and compliance. The region's diversity of markets, regulators, and consumer behaviours acts as a live laboratory. The result is not a single model but a web of interoperable, increasingly programmable financial infrastructures.

Predictions For The Future Of Fintech, AI, Digital Currencies And Financial Infrastructure In Asia

1. **Asia is Likely to Lead the Deployment of Cross-border Digital Currency Bilateral Implementations Moving from Pilots to Production**
   - Multi-CBDC platforms appear to be ready to graduate from technical proofs to limited-production implementations that handle real trade settlement and treasury flows among a handful of anchor markets in East and Southeast Asia. Initiatives like mBridge deliver the building blocks of shared ledgers, common legal frameworks for settlement certainty, and operational processes for 24/7 cross-border payments together with FX on-chain in live production. Over the next two to three years, this will manifest as 'first-wave' bilateral implementations with limited participants (major banks and payment institutions) and controlled currency pairing or cross-border settlement.

2. **Tokenisation of Real-world Assets Will Migrate from Showcases to Scaled, Regulated Market Infrastructure in Select Hubs**
   - Singapore's Project Guardian, which engages financial institutions to test tokenised bonds, funds, and deposits, is likely to accelerate into standardised frameworks for issuance, distribution, and lifecycle events at scale across the region. It should be expected that regional custody standards, interoperable identity/permissioning schemes, and clear disclosure templates will emerge that allow asset managers and banks to operate tokenised products across multiple chains and venues. This will stimulate secondary liquidity pools for tokenised fixed income and money-market instruments targeting treasurers and affluent investors.

3. **AI is Set to Become an Embedded Utility Across Credit, Compliance, and Customer Operations Together with Privacy-preserving Collaboration**
   - Asia's rich and heterogeneous datasets (banking, super-apps, commerce, telecommunications) create feature-rich spaces for credit issuance to thin-file customers and SMEs, provided privacy and cross-border data rules are observed. It should be expected that financial institutions will invest in production-grade AI model governance, bias testing, and federated learning that enables cross-institution anomaly detection without sharing raw data. The result will be better

fraud interception across corridors and materially lower false positives in AML/KYC screening as ISO 20022 and richer data fields are propagated.

4. **Open Finance Will Probably Outpace Traditional 'Open Banking', Driven by Super-apps, Portable Data Consent, and Embedded Credit**
   - In markets like India, Singapore and parts of ASEAN, consent frameworks and account aggregators are poised to expand beyond deposits to include investments, pensions, insurance, and utilities data. This broader data portability will power cross-selling (e.g., from the wealthy to mass consumer markets via micro-investing), risk-adjusted SME lending and personalised protection products. India's Account Aggregator framework and Singapore's data-sharing initiatives point toward a region-wide trend using open finance rails aligned with instant payments and eKYC utilities.

5. **Real-time, Low-cost Cross-border Payments are Likely to Proliferate via Linked Fast-payment Systems and Network-of-networks Orchestration**
   - Bilateral linkages such as PayNow–PromptPay (Singapore–Thailand) and UPI linkages (India–Singapore and other geographies) preview a potential future of multi-node, rule-based routing among instant payment systems. Treasury and FX will be increasingly automated, with pre-validation, AML/KYC screening, and data quality checks occurring upfront. QR interoperability will extend remittances and small business acceptance in tourism destinations, reducing cash reliance and settlement delays. Regional authorities have signalled the continued build-out of such links as a policy priority.

6. **Stablecoins Will Professionalise Under Maturing Regulatory Regimes, but CBDC Rails Will Underpin Wholesale Settlement**
   - Asia's regulators are converging on prudential standards for fiat-referenced stablecoins which will probably emphasise reserve adequacy, redemption rights, disclosure, and segregation of funds. This will probably open pathways for compliant usage in trading, remittances, and B2B payments. For interbank and wholesale settlement, central bank money (including CBDCs) will remain dominant, especially where programmability, intraday liquidity management and DvP/PvP [95] can be assured on shared ledgers operated under central bank governance.

7. **Fragmented Regulations are Likely to Give Rise to 'Compliance Orchestration' Platforms as a New FinTech Category**
   - With varying local data storage rules, export rule enforcement for digital assets and diverse eKYC requirements, institutions will be ready adopt layered approaches to routing workflows to compliant venues, injecting jurisdiction-specific checks and maintaining machine-readable libraries of controls. These platforms seem set to pair policy-as-code with AI model risk management

[95] DvP stands for delivery versus payment and ensures securities are delivered only upon payment, while PvP ensures currency payments occur simultaneously in both directions to eliminate settlement risk.

capabilities to speed time-to-market across jurisdictions, particularly for tokenised products and AI-enabled decisioning.

8. **Trust, Digital Identity and Verifiable Credentials Will be Core to Cross-border Compliance and Customer Experience**
   - It should be expected that authoritative IDs (national schemes), verifiable credentials (employment, address, business registry entries) and reusable eKYC will combine which will enable low-friction onboarding across borders for retail customers and SMEs. In practice, this means fewer document uploads, more deterministic due diligence, and lower costs for correspondent relationships, especially when paired with ISO 20022 structured data.

9. **Cloud-native Financial Market Infrastructure is Likely to Become the Norm With Hybrid Sovereignty Models Prevailing**
   - Asia's financial markets infrastructure operators, banks, and insurers will increasingly run mission-critical workloads on regulated cloud with sovereign controls relating to home jurisdictions, confidential computing, and zero-trust architectures. This will let these institutions flexibly scale AI, real world simulation and, tokenisation workloads while meeting local regulatory and audit requirements. Infrastructure operational architectures are set to shift from monolithic provision to microservice-based delivery, enabling faster rule updates and product iteration.

10. **New Competitive Dynamics are Likely to Emerge Where 'infrastructure-native' FinTech Businesses and Bank–tech Joint Ventures Start to Proliferate**
    - Increased numbers of FinTech businesses that build directly on public and permissioned ledgers, instant payments, and consented data rails should be expected. These enterprises will wish to offer B2B services to banks, payment companies, and marketplaces. Simultaneously, joint ventures between incumbent banks and technology providers (bank-techs) seem set proliferate to pool balance sheets, compliance expertise and platform engineering at scale.

Possible Emerging Trends To Monitor

In addition to the developments based on activities and initiatives, there are a further set of trends to keep an eye on that may become more salient in Asia.

1. **Cross-border Payments and Multi-rail Interoperability**
   - Following implementation of the Singapore–Thailand (PayNow–PromptPay) payments facility, more bilateral ASEAN linkages are expected, with routing rules and FX embedded. Tourist destinations and SMEs are likely to feel the impact first, then corporate treasurers. Over time, these links will potentially connect into multilateral regional hubs that normalise ISO 20022 data and pre-validate messages, sharply cutting exceptions.
   - CBDC platforms will evolve from pilots to 'minimum viable products' (MVP). Project mBridge is showing how capabilities covering onboarding of commercial

banks, liquidity provisioning, support for multiple CBDCs and rapid international settlement supported by FX pairs can be implemented across jurisdictions. In parallel, PvP/DvP options in FX and securities seem ready to be launched. Governance, settlement completion certainty (also known as legal finality), and operational resilience will become the key differentiators between participants.

2. **Distributed Ledgers for Tokenised Finance (Beyond Proofs of Concept)**
   - Frameworks for tokenised bonds and fund units, covering issuance, corporate actions, and redemption, may well be adopted among consortia of regional banks and asset managers, informed by MAS's Guardian work. Interoperability across chains and custodians will probably be addressed via standard legal wrappers (for regulatory clearance) and messaging bridges.
   - Tokenised collateral eligibility for central bank and central counterparty frameworks could reduce friction in securities financing and derivatives margining, particularly for regionally active banks.

3. **AI Operating in Production Covering Risk, Compliance and Personalisation**
   - AML/KYC rejuvenation will occur through combining ISO 20022 rich fields with network-scale learning. This combination will reduce false positives and speed case resolution. Institutions will deploy AI explainability toolkits and counterfactual testing to meet supervisory expectations. Expect supervisors to issue guidance aligning model risk management with AI-specific issues (drift, bias, adversarial inputs).
   - Based on current trends, credit and treasury analytics will be re-engineered by AI helping SMEs manage cash cycles and FX risk, while banks become able to anticipate intraday liquidity needs, especially where 24/7 settlement compresses buffers.
   - GenAI assistants with guardrails will almost certainly become ubiquitous. Current data indicates that customer and employee copilot tools will be embedded across contact centres, wealth advisory, and operations, constrained by retrieval augmented generation (RAG, to protect the confidentiality of source information), redaction (similarly for privacy purposes), and audit logging.

4. **Sustainability in Finance and Transition Financing**
   - Asia's heterogeneous sustainability taxonomies[96] (e.g., ASEAN Taxonomy) will most likely move toward interoperability. This will enable cross-border green capital flows, securitisations, and blended finance structures. Tokenised performance-linked instruments (e.g., sustainability-linked bonds with on-chain KPIs) could well gain traction once assurance mechanisms mature.
   - Asset-level data from sensors and satellite imagery may well become integrated into lending covenants and insurance pricing, with tamper-evident logs improving investor confidence.

[96] A 'sustainability taxonomy' is a classification system that defines and categorises economic activities that are considered environmentally sustainable. It serves as a framework to guide investments towards activities that align with sustainability goals, such as climate change mitigation and biodiversity protection.

- Banks seem to be getting ready to scale tools that map sectoral decarbonisation pathways to client-specific transition plans, linking lending margins to audited milestones.

5. **Open Finance and Embedded Services**
   - Account aggregators and standardised APIs will almost certainly widen product choice and availability. Micro-investments, usage-based insurance, and SME working capital tied to ecommerce data will probably emerge which will be serviced through super-apps and marketplaces.
   - Verifiable trust credentials will allow SMEs and people who move geography to carry over their reputation and transaction histories, improving access to credit in destination markets.

6. **Market Structure and Regulation**
   - Jurisdictions will continue to publish prudential frameworks covering reserves, redemption, disclosure and governance for financial sector activities by institutions. Asia will continue to see early approvals for tokens used in wholesale settlement experiments and retail payments in tightly controlled sandboxes.
   - Regulators also seem likely to push functional equivalence. Tokenised fund units or bonds will probably inherit disclosure, custody, and oversight requirements of their traditional forms, plus new controls for smart contract risk and cyber/operational resilience.

7. **Infrastructure Modernisation**
   - Cloud, confidential computing, and zero trust will almost certainly underpin safe AI and tokenisation at scale, with regulators setting baselines for segmentation, encryption, and recoverability.
   - Event-driven architectures will support pre-validation, sanctions screening, and fraud scoring prior to payment execution, reducing rework and return rates.

Risks To Watch For And Mitigating Actions

In parallel with these emerging trends and future directions, new risks will emerge, together with mitigating factors and actions. Key themes to monitor include:

- **Regulatory Fragmentation and Settlement Finality**
  - Without harmonised definitions of settlement finality and shared controls for smart contract risk, cross-border tokenisation and CBDC settlement facilities can stall. To mitigate this risk will need bilateral and multilateral legal workstreams embedded into technical projects (as seen in mBridge's governance evolution).
- **Cyber and Operational Resilience**
  - Always-on, programmable infrastructures expand the attack surface available to threat agents. To mitigate this risk needs zero-trust verification for identity and other transactions, confidential computing as standard and layered 'kill-

switches' for smart contracts and payment routing in the event of threat agent attack or other disruption.

- **AI Model Risk and Data Governance**
  - AI model bias, drift and adversarial inputs can undermine outcomes and regulatory trust in such models. To address this risk will require standardised AI model documentation, robust validation, synthetic data for pre-production testing, and monitoring telemetry with human-in-the-loop escalation.
- **Interoperability Debt**
  - Multiple chains and payment rails can reintroduce fragmentation. To address this risk will require chain-agnostic token standards, cross-chain messaging with attested events, and reference implementations curated by regulators and industry alliances.
- **Consumer Protection**
  - Embedded finance and instant payments can expose users to scams. To address this challenge will involve pre-transaction risk scoring, mandatory confirmation-of-payee checks, refund frameworks, and network-level shared scam intelligence.

What Success Could Look Like by the Late 2020s

In a very few years' time, success may look different from today as the pace of change seems certain to accelerate. The near future could include several developments described in this paper. Cross-border SME payments may well clear in near real time with transparent FX, pre-validation and low error rates, orchestrated across fast-payment links and, where appropriate, CBDC settlement facilities.

Institutional tokenised fixed income and fund units could well trade with deterministic DvP and automated corporate actions across interoperable venues, under common disclosure and custody standards codified in major hubs. Successfully deployed AI will reduce AML/KYC false positives materially and perhaps halve investigation times in leading institutions. In addition, federated AI models may well detect cross-border mule networks more rapidly while keeping data in-country.

Sustainability-linked instruments could well integrate real-world data (sensors, satellite) into risk pricing and coupon adjustments, improving integrity and channelling more capital to credible transition deployment. Consumers and SMEs might well use verifiable credentials to onboard anywhere in the region with minimal friction. At the same time, super-app ecosystems may well serve as distribution channels while banks provide balance sheet, risk and compliance 'as infrastructure'.

Practical Recommendations For Banks, Financial Institutions And Fintech Firms

From the foregoing, practical actions that banks, financial institutions and FinTech businesses might take could consist of:

- Building natively to ISO 20022 and event-driven architectures, so data is validation-ready and AI-friendly from the start.
- Investing in AI model governance and federated learning capabilities; treat privacy-enhancing technologies as part of core fraud/AML strategy rather than research.
- Preparing for tokenised products by upgrading custody, key management and corporate actions processing; design for chain-agnosticism and portability.
- Joining multi-stakeholder programmes (e.g., tokenisation pilots, cross-border payment linkages), contributing real product and compliance requirements so standards match operational realities.
- Standing up a compliance orchestration layer to encode multiple geography jurisdictional rules and to accelerate cross-market deployment.

Conclusion

Asia has entered a decisive decade in which finance is being rebuilt around software, data, and intelligence. What began as a set of parallel experiments deploying instant payments, digital identity, AI in credit and fraud, tokenised assets, and CBDC pilots has cohered into a regional transformation of the financial services landscape. Asian markets are both digitising existing products as well as reinventing the market infrastructure itself. This transformation involves re-engineering how value is represented, how trust is established, and how risks are controlled.

This shift is both technological and institutional. It couples AI-native operating models with new public–private rails (UPI, PayNow–PromptPay, SGFinDex, Aadhaar), supervisory innovation (sandboxes, AI risk guidance, open-finance frameworks), and cross-border programmes (mBridge, QR linkages, ISO 20022 adoption). The outcome is a set of finance services that is increasingly interoperable, programmable, and real time. This set of services is capable of serving both frontier financial centres and inclusion-driven markets at continental scale.

Three strategic pillars underpin this change:

- First, interoperable digital rails are turning payments, settlement, and data exchange into networked utilities. Fast-payment systems and CBDC platforms which are interlinked demonstrate that Asia is converging on settlement architectures that reduce time, errors and operating costs while increasing transparency and certainty of completion.
- Secondly, high-integrity data (driven by ISO 20022, moved securely by APIs and verified via digital identity) has become core infrastructure. Data quality is no longer an operational afterthought. Now it is the substrate for automation, embedded finance, analytics, and AI.
- Thirdly, privacy-preserving AI collaboration is emerging as a network capability. Federated learning and PETs show how institutions can share intelligence against fraud and financial crime without moving sensitive customer data, raising the baseline of safety for everyone on the network.

Within this context, the case studies in this paper illuminate how strategy translates into outcomes. Seoul demonstrates the power of proximity and policy. Concentrating exchanges, banks, regulators, and computing power within a short radius and pairing that with talent pipelines and applied research, compresses the time from idea to implementation. The Seoul FinTech Lab model, with full-lifecycle support spanning compliance readiness, data access, mentoring, and investor relations, removes the practical bottlenecks that stall financial innovation.

It also shows how an AI-first posture can be reconciled with governance using counterfactual explanations in identity verification, human-in-the-loop workflows for edge cases, bias reporting, and AI model lineage tracking. These innovations all make AI deployable in regulated settings. The lesson is that successful FinTech ecosystems are choreographed and

not accidental. These ecosystems are designed around computing power availability, standards, supervisory engagement, and rapid cycles of test–learn–scale.

At the financial network infrastructure level, SWIFT's transformation clarifies another essential lesson, i.e., that the future is not a clean break with the past but an accretive evolution that preserves trust while expanding capability. SWIFT is moving from messaging to execution assurance and introducing a shared ledger, co-ordinating tokenised asset lifecycles, and operationalising programmable conditions. By evolving in this manner, SWIFT shows how an incumbent utility can become a platform for innovation without sacrificing global reach, neutrality, or compliance-grade resilience.

The practical takeaways are widely applicable, namely:

- Build for interoperability first, so new ledgers and tokenised instruments plug into legacy operations.
- Elevate data quality as product infrastructure, not a remediation task.
- Treat privacy-preserving collaboration as a core risk discipline, not a research curiosity.
- Design for execution by implementing deterministic ordering, real-time pre-checks, and event-driven reconciliation so that 'faster' also means 'safer'.

These exemplars sit inside a broader regional trend where finance is becoming embedded, continuous and contextual. Payments and identity checks happen within journeys, not as separate chores. Credit and insurance flex to real-time signals rather than static snapshots. Cross-border flows feel more like domestic transactions. The region's heterogeneity, once a source of friction, is becoming an engine for design.

Hubs such as Singapore and Hong Kong are pressure-testing tokenisation standards and supervisory models while large markets such as India and mainland China are pushing scale and inclusion frontiers. ASEAN linkages are teaching the benefits of incremental interoperability. This diverse set of initiatives and capabilities is creating cross-learning loops where practices proven in one sub-region can be localised and rolled out in others with fewer false starts.

Four capabilities stand out as significant in defining leadership for the next decade.

- **AI-native Operations and Governance**.
    - Winning institutions will rebuild the workflows so that decisions, controls, and service flows are powered by AI and are event-driven and data-complete from the start. That implies strong model governance (documentation, monitoring, counterfactuals, fairness testing), robust security against AI model-specific threats (prompt injection, data poisoning, adversarial examples), and organisational patterns. It also requires putting human expertise where it adds the most value, namely in policy setting, exception handling, and customer empathy, while FinTech and AI FinTech applications handle volume, patterning, and latency.

- **Tokenisation Ubiquity Combined with Settlement Discipline**.
  - Tokenised deposits, funds and bonds are moving from pilots to operating regimes. Institutions will need custody and key-management that meet regulatory standards, including legal wrappers that map cleanly to rights and obligations and orchestration that makes DvP/PvP deterministic across both multiple chains and conventional rails. The mark of maturity is the certainty of settlement, accuracy of corporate actions and clarity of investor protections.
- **Compliance Orchestration Across Jurisdictions**.
  - Fragmented rules will remain across the region. The efficient response is to codify them into FinTech and AI FinTech applications deploying policy-as-code, jurisdictional playbooks, and route-to-compliance engines. These capabilities should then be paired with observability (consisting of recorded AI model lineage, decision logs and outcome explanations) that satisfies auditors and supervisory authorities. This curation layer also needs to choose the 'right rail for the job', steering transactions to the optimal combination of speed, cost, risk, and settlement completion certainty.
- **Sustainable Finance Embedded in Infrastructure**.
  - Transition financing will increasingly depend on machine-verifiable real-world data (such as sensors, satellite data, and attestations). Platforms that can bind those data to financial contracts (e.g., sustainability-linked instruments with on-chain KPIs) and assure integrity will channel capital to credible decarbonisation. Interoperable sustainability taxonomies and audit trails matter as much as instrument design for encouraging sustainable investment.

On risks, the region's ambition demands institutional clarity of focus and comprehensive cyber security. Always-on programmable infrastructures expand the attack surface for cyber adversaries. AI equips both defenders and attackers; and cross-chain, cross-rail orchestration introduces new failure modes. The requirement is to blend design and discipline. Zero-trust security and confidential computing should be defaults, not options. Kill-switches and circuit breakers should be engineered into smart contracts and payment routing to contain incidents.

Furthermore, 'interoperability debt' needs to be actively managed through standards bodies, reference implementations, and conformance testing. Otherwise, the multiplicity of rails becomes fragmentation by another name. Regulators will continue to press for 'same risk, same rules' across tokenised and traditional products and will expect explainability and auditability in AI-mediated decisions, especially for credit, fraud and conduct.

For policymakers, the imperative is to prioritise public digital infrastructure that catalyses private innovation focusing on identity verification, fast payments, data portability, and safe cloud infrastructure. Use of sandboxes and cohort programmes can transform uncertainty into evidence and channel that evidence into guidance that raises the whole market. Promoting cross-border pilots that include legal and operational workstreams will be important, not just technical demonstrations, so that settlement finality and governance can mature in parallel with code. Investment in supervisory technology (RegTech, SupTech) so that oversight keeps pace with industry capability is imperative. When the state's tools lag the market's capabilities, trust erodes and risk rises.

For banks and insurers, the competitive edge is clarity of architecture and execution. The recommendation is to build natively to ISO 20022 so data are structured at capture, not patched downstream. Moving to event-driven microservices will deliver benefits so that pre-validation, sanctions screening, and fraud scoring run inline, not after the fact. Modernising custody and corporate actions for tokenised assets with chain-agnostic design will ensure that end-to-end processing can be fulfilled efficiently and effectively. Creating AI model-risk and AI-safety functions with real authority and telemetry will be required to demonstrate responsible and ethical use of AI. Joining multi-stakeholder programmes early, not just to 'be seen' but to shape the interfaces and controls that will later become table stakes, will deliver clear medium terms benefits.

For FinTech firms, the opportunity is to be infrastructure-native. Solving hard, horizontal problems, such as identity verification, interoperability, compliance orchestration, tokenisation toolchains, and PETs-based analytics will establish value for the organisation. Many institutions share these challenges, but few can solve them alone, which provides market entrees for FinTech businesses. Packaging governance into FinTech and AI FinTech products will ensure regulatory clearance. AI explainability artefacts, bias dashboards, and operational playbooks should be built-in, not delivered as add-ons. New entrants should expect that distribution may well flow increasingly through platform partnerships, super-apps and B2B/B2B2C channels where trust, certification, and auditability determine access as much as features.

For investors and boards, the capital allocation indications are that financial services institutions are infrastructure plays as much as they are product/service plays. The returns will come from platforms that reduce frictions for the system by delivering lower error rates, faster settlement, safer operations, and better data. Those platforms are likely become default choices for many participants. Conversely, bets on isolated features without integration pathways will struggle to scale in a world that is converging on curated interoperability.

Finally, for customers, especially individuals and SMEs, the promise is tangible through simpler onboarding via verifiable credentials together with faster, cheaper payments with associated FX. They can also expect credit that reflects real activity more than static proxies, protection products priced and paid out on observable events, and fewer scams that succeed because safety checks happen before money moves, not after. Inclusion will probably become pragmatic. Identity verification that works on a low-end phone may well be ubiquitous. Micro-products that respect small ticket sizes should become commonplace. Multi-lingual, conversational interfaces that reduce form-filling and portability of reputation across borders are likely to be available to individuals and SMEs.

Asia's financial future is being built as a system. The components (AI, digital currencies, tokenisation, open finance, cloud, and cybersecurity) only create durable value when they interlock through standards, governance, and collaborative execution. Seoul's city-scale choreography and SWIFT's network-scale evolution capture this ethos from different angles. One compresses innovation cycles within a place; the other binds thousands of institutions

across places into a more capable whole. Together they show what 'responsible speed' looks like, i.e., moving quickly, but with observability, safeguards and a bias toward interoperability.

By the late 2020s, success will be visible in a handful of metrics that matter, namely: settlement times measured in minutes not days, with settlement completion certainty assured together with exception rates that fall because data are right first time. Fraud losses should be contained by shared intelligence rather than borne firm by firm. Carbon and transition outcomes that are priced into instruments with verifiable data should be widely available and customer journeys that feel local should be the norm even when they traverse borders and rails.

Getting there requires continued investment in standards and shared infrastructure together with disciplined adoption of AI with governance. Regulatory harmonisation where possible is also needed, supported by codified divergence where necessary. A culture of co-creation is the optimum working model ('co-operating to compete') among competitors who recognise they are also participants in the same networks.

Asia has the ingredients and the momentum. The region's combination of scale, policy pragmatism, and willingness to learn in public has already moved finance from paper to phones and from overnight batches to instant flows. The next step is moving from instant to intelligent which is where the system moves value quickly whilst understanding context, enforcing rules, proving outcomes and adapting/adopting safely.

Institutions that align their product and data strategies to this trajectory will do more than keep up; they will set the standards others adopt and thereby gain first mover advantage. Those that hesitate will find themselves paying an 'interoperability and governance tax' for years. The choice is strategic, but the path is practical and well-mapped. That is how Asia will both shape its own financial future and influence how finance works everywhere around the world.

Glossary

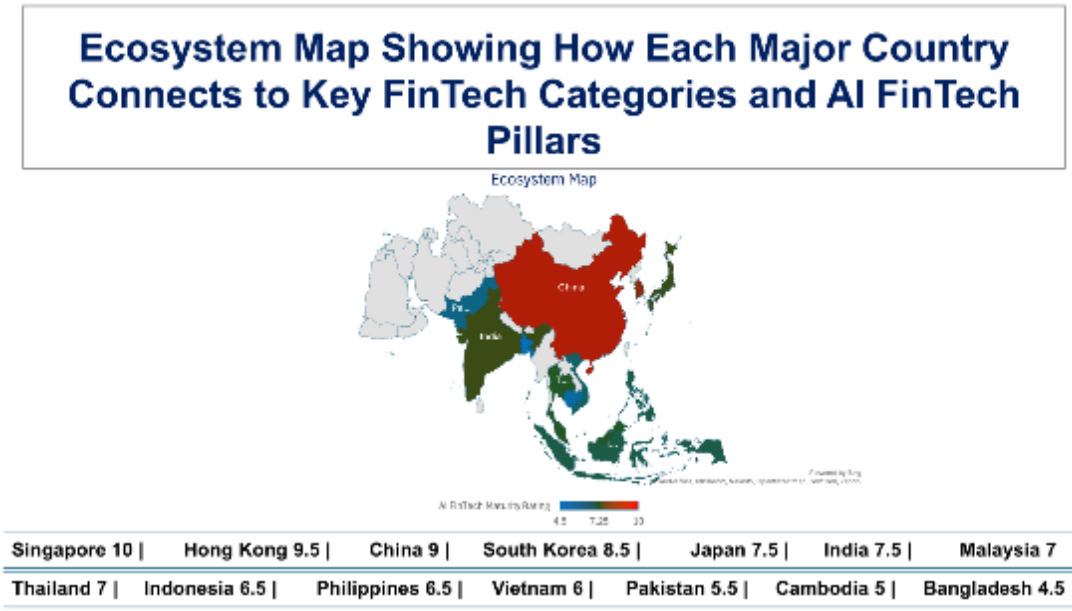
The following terms are used in this report. Definitions are provided here for reference: definition.

- **Account Aggregator (AA)**: A consent-based framework (notably in India) that lets individuals and SMEs share financial data securely across institutions via standardised APIs.
- **Aadhaar**: India's national digital identity system enabling eKYC, direct benefit transfer, and low-cost account opening.
- **Agentic AI:** AI systems that can plan, act, and adapt across workflows (e.g., risk, operations) to achieve goals with minimal human input.
- **AI Governance**: Policies, controls, and processes to manage AI model risk, bias, explainability, security, and accountability across the lifecycle.
- **AML / KYC** (Anti-Money Laundering / Know Your Customer): Controls to identify customers and detect illicit finance; increasingly automated with AI and richer ISO 20022 data.
- **ASEAN Payment Connectivity**: A programme linking instant and QR payment systems across ASEAN to enable real-time, low-cost cross-border retail transfers.
- **BNPL** (Buy Now, Pay Later): Short-tenor, point-of-sale credit embedded in merchant checkout flows, frequently powered by alternative data.
- **CBDC (Central Bank Digital Currency**): A digital form of central bank money. Retail CBDC targets the public; wholesale CBDC targets interbank/market settlement.
- **Chain-Agnostic**: Designs and tools that work across multiple blockchains/ledgers without lock-in to a single protocol.
- **C I / CD (Continuous Integration/Continuous Delivery)**: DevOps practices that automate testing and deployment of software (including financial market infrastructure components).
- **Compliance Orchestration**: A rules-and-workflow layer that routes transactions and data to compliant processes per jurisdiction (policy-as-code for cross-border ops).
- **Counterfactual Explanation**: An AI explainability method showing the minimal realistic change(s) that would alter a decision (e.g., from fail to pass in onboarding).
- **DLT (Distributed Ledger Technology)**: Shared databases (often blockchain-based) that synchronise records across parties with consensus and auditability.
- **DvP / PvP (Delivery versus Payment / Payment versus Payment)**: Settlement mechanisms that eliminate principal risk by synchronising asset-for-cash (DvP) or currency-for-currency (PvP) exchanges.
- **Embedded Finance**: Distribution of financial products (payments, credit, insurance, investments) within non-bank customer journeys (e.g., super-apps, e-commerce).
- **EPR (Explainability, Privacy, Resilience) for AI**: Shorthand for the trio of requirements regulators expect in production AI deployments.
- **Federated Learning (FL)**: Collaborative AI training where models learn from distributed data at institutions without moving raw data offsite.
- **FinTech**: Technology-enabled innovation in financial services that materially affects products, processes, distribution, and market structure.

- **Graph Analytics**: Network-based analysis used in fraud/financial crime detection (e.g., mule account ring detection via entity relationships).
- **Green / Transition Finance**: Instruments and data frameworks (often tokenised) that channel capital to decarbonisation and track verifiable sustainability KPIs.
- **ISO 20022**: Global financial messaging standard providing richer, structured data to improve straight-through processing, compliance, and analytics.
- **Instant Payment System (IPS)**: Real-time domestic retail payments rail (e.g., UPI, PayNow, PromptPay, DuitNow) now often linked cross-border.
- **Interoperability Debt**: Accumulated complexity and fragmentation from non-aligned standards, ledgers, and rails that inhibits seamless operation.
- **LLM (Large Language Model)**: AI models trained on vast text corpora; used in copilots, knowledge retrieval, case summarisation, and customer service.
- **MAS (Monetary Authority of Singapore)**: Singapore's central bank and integrated regulator, noted for AI governance, Project Guardian, and Project Orchid.
- **mBridge**: A multi-CBDC platform (BIS and partner central banks) at MVP stage for cross-border wholesale settlement with on-chain FX.
- **Microservices:** Modular software components communicating via APIs; foundation for scalable, event-driven financial infrastructure.
- **Mule accounts:** A mule account is a bank account used to receive, transfer, or launder illegally obtained funds on behalf of criminals, often without the account holder's full knowledge.
- **Open Finance**: Consent-based data sharing across multiple financial verticals (beyond banking) via standardised APIs.
- **PETs (Privacy-Enhancing Technologies)**: Techniques (e.g., secure enclaves, differential privacy, homomorphic encryption) enabling analytics/modeling without exposing raw data.
- **Programmable Money**: Funds with embedded rules/conditions (via smart contracts or purpose-bound constructs) enabling automated, conditional transfers.
- **Project Agora**: Another international project, led by the Bank for International Settlements which includes eight central banks including the Bank of Korea and the Bank of Japan to demonstrate that tokenised central bank reserves and commercial bank deposits can settle across international borders in a fraction of a second..
- **Project Guardian**: MAS-led industry pilots exploring tokenised funds, bonds, and deposits on interoperable networks.
- **Project Orchid**: MAS initiative exploring "purpose-bound money" and design choices for programmable digital money.
- **QR Payment Interoperability**: Cross-merchant/cross-border QR scanning standards enabling wallet-to-merchant and person-to-person transfers.
- **RAAST**: RAAST means 'direct' in Urdu, is an instant payment system developed by the State Bank of Pakistan (SBP) to facilitate real-time settlement of small value retail payments. It operates on the Pakistan Faster Payment System (PFPS) and allows seamless and allows seamless transactions across banks, digital wallets, and financial institutions.
- **RAG (Retrieval-Augmented Generation**): LLM pattern where external, vetted documents are retrieved and ground the model's responses to improve accuracy and auditability.

- **Rails (Settlement or Payment)**: Rails are the technical, legal and institutional infrastructure used to execute financial transactions, such as to transfer and settle funds or assets between parties, usually through banks, payment systems, central banks, or market infrastructures.
- **Real-World Asset (RWA) Tokenisation**: Digital representation of claims on assets (e.g., bonds, funds, deposits, real estate) enabling fractionalisation and faster settlement.
- **RegTech / SupTech**: Technologies enhancing regulatory compliance (RegTech) and supervisory capability (SupTech), including AI-driven monitoring.
- **Sandboxes (Regulatory)**: Controlled environments letting firms test innovative services under relaxed rules with safeguards and supervision.
- **SGFinDex**: Singapore's API platform allowing residents to consolidate and share financial data using SingPass identity.
- **Settlement Completion Certainty (Legal Finality)**: The legally recognised point at which settlement is final, a prerequisite for production-grade tokenised/CBDC systems.
- **Shared Ledger (Industry Utility)**: A network-operated ledger layer (e.g., SWIFT plans) providing 24/7 orchestration, sequencing, and programmable settlement.
- **Smart Contract**: Code on a distributed ledger that self-executes when predefined conditions are met; used in programmable payments and token lifecycle actions.
- **Stablecoin (Fiat-Referenced)**: A digital token that aims to maintain parity with a reference currency (often via regulated reserve backing and redemption rights).
- **Tokenisation / Tokenised Deposits**: Creating digital tokens representing assets or bank deposits, enabling programmability and rapid, atomic settlement.
- **UPI (Unified Payments Interface)**: India's real-time payments system and open interface allowing instant bank-account-to-account transfers.
- **Verifiable Credentials (VC)**: Cryptographically signed attestations (e.g., identity, address, corporate status) that can be selectively disclosed and verified across borders.
- **Virtual / Internet-only Bank**: Digitally native, licensed bank operating without branches; common in Hong Kong, Korea, Singapore, and elsewhere.
- **Zero-Trust Security**: A security architecture assuming no implicit trust; every user/device/API must be continuously authenticated and authorised.

Annex 1: Country Perspectives



Country-Specific Summaries

China

- World's largest mobile-payments market.
- Advanced AI in lending, fraud detection and user behaviour modelling.
- Digital yuan (e-CNY) pilots are integrated with FinTech platforms.
- WealthTech and Robo-Advisory markets are rapidly expanding.

Singapore

- High AI adoption among financial institutions.
- MAS leads global AI governance frameworks and supports AI adoption through talent and R&D initiatives.
- SGFinDex integrates personal financial data across institutions using SingPass digital identity.
- Strong digital-assets and tokenisation ecosystem.

Hong Kong

- AI governance and the GenAI Sandbox++ programme (2024) provide supervised testing for AI in banking, insurance and wealth management.
- Virtual banks such as WeLab and ZA Bank spearhead AI-enabled credit and personal finance.

Japan

- Conservative consumer finance culture but innovative in blockchain, tokenisation and stablecoin rules.
- Major banks plan tokenised deposit platforms and digitised securities infrastructure.

- AI used widely for AML, cybersecurity and customer interfaces.

Korea

- Highly digital banking market.
- Advanced AI in payments, fraud detection and robo-advisory.
- KakaoBank sets global benchmarks for digital bank profitability.

Southeast Asia (Indonesia, Vietnam, Philippines)

- Massive FinTech adoption driven by cash-to-digital transition.
- AI used in alternative data scoring, e-commerce lending and micro-insurance.
- Wallet ecosystems (GoPay, MoMo, GCash) use AI to combat fraud and tailor financial products.

Annex 2: Regional Perspectives

These regional perspectives have been synthesized from the research conducted for this report.

Asia FinTech & FinTech Heat Map (Colour Grid)

Country	FinTech	AI FinTech	Regulation	Payments Infra	Digi-Banks
Singapore					
Hong Kong					
China					
South Korea					
Japan					
India					
Malaysia					

Singapore, Hong Kong, China
South Korea, Japan, Malaysia, Thailand
Indonesia, Philippines, Vietnam, India
Cambodia, Pakistan
Bangladesh

*(India is in payment but in AI depth – averaged here.)

*Colour Gradient Legend: Very High High Moderate Developing Early Stage

Asia FinTech & FinTech Heat Map (Colour Grid)

Country	FinTech	AI FinTech	Regulation	Payments Infra	Digi-Banks
Thailand					
Indonesia					
Philippines					
Vietnam					
Pakistan					
Bangladesh					
Cambodia				(Bakong)	

Singapore, Hong Kong, China
South Korea, Japan, Malaysia, Thailand
Indonesia, Philippines, Vietnam, India
Cambodia, Pakistan
Bangladesh

*Colour Gradient Legend: Very High High Moderate Developing Early Stage

Asia FinTech & AI-FinTech Colour Gradient Map (Regional)

Southeast Asia

Country	FinTech	AI FinTech	Regulation	Payments Infra
Singapore				(Global leader across all dimensions)
Malaysia				(Strong Ecosystem + strong regtech)
Thailand				(High maturity in payments + regulation)
Indonesia				(High FinTech + moderate AI depth)
Philippines				(FinTech expanding fast, mixed AI Layers)
Vietnam				(Rapid adoption but early AI scaling)
Cambodia				(Developing; advanced Bakong payments)

*(Southeast Asia is highly diverse - top-tier Singapore mixed with developing markets.

*Colour Gradient Legend: Very High High Moderate Developing Early Stage

Asia FinTech & AI-FinTech Colour Gradient Map (Regional)

South Asia

Country	FinTech	AI FinTech	Regulation	Payments Infra
India				(High FinTech + moderate AI depth)
Pakistan				(FinTech expanding fast, mixed AI Layers)
Bangladesh				(Rapid adoption but early AI scaling)

*(South Asia shows extreme variation between India and the rest.)

^Colour Gradient Legend: Very High | High | Moderate | Developing | Early Stage

Asia FinTech & AI-FinTech Colour Gradient Map (Regional)

East Asia

Country	FinTech	AI FinTech	Regulation	Payments Infra
China				(Global leader across all dimensions)
Hong Kong				(Strong Ecosystem + strong regtech)
South Korea				(High maturity in payments + regulation)
Japan				(High FinTech + moderate AI depth)

*(East Asia is the strongest zone in Asia overall.)

^Colour Gradient Legend: Very High | High | Moderate | Developing | Early Stage

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One of Z/Yen's specialisms is the study of the competitiveness of financial centres around the world. A summary of this work is published every six months as the Global Financial Centres Index. This report is original work and has used AI tools to support some of the research data collection.

For the Seoul Metropolitan Government

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