Central Bank Payments News

Charting the Course for Transformative Payments in 2022 and Beyond: Industry Perspectives

A Central Bank Payments News Special Supplement

DISCOVER EMTECH FIS

ProgressSoft www.progressoft.com RTGS.global The world's cross-border liquidity network StoneX

tietoevry VISA

Table of Contents

Carmelle Cadet

CEO and Founder, EMTECH

[LinkedIn]

Aman Cheema

Global Managing Director, FIS RealNet™ Central

[LinkedIn]

Julia Demidova

CBDC Public Policy Strategy Lead, FIS

[LinkedIn]

Samia Ferradj

Head of Sales Europe, FX Payments, StoneX

[LinkedIn]

Jerry Fosker

Head of Network Alliances EMEA, Discover® Global Network

[LinkedIn]

Jean-Michel Godeffroy

Former ECB Director General of Payment Systems & Market Infrastructure and CBPC Chairman

[LinkedIn]

Valdis Janovs

Head of Instant, Retail Payments and Cards, Tietoevry

[LinkedIn]

Hussein Jundi

CBDC Account Manager, ProgressSoft Corporation

[LinkedIn]

Seun Owoeye

Chief Operating Officer, Integrated Payment Services Limited (IPSL)

[LinkedIn]

Ruben Salazar Genovez

Global Head, Visa Direct

[LinkedIn]

Dave Sissens

CEO, RTGS.global

[LinkedIn]

Andrew Turner

CBDC Product Strategy Lead, FIS

[LinkedIn]

Discover® Global Network: Our Role in Supporting Domestic Payments Schemes and Providing Benefits for Them and Their Members

By Jerry Fosker, Head of Network Alliances EMEA,
Discover® Global Network

The opinions expressed in this publication are those of the author. They do not necessarily reflect the official policies or positions of Discover® Global Network or other related entities.

For over a decade, Discover® Global Network has been a financial services pioneer and leader with an impressive record of accomplishment—forging new networks and alliances with many domestic schemes and networks worldwide. Supporting the growth of domestic schemes and networks has been one of our core strategies. This has resulted in many domestic payment schemes choosing to work with Discover Global Network, because we offer a highly beneficial business relationship with our partners.

Discover Global Network provides a "New Option" for domestic schemes, leading us to form Alliance Partnerships that:

- Support the domestic scheme and network growth through licensing our assets, such as payments technologies and expertise sharing on scheme risk management and compliance program standards.
- Leverage our global scale in deploying innovative products and promoting use of domestic and international payments products.
- Provide extensive experience in deploying Discover Global Network technologies with domestic schemes and networks around the world.
- Preserve the domestic brand and control over a domestic scheme's home market and ensure domestic transactions remain on the domestic scheme's network.
- Implement mutually beneficial solutions that can improve both parties' industry presence.

Domestic payment schemes have a unique opportunity to leverage the expertise of Discover Global Network. With more than a decade of hands-on experience working with domestic schemes to build and strengthen their domestic networks, Discover provides a strong understanding and flexible approach.

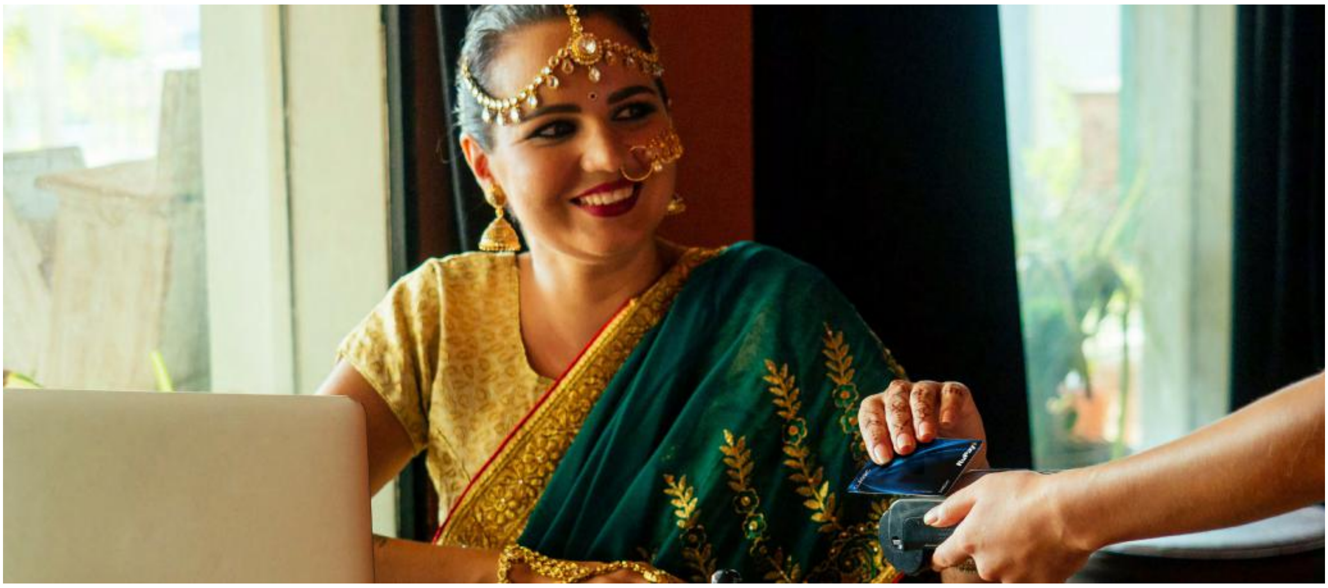
Through strategic alliances with 26 domestic schemes, the company supplies international payments interoperability and is currently providing operating regulations, technology and international acceptance to its Alliance Members.

EXAMPLES:

- **Turkey:** BKM's (Interbank Card Center of Turkey) domestic card scheme Troy licensed the Discover Global Network contact/ contactless D-PAS EMV solution, and Discover Global Network supplied its operating regulations and scheme risk management processes to help BKM set up Troy. All Turkish banks now support acceptance for Troy's products. The first Troy international cards (Troy Global Cards—cards that operate on the Discover Global Network acceptance network outside Turkey) were launched in October 2017. To date, more than 1 million Troy Global Cards have been issued.
- **Republic of Korea:** BC Card (the largest payment network in Korea) licensed the Discover Global Network D-PAS EMV solution and were provided the Discover Global Network Issuer Identification Number (IIN) ranges to issue "BC Card Global Cards" in South Korea. Implementation was completed in less than nine months, with BC Card member adoption at over 90%. To date, BC Card has issued nearly 15 million BC Global Cards.
- **India:** The National Payments Corporation of India (NPCI)/ RuPay (part of the Reserve Bank of India) licensed the Discover Global Network D-PAS EMV solution and were provided the Discover Global Network IIN ranges to issue "RuPay" in India. The NPCI, which launched RuPay, has issued more than 140 million cards with D-PAS technology for use in the Indian market and abroad. Discover Global Network also supplied its operating regulations and scheme risk management processes to RuPay for use in their domestic scheme.

- **Brazil:** Elo (the largest debit and credit card brand in Brazil) uses the Discover Global Network D-PAS EMV technology, and the Elo Global Card is issued on Discover Global Network IIN ranges for immediate global acceptance. Accepted across the country in more than 4.3 million establishments, Elo has approximately 118 million cards issued in the Brazilian market, with 40 million of those being Elo Global Cards.

Discover Global Network encourages the growth and development of national payment schemes, retaining their brand, network, rules, pricing, volume and revenue within the national payment scheme. Through a partnership with Discover Global Network, domestic payment schemes can scale their domestic product offering to include products that work internationally. This enables the domestic schemes to offer product options that allow their banks to truly compete with the other international payment schemes in their own market.



The Alliance Partnership concept supports domestic payment schemes rather than competing with them in their own market. It also creates a network effect by joining domestic schemes together by sharing interoperable technology, adding relevance, value and products with international acceptance to their member banks in a cost-effective and quick-to-market manner. This provides choice and leverage for the domestic payments schemes' member banks within the international competitive landscape, including:

- Through an Alliance Partnership with Discover Global Network, domestic schemes can leverage the wide range of internationally certified payments products from Discover. These include tokenization capabilities allowing for digital wallet capabilities to bring x-pays to their network and EMV technology solutions (D-PAS; loyalty solution capabilities; QR code specs; and consumer authentication tools such as ProtectBuy® [3DS] and SRC). Such a partnership ensures that the domestic scheme continues to receive a pipeline of technology enhancements and innovations as they are developed for Discover partners around the world. This ongoing pipeline of innovation reduces the costs for domestic schemes to compete in their own market.
- Each domestic scheme partnership benefits from global acceptance through the Discover Global Network outside their country—at over 61 million point-of-sale locations and 2 million ATMs globally, as well as millions of e-commerce and micro-merchants worldwide. Use of the Discover Global Network globally certified technology provides a domestic scheme with instant interoperability with 26 leading domestic schemes around the world, including Rupay in India, Discover in the U.S., ELO in Brazil, BC Card in Korea, SIBS in Portugal, Troy in Turkey, SAMA's Saudi Payments in Saudi Arabia and many others.
- A Discover Global Network partnership provides the domestic schemes with strong and highly competitive economics that it can pass on to its members. Compared with other international scheme partnerships, domestic schemes and their members will enjoy competitive fees on cross-border transactions while retaining full control over their domestic scheme pricing, branding and development—enhancing the competitiveness of the overall product.
- Additionally, thanks to a domestic scheme-enabling acceptance through its network for inbound Discover Global Network payment products from around the world, the domestic scheme receives international acquiring volume and associated revenues from all the other Discover Global Network partners in our network.
- Such a strategic partnership provides domestic schemes with a simple, quick and cost-effective solution to their scheme and technology requirements and allows them to grow, stay ahead of payments innovation and compete more effectively domestically and on a global stage.

Importantly, where appropriate, all technologies of Discover Global Network are developed and certified to EMVCo® standards, providing the highest technological protocols in the industry. As part owner of EMVCo®, Discover is one of several leading payment networks, including American Express, JCB, Mastercard, UnionPay and Visa, to have representatives in the organization at the management and working group levels. Decisions are made on a consensus basis among the member organizations. Additionally, Discover is a member of the NFC Forum, MAOSCO (Multos Consortium), and Global Platform.

SO HOW DOES IT WORK?

Under an Alliance Partnership, the contract is between the domestic scheme and Discover Global Network.

This is a unique benefit because connectivity and transaction flows are between Discover Global Network and the domestic scheme. Since Discover Global Network does not connect to each issuer bank or acquirer, that means all transactions for the partner cards' spending in the domestic scheme's country and for spending abroad (when the domestic scheme's cards are issued using D-PAS and Discover Global Network's IINs) must flow through the domestic scheme's network, regardless of which network a cardholder chooses at point of sale.

The way this works is that the domestic scheme introduces the concept of a domestic scheme "Global Card" (local card for international use) and a domestic scheme "Foreign Card" (Discover Global Network cards) into its scheme rules and pricing alongside its own domestic scheme rules and pricing.

Discover Global Network scheme rules and pricing apply to the domestic scheme's "Global Card" transactions abroad, which (as described above) provide very competitive economics. Meanwhile, local scheme rules and pricing apply to their domestic transactions.

For Discover Global Network transactions spend in the domestic scheme's country, accepted by the domestic scheme's acquirers, Discover Global Network scheme rules and pricing would also apply, which again are very competitively priced.

For more information on the topic, please visit:

https://www.businesswire.com/news/home/20210713005256/en/Discover-and-SIBS-MB-Establish-Strategic-Agreement-to-Increase-Payment-Acceptance

https://www.finextra.com/pressarticle/43476/discover-and-indias-npc-forge-reciprocal-alliance

https://www.finextra.com/pressarticle/71533/turkeys-troy-moves-overseas-with-discover-deal

https://www.discoverglobalnetwork.com/our-network/our-unique-network/

ABOUT DISCOVER® GLOBAL NETWORK

Discover® Global Network, the global payments brand of Discover Financial Services, processes millions of cardholder transactions each day. With industry expertise, innovative technology and a closed-loop infrastructure, Discover Global Network provides effective, customized solutions that evolve as needs change. Discover Global Network has alliances with 26 payment networks around the world, and is led by three Discover businesses: Discover Network, with millions of retail and cash access locations; PULSE®, one of the leading ATM/ debit networks in the U.S.; and Diners Club International®, a global payments network with acceptance in more than 200 countries and territories.

For more information visit DiscoverGlobalNetwork.com

EMTECH: For Modern Central Banking

By Carmelle Cadet, Founder & CEO, EMTECH

No two central bank systems are exactly the same. Nor do two central banks govern exactly the same. However, today, all central banks are expected to address new complicated mandates faster at home, while complying to ever evolving international standards.

EMTECH is proudly responding to the demand from central banks and regulators to go digital and tackle key challenges with modern technology. EMTECH builds easy to deploy, highly secure, cloud-based software for central banks to become more innovative, provide financial inclusion and build infrastructure resilience in the era of open banking and digital currency.

We see a future of financial services based on truly digital currency-based systems embedded with distributed ledgers. This transformational change from centralized to network business models will need a modern infrastructure.

WHY CENTRAL BANKS?

We believe central banks need to innovate in order to deliver on the mandate of maintaining financial stability and efficient payment infrastructure for all. Our approach maps policy frameworks to technologies that can execute as intended. We are modernizing central banking infrastructure to drive value for central banks and their fintech ecosystem. In doing so, we also reduce the costly friction for emerging financial service providers to interface with central banks with easy-to-use and developer-friendly APIs.

Our products include the Central Bank Digital Regulatory Sandbox, built for collaborative execution of innovation and regulatory frameworks, and Central Bank Digital Cash designed to be a modern cash infrastructure built on a trusted, enterprise-grade and energy efficient blockchain stack with a native open banking architecture. We believe those are critical design factors for central bank money, riskless and most used for payments, to be accessible, trusted and adopted.

The five key drivers of a digital Regulatory Sandbox for central banks include: modernizing the regulatory environment and frameworks; streamlining supervision and enhancing decision making; understanding the risks and fostering safe fintech innovation; accelerating the adoption of CBDC to enhance financial inclusion; and safeguarding consumer protection and ecosystem resilience. According to the WEF Report, regulatory frameworks for CBDC and stablecoins are critical for the ecosystem to discover the new business models.

"Our digital Regulatory Sandbox enables central banks and other regulators to create innovative space to empower a safe, digital and inclusive financial ecosystem for underserved consumers," said EMTECH Executive Director Tunji Odumuboni.

WHY EMERGING, DEVELOPING & TRANSITIONAL MARKETS?

There is a clear need and demand for modern payment infrastructure across the Africa and Caribbean regions. The financial market infrastructure in emerging, developing, and transitional markets is cash heavy and inefficient, but ready for change. Central banks in emerging markets in particular have a unique opportunity to leapfrog in the technology they use to modernize their financial systems. We hope to serve as the trusted partner in that journey.

OUR KEY DRIVERS

- We are in the midst of an innovation wave in the financial sector that is now impacting central banks
- The role of central banks is key to closing the financial inclusion gaps, as more economies go digital
- Ultimate success for central banks requires public-private integrations

EMTECH's strategy in building modern banking infrastructure is anchored in our mission of leveraging technology to enable access to modern and sound financial markets. As a team, we are all about innovation, passion, and impact. Find out more at https://emtech.com/

CBDCs and Digital Currencies: Shaping the Future of the Payments Ecosystem



By Aman Cheema, Global Managing Director, FIS RealNet™, Andrew Turner, CBDC Product Strategy Lead, FIS, Julia Demidova, CBDC Public Policy Strategy Lead, FIS

Rapid innovation in digital money attracted significant interest over the course of the last year, a trend that has continued into 2022. We have seen significant market development in the payment ecosystem, with central banks spearheading efforts in exploring, piloting and launching a central bank digital currency (CBDC).

The current year has started with an absence of global coordinated regulation on digital assets, yet both public and private sector institutions are hoping for this to be a temporary problem. Recognising the need to protect consumers, policy makers and regulators around the world are taking full engagement and authority in regulating crypto, stablecoins and other digital assets.

At the end of 2021, we saw the UK establishing an All-Party Parliamentary Group (APPG) for Crypto and Digital Assets and global anticipation for the Federal Reserve's report on CBDC, stablecoins and crypto. Sparked by growing adoption and valuations juxtaposed with volatility and concerns about financial stability, regulators across the globe are working to establish a taxonomy for digital assets, as well as regulatory frameworks for national regulation and supervision. The regulatory objectives for financial markets are to maintain financial stability, monetary policy effectiveness and consumer protection, meaning that regulators may need to further regulate digital assets or even decide to launch a CBDC as a way to preserve and provide confidence in all forms of money, whether private, commercial or central bank money.

Central banks and national governments have a historic opportunity to design the future of money with a CBDC. A consensus seems to be emerging between public and private sector interlocutors that the central bank or the payment systems operator should design the full CBDC ecosystem in collaboration with the private sector, as well as the other public sector institutions. For CBDC to be successful it will need to be legal tender, widely accepted, user-friendly, low cost and integrated with the existing payments system to facilitate adoption.

Whilst central banks have different objectives in launching a CBDC (many of which are country specific), some prime objectives include promoting innovation, resilience and competition in the payments landscape. Some central banks are seeking to maintain public access to central bank money and other central banks are looking to mitigate future currency substitution risk from a widely adopted global stablecoin denominated in a foreign currency.

THE ROLE OF STABLECOINS AND CRYPTO IN THE FUTURE OF THE PAYMENTS ECOSYSTEM

The emergence of stablecoins has of course raised fundamental questions around legal and regulatory safeguards, financial and monetary stability, and the role of money. However, we should not eliminate stablecoins from the future of the payments ecosystem. The role of stablecoins highly depends on how the regulatory framework plays out. Stablecoins vary widely in their design and architecture and therefore no single definition fits all.

According to January 2022 research undertaken by FIS, we believe that stablecoins are perhaps more suitable on the wholesale side, as the stablecoin issuer does not design and provide the full ecosystem or end-to-end functionality needed for a retail CBDC. Today, one of the concerns around stablecoins is consumer protection and the asset backing the stablecoin which carries different consumer risks. This is yet to be addressed by regulatory frameworks and guidelines, including the reserve management risk, as this type of risk does not today exist with traditional bank deposits (in most jurisdictions bank deposit insurance protection exists). Stablecoins could be programmed and made interoperable with other currencies, potentially creating efficiencies to improve the speed, access and efficiency of financial services.

Crypto has also gained a lot of backing and support from institutions globally, with a rapidly developing ecosystem emerging for this newly established asset class, such as exchanges, custody solutions, and even loans being offered against digital assets.

It is important to remain flexible in a quickly evolving and growing digital money market. During the current pandemic, we have seen an emerging trend of diversification by reserve managers and increasing capital allocations towards digital assets in general. Due to uncertainty around global economic recovery, reserve managers are trying to diversify traditional portfolios as the yields have been decreasing gradually; digital assets in the past year have been on the minds of the reserve managers as a lucrative and speculative asset. We have seen some sovereigns linking them to their balance sheets, with the prime example being El Salvador President Nayib Bukele making Bitcoin legal tender. But for many, crypto-assets remain highly speculative, considered more of an investment asset class rather than a general means of payment.

The risk, volatility and lack of consumer protection has led central banks to actively experiment with technology and CBDCs.

THE RISE OF CENTRAL BANK DIGITAL CURRENCIES

CBDCs are a new money format and method of payment issued by central banks. The emergence of stablecoins and the rising popularity of crypto-assets have underscored central banks efforts to launch fully functional CBDCs that would provide financial and monetary stability, as well as consumer protection.

There are several payment applications of CBDCs to be considered—including B2C, C2C, G2C and vice versa—as well as interesting use cases such as financial inclusion, offline functionality and cross-border payments that central banks need to design for.

To help central banks conduct CBDC pilots and experiment with relevant policy decisions, FIS has launched its CBDC and Digital Currencies Sandbox, which incorporates a number of new concepts and ideas that can be tested including:

i. How aid could be better distributed when a natural disaster disrupts the internet and electricity and prevents cash deliveries.

ii. How pan-regional and global trade can be increased with interoperable CBDCs.

iii. How the fractional banking issue can be solved without imposing limits or negative renumeration whilst not disintermediating banks and ensuring credit creation is not impacted.

iv. How multi-dimensional interest rates could be used to tackle high inflation.

FINANCIAL INCLUSION & CBDCS

Today there remains a large unbanked population globally. Many governments and financial institutions have tackled the challenges of financial exclusion with a mixture of regulation, new products, services and financial literacy programmes. Current barriers to financial inclusion include geographic location and infrastructure, as well as socio-financial barriers such as lack of education, financial or digital literacy, and limited internet and mobile phone penetration.

CBDC will face the same hurdles and barriers to adoption and will need to be specifically designed to decrease the overall percentage of unbanked citizens. Many of these challenges will be complex, as populations remain unbanked for a variety of reasons. In some countries it may be due to distrust in the banking system, or educational barriers and challenges, or reachability in those countries that are scattered across different islands. In the UK some of the unbanked and underbanked population continue to use cash for its budgeting features.

At FIS we have developed several CBDC pilots to promote financial inclusion which will be available to central banks and nations to test in the FIS CBDC and Digital Currencies Sandbox.

These include:

i. Developing a wallet/account with a risk-based approach to KYC, budgeting features and helping reduce homelessness providing wallets/accounts to individuals with no fixed address.

ii. Verification services to allow government departments to confirm the identity of an individual.

iii. Electronic mechanisms for the unbanked to exchange cash for CBDC.

In October 2020, the National Bank of Cambodia (NBC) launched its blockchain-based central bank payment system which uses digital currency. Many refer to the initiative, Project Bakong, as a 'quasi-CBDC' as it only carries out payments in both USD and Cambodian Riel. The pilot project was launched to increase financial inclusion and to reduce the nation's dependence on the US Dollar by increasing the use of Cambodian Riel via digital payments.

Bakong has multi-tier implementation. Wallets that can hold limited amounts can be opened using only SMS-verification, whereas accounts with higher limits can be opened by visiting a bank and registering with a government-issued ID. Users can then create their own QR code to share in order to receive payments, scan QR codes to make payments or send money via phone number.

The hope was that by decreasing the cost of financial transactions and being able to make payments in local currency, rather than paying forex rates to use USD, underserved consumers and small businesses would save money, thereby increasing their borrowing and use of the banks' other financial services. This seems to have been achieved. In the first half of 2021, the NBC reported that borrowing had increased by more than 22%.

CBDC & PROGRAMMABILITY

Central banks and governments will need to decide the extent of programmability of CBDCs, including the restrictions that may be placed on money with the use of smart contracts. The fundamentals of technology and innovation are changing very fast, with programmability features becoming more common and a must-have in designing a CBDC.

Programmable CBDC in the manufacturing industry could significantly improve the manufacturing processes, with IOT-enabled devices purchasing more materials or parts predicting when stock levels run low or when there is a large order. Programmable CBDC could add simplification, efficiency and reduction in operational costs, with smart contracts being used to purchase raw materials, commodities or parts when a price reaches a certain level.

CBDC & FRACTIONAL-RESERVE BANKING

At FIS, we believe the risk of bank disintermediation can be mitigated with central banks imposing limits or negative remuneration. At the same time, the disintermediation risk will vary across markets, with some instead substituting CBDC for cash. Should a nation launch a retail CBDC, this would account for a portion of the money supply. We expect households and businesses to continue to hold bank deposits in their accounts.

There is an opportunity to solve the fractional banking challenge without imposing limits or tiered negative renumeration by adopting a multi-ledger two-tier dual CBDC / regulated digital money approach. This approach may also encourage banks and other industry players to offer accounts or wallets and works to digitalise cash and bank deposits whilst ensuring access to central bank money.

CBDC AND OFFLINE FUNCTIONALITY

FIS has played a leading role in implementing offline payments in today's payments landscape. Offline payment functionality must solve the online checks and validation performed by the core network when connected and is needed to keep businesses and payments moving in case of:

- Network connectivity issues or outages
- Resiliency if a natural disaster occurs
- Remote/ rural areas without internet
- Network dead-spots

Offline functionality must enable transfers whilst protecting against the risk of offline double-spend and offer protection and security from fraud, counterfeiting and cyber-attacks. Further, the issue of privacy (revealing transaction parties, transaction data, or metadata) when supporting offline payments requires additional consideration.

CONCLUSION

It is important to design a CBDC with users and consumers in mind, as well as the high-level policy objectives for each individual nation. Covid-19 has demonstrated that in times of crisis and distress there may be a need for governments to directly provide support to citizens and businesses, such as stimulus payments. A CBDC can be designed to run alongside—yet be distinct from—other payment infrastructure should the banking system fail. This would provide an alternative payment mechanism in case there are any system outages or if the banking sector becomes impaired.

Central banks across the globe have differing objectives in tackling the most pressing issues impacting their national economies. FIS stands ready to support central banks on their journey to launch CBDCs by providing expertise and technology, as well designing, building, testing and/or support services.

Exploring Blockchain-based Central Bank Digital Currency

Exploring Blockchain-based Central Bank Digital Currency

By Hussein Jundi, CBDC Account Manager,
ProgressSoft Corporation

The Bank for International Settlements estimates that approximately 80% of central banks around the world have embarked on exploratory projects to study the potential for issuing central bank digital currency (CBDC), an inevitable shift towards a new monetary era that is today being realized.

Utilizing our over 32 years of experience with central banks, government regulators and versatile financial institutions, and over 6 years of proficiency in building a blockchain-based CBDC, we have developed a complete understanding of the limitless considerations this intricate technology presents, and what it means for central banks in their exploratory projects.

Our business, operational and technological expertise, and massive access to economic, legislative, regulatory and compliance requirements, has enabled us to overcome the obscurities of what this technology presents to central banks, with our teams today ready to assist central banks in the journey to explore the potentials of issuing CBDC: from assessing its effects on financial stability and security to evaluating its implications on bank funding and liquidity, all on top of the integral blockchain-based technology.

PS-CBDC

Our software development capabilities, technology infrastructure expertise and extensive manpower dedicated to this disruptive technology are reflected in our bespoke blockchain-based CBDC, **PS-CBDC**: a solution that offers a country an advanced, secure form of its own regulated national digital currency built on advanced blockchain technology and authorized by their central bank.

As CBDC is also a relatively new and disruptive technology, we believe it is vital for central banks to partner with well-informed and highly capable providers to guarantee success. As such, our renowned digital currency specialists and international consultants in different domains are available to assist with and assess PS-CBDC to ensure that it contains the advantageous capabilities of conventional currencies, while maintaining adaptability to strategies adopted by central banks—and also ensuring that central banks are involved in all phases of development.

From the technology perspective, PS-CBDC encompasses intricate components to furnish a secure, tailored and advanced solution for central banks, including, but not limited to:

Permissioned Blockchain Network that stores and shares immutable ledgers of all transactions in the network.

One-to-One Exchange Rate with fiat money which allows for the gradual migration towards central bank digital currency.

Open Integrators and Built-in Smart Contracts in addition to its auto-scalability and modular components that satisfy multifold payment ecosystems.

Dynamic Use Cases which facilitate resilient wholesale and general-purpose CBDC implementation designs.

Identity Management and modules that accommodate issuance, valuation, consensus and peer-to-peer domestic and/ or cross-border payments.

Mobile Wallet Software Development Kit (SDK) that connects with any mobile payment application and facilitates a smoother nationwide transition to CBDC.

OBJECTIVES AND BENEFITS

PS-CBDC was created to enable central banks to serve the following main objectives:

1. Resolve cash fraud and robbery
2. Eliminate cash costs

3. Support new market needs
4. Enhance financial inclusion
5. Reduce operational risk
6. Prevent monopolies

These objectives are achieved through multiple benefits that are inherently provided by PS-CBDC, including:

Financial Inclusion

PS-CBDC serves as a costless medium of exchange, secure store of value and stable unit of account for banks, central banks, governments, financial institutions, and banked and unbanked individuals. It also supports all types of payments for retail CBDC, including but not limited to person-to-person, person-to-business, and person-to-government.

Financial Integrity

PS-CBDC is compliant with Anti-Money Laundering/ Combating the Financing of Terrorism (AML/CFT) and Know Your Customer (KYC) requirements through participant registration and periodical records updates, thereby ensuring financial integrity of transactions. It also delivers no single point of failure and multi-phases of validations and consensus protocols.

Transactions Privacy

Depending on the preference of the central bank, PS-CBDC may offer transaction anonymity between transacting parties. For jurisdictions and claim of ownership, the central bank is authorized for accounts and transactions tracing.

Financial Market Monitoring

PS-CBDC provides statistical data analytics and monitoring of market spending behavior. It presents money distribution between industries and the financial sector, enhances monetary policy tools and ultimately prevents tax evasion.

Economic Gains

PS-CBDC eliminates transaction 'friction' with minimal infrastructure cost and reduces risks involved from deferred settlement. It also improves confidence in privately controlled money systems and increases trust in the national payment system.

Cross-Border Payments

PS-CBDC can also be expanded to enhance the efficiency of cross-border payments and has the capability of forming multi-CBDC arrangements by central banks, resulting in convenient and inexpensive access to other currencies for remittances, travel and trade, especially in emerging economies.

EXPERIMENTAL EXPLORATION

When a newly emerging phenomenon is addressed, the recommended approach is an experimental exploration through Proof of Concept (PoC) and pilot projects, which is the approach being taken by most central banks exploring CBDC in the absence of globally recognized best practice standards.

Accordingly, we have been advising our clients to explore the technology's potentials and feasibility via PoC and pilot projects across different business use case scenarios, which if executed successfully, may lead to more confident steps towards establishing a formal CBDC.

PoC and pilot projects by central banks should be able to cover technology, economic and regulatory aspects before they commence with their CBDC journeys. Accordingly, we provide country-specific consultations by our partner consultants covering two major aspects:

1. **Business Process Re-engineering**

Our business process engineers assess monetary situations in the country, while our engineers scrutinize the 'as-is' situation for every business use case scenario, as well as build and provide several recommendations for the 'to-be' situations.

2. **Blockchain, DLT and CBDC Analysis**

For the technological scope, our highly experienced team of experts which have been working with monetary technologies for over 20 to 30 years, as well as specializing in blockchain and CBDC technologies for the past 6 years academically and experientially, are responsible for providing an expert opinion on what technologies to use/ not use and why.

These consultations are complemented with several envisioned PS-CBDC use case scenarios that include:

All-Purpose Technology

PS-CBDC was developed with different approaches in mind which led to a portable application of use cases irrespective of the blockchain engine being used.

Issuance, Pledging and Redemption

Direct or indirect/ hybrid distribution of PS-CBDC units for general use through pledging and redemption operations.

Interbank Settlement

Commercial banks can use PS-CBDC to transfer balances between their accounts for settlement purposes using CBDC wallets.

Cash-In/ Cash-Out

PS-CBDC offers both a cash-in facility to exchange banknotes for CBDC and a cash-out facility to exchange CBDC for banknotes.

Wallet-to-Wallet Transfers

PS-CBDC offers real-time value transfer between different supported wallet types with well-defined payment purposes and configurable payment limits. Wallets can be assigned to individuals, businesses, government entities, or any community organization with a well-established identity.

Reports and Enquiries

PS-CBDC offers reporting facilities to the central bank and any other participating organization to inspect and trace sent or received transactions.

Offline Transactions

PS-CBDC allows limited use of offline transactions in situations with limited or no network connectivity. To minimize the risk of offline transactions, certain measures are provided to the central bank to retain control.

Intraday Liquidity Management and Sweep Accounts

Business entities work in an extended timeframe that goes beyond commercial banks and central banks, so introducing hierarchically deterministic PS-CBDC wallets makes it easier for business entities to manage liquidity needs after the central bank's working hours. This requires interoperability between CBDC wallets and e-money bank accounts managed by business entities where they need to be able to sweep money from and into their bank accounts frequently during the day, especially when subsidiaries are involved.

IMPLEMENTATION APPROACH

The recommended approach for implementing CBDC use case scenarios should be the gradual approach in which CBDC is tested in limited use cases either geographically and/ or according to other dimensions such as industries or vendor types. With this limited exploration phase, it is important to have a 'success' criteria or benchmark that can be tested in addition to incentives such as the red envelope giveaways in the case of China or lottery entries in the case of Uruguay.

Once a use case is applied to a limited partial group of the business scenario domain, it can be expanded to additional segments of the same domain for the same use case. And only when a business use case is fully implemented or at least expanded to over 80% of the domain population, the platform may be extended to incorporate another use case and so on. However, throughout the transition from testing and experimental phases to full launch, central banks must ensure that the approach remains user-centric and agile.

Access our PS-CBDC Sandbox Testing

Tackling Today's Challenges in Wholesale Cross-border Payments Provision

By Dave Sissens, CEO, RTGS.global

Resolving issues that have inhibited efficient cross-border currency movement and exchange for decades requires constructive innovation, not the wholesale replacement of the existing system.

Last October, the Financial Stability Board (FSB) published its first Consolidated Progress Report on the G20 Roadmap for Enhancing Cross-border Payments, summarising progress made on enhancing cross-border payments services to make them faster, cheaper, more transparent and more inclusive, whilst maintaining their safety and security. At the same time, the FSB published its report on Targets for Addressing the Four Challenges of Cross-Border Payments, which set specific goals for addressing identified issues and challenges faced in cross-border payments.

The FSB Roadmap initiative aims to encourage proposals to improve existing systems and arrangements for cross-border payments, as well as for developing new systems. Through a set of 19 'building blocks,' the Roadmap envisions accomplishing this via a progressive evolution in specific areas of the current cross-border payments ecosystem, rather than a total overhaul that would sweep away today's ecosystem and replace it with another. Any reforms should seek to maintain soundness and stability by preserving what is effective and good, whilst emphatically addressing acknowledged deficiencies in legacy cross-border payments mechanisms in a thoughtful and targeted way.

ADDRESSING CURRENT CHALLENGES

In terms of addressing the four challenges identified in the Roadmap, several objectives have been set specifically for wholesale cross-border payments. These goals include financial institutions in all currency corridors having at least one option and, as appropriate, multiple infrastructures or providers, for sending and receiving cross-border payments. This makes sense, as multiple providers can help mitigate concentration risk from a single provider becoming inaccessible. Promoting the establishment of multiple options would also lead to greater competition and wider choices in alternatives for access to payment rails for those using them.

Another goal is to speed up the time it takes for wholesale cross-border payments to be credited to recipients and for credited payments to be reconciled. Processing speed is an important element of cross-border payments, as slowness in the transfer of payments and time lags between receipt and reconciliation of funding and defunding status can translate into costs and inefficiencies for both senders and receivers of funds. With traditional correspondent bank funding arrangements, which are often impacted by time zones and reliance on central banks and RTGS operating hours, wholesale cross-border payment settlements can take 48 hours or longer to achieve.

Also included within the Roadmap's focus areas are several building blocks related specifically to payment infrastructures and arrangements. Notably, these include considering the feasibility of new multilateral platforms and arrangements to alleviate friction in cross-border payments, and facilitating increased adoption of payment-versus-payment (PvP), a risk-reducing mechanism vital to the wholesale FX market – which relies on cross-border payments for settlement – given the vast amounts of currency exchanged around the world each day.

Expanding the availability and use of PvP mechanisms to mitigate FX 'settlement risk' – the risk a currency is sold without receiving the currency bought – is an imperative. According to figures from the Bank for International Settlements (BIS), close to US$9 trillion of FX payments incur settlement risk on any given day, driven largely by an increase in the turnover of FX trades in emerging market currencies that lack PvP settlement capabilities.

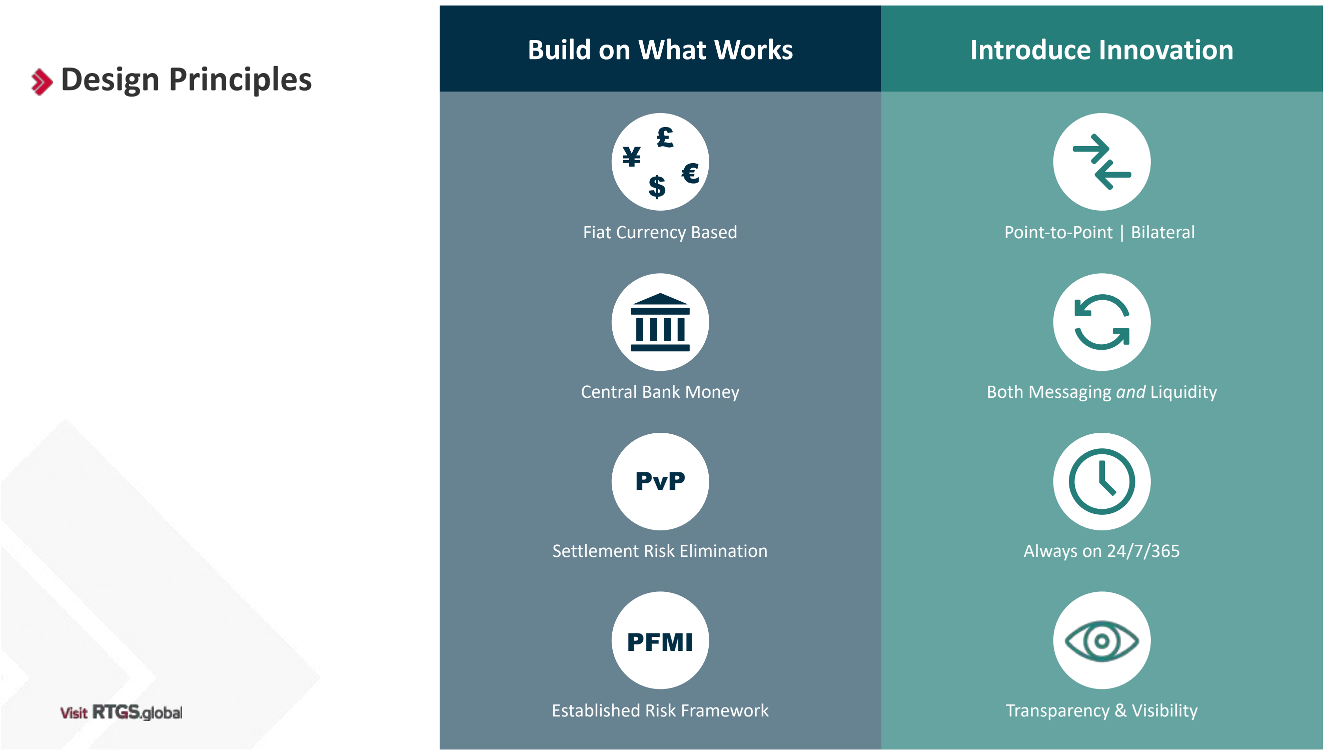
This has led to a call to action by the Committee on Payments and Market Infrastructures (CPMI), as part of the G20 / FSB initiative, for the development of proposals to increase adoption of PvP through both enhancements to existing PvP arrangements as well as the design of new solutions, with public sector support to be lent as necessary and appropriate.

REIMAGINING WHOLESALE CROSS-BORDER PAYMENTS

We at RTGS.global have developed a new solution to tackle today's challenges in wholesale cross-border payments provision by reimagining the way in which currencies are transferred and exchanged around the world. We have launched a next-generation financial market infrastructure (FMI) to provide cost-efficient, streamlined, and secure capabilities for not only inter-bank PvP FX settlement, but also cross-border intraday liquidity management, global commercial payments, and more.

RTGS.global is building on what works well today for the transfer of fiat currencies, including the use of central bank money, simultaneous PvP transfers, and adherence to the Principles for Financial Market Infrastructures. In doing so, we are keeping what is good, but also introducing innovation to contribute to the realisation of the FSB targets related to the speed, cost, transparency, and accessibility of wholesale cross-border payments.

RTGS.global's 'Liquidity Settlement System' (LSS) uses cloud infrastructure with next-gen communications technology to enable funds movements and bilateral 'atomic' (PvP) FX settlement. The LSS facilitates safe, secure, immediate, and simultaneous transfers of liquidity in traded currencies between participating banks. Recognising that many currencies pairs do not currently have a PvP settlement option, we are seeking to enable liquidity transfers and settlement between a more expansive set of global currencies (subject to necessary regulatory approvals). These transfers are made bilaterally point-to-point, without any need for RTGS.global – or any other third party – to act as an intermediary in the flow of funds between participants. This minimises cost, friction, and operational and counterparty risks for LSS participants.



Funds transfers and settlement via the LSS occur using central bank money and, in addition to taking place in real-time, can happen 24 hours a day, every day, without being contingent on time zones or constrained by central bank or payment system operating hours.

The LSS uses ISO 20022-compatible messaging standards and another significant benefit of the LSS over current processes, where payments messaging and funds movements often occur separately, is that the payment information and liquidity transferred travel together in the LSS, rather than having banks rely on two separate service providers: one for messaging, one for settlement.

RTGS.global also makes accessibility easy, offering direct connectivity between the LSS and participating banks' back-office systems – in part thanks to the use of advanced communications technologies, such as protocol buffers. To provide central banks visibility into the status of funds held with them by the LSS participant banks they supervise, RTGS.global can, additionally, enable a dashboard feature whereby the central bank can see for whose benefit funds in the supervised bank's reserve account are held, a feature that could be particularly helpful in the case of a bank in resolution.

Whilst the LSS is built for liquidity transfers in fiat currency, the technology that supports it is agile and adaptable. Given the rapidly evolving payments landscape, including exploration around central bank digital currencies (CBDCs), stablecoins, and cryptocurrencies, RTGS.global is monitoring developments in the digital assets sphere, to assess where there may be interplay with RTGS.global's capabilities.

WORKING TOGETHER TO DELIVER FRICTIONLESS CROSS-BORDER PAYMENTS

It is an exciting time for cross-border payments, given the universal approbation for innovation endorsed by key international standard-setting bodies, such as the FSB, G20, BIS, Basel Committee on Banking Supervision (BCBS), and CPMI, as well as central banks and regulatory authorities globally. RTGS.global has risen to the challenge to advance improvements in wholesale international currency movements, delivering for the industry the ability to make frictionless cross-border payments in real-time, globally, 24/7/365.

The FSB has said that the work required to improve cross-border payments will depend on the commitment of public authorities and the private sector working together to enhance existing arrangements and develop new solutions, and will necessitate global coordination and sustained political support. At RTGS.global, we are making the investment required in systems, processes, and cutting-edge technology to build on today's infrastructure in order to provide welcomed and measurable improvements to wholesale cross-border payments, and stand ready to work with public authorities to achieve the targets laid out in the FSB Roadmap.

ABOUT RTGS.GLOBAL

The interbank wholesale FX market continues to be impacted by inefficiency and settlement risk. RTGS.global is a next-gen FMI that addresses these problems.

RTGS.global is the world's cross-border liquidity network: a bank-only infrastructure that transforms cross-border transactions by locking and transferring liquidity ownership in real-time. In RTGS.global, banks use their highest quality asset to fund transactions: central bank reserves balances. Our infrastructure is cloud-native and is designed for a data-driven, digital era. During 2022, we aim to commence live-trialing and activation of our first currency corridors. RTGS.global makes liquidity visible, enabling real-time, 24/7/365 atomic settlement of fiat currency transactions.

StoneX

Improving Cross-Border Payments for the Developing World


A conversation between Samia Ferradj, Head of Sales Europe, FX Payments at StoneX and Jean-Michel Godeffroy, Former Director General of Payment Systems & Market Infrastructure at the European Central Bank and Chairman of the Central Bank Payments Conference

Jean-Michel Godeffroy (JMG): Could you please tell us about StoneX?

Samia Ferradj (SF): StoneX is a publicly traded company listed on NASDAQ, headquartered in New York, with 2,900 employees in 70 offices spread across five continents. It specialises in global trading, mostly in commodities but also in securities and currencies.

We do not speculate on currencies. Our "global payments" activity specialises in transferring funds to the developing world. It has progressively grown in the last thirty years to serve the needs of our clients, mainly banks (including 9 of the top 10 in the world, by FX market share), of course acting in their name or the name of their clients, but also NGOs, charities, international organisations, and more.

JMG: And central banks?

SF: Central banks often have important payments to make in a wide range of currencies, not so much for them, but mainly for their clients, and in particular for the central government. For example, many central banks are responsible for funding the country's embassies all over the world. But this activity is not at the heart of their responsibilities, and they tend to rely on procedures put in place long ago and which have become inefficient over time.

So far, we only have a few central banks as direct clients. But those with whom we work have told us that they are pleased to work with us because we help them offer a better service at lower costs than the alternative solutions they have used before.

I see two reasons why our customer relationship with central banks is not yet what it should be: on the one hand we, StoneX, have not made ourselves sufficiently available to listen to central banks' needs and to explain to them why and how we can offer first-class services at a very reasonable cost; on the other hand, central banks do not consider the processing of payments in what they often call "exotic currencies" as an important part of their activities. This triggers inertia, inherent in non-profit seeking companies, where it appears safer to "do as we have always done" rather than looking for innovative solutions with better service and better prices for their customers.

To illustrate this point: we have realised that many central banks already use our services indirectly because their currency provider is in fact one of our bank clients. In other words, in such cases when central banks use our services indirectly, they offer unnecessarily higher prices to their clients because of the existence of an intermediation layer that could easily be eliminated.

JMG: This is interesting: central banks which are currently looking for ways to improve the price and efficiency of cross-border payments often offer conditions which are suboptimal to their own customers, even with the existing standards. Therefore, I very much understand now why you were so keen to speak to central bankers at the Central Bank Payments Conference last November. However, central banks are not just interested in the quality of the service they receive. They want to know how this service is produced because they want to be able to evaluate their risks, if any.

SF: We are very transparent with our clients, and we are even more transparent with central banks. In the limited space that we have here today, I can only provide the main features. But we will be available to provide further details with central banks that are interested in knowing more.

In a nutshell, our main asset is our network of 350 correspondent banks that allow us to offer payment services in approximately 140 currencies. Our approach in each country depends on the currency regime. In some countries our correspondent is the central bank itself; in other countries we connect with several competing local banks. We have very close relationships with our correspondent banks which our employees visit at least once a year. Even if we aim at developing mutual trust through long-term relationships, we do not hesitate to change our banking relationships when we think this is needed.

JMG: Can central banks influence the choice of the correspondent that will be used?

SF: Indeed, central banks can inform us if they are not comfortable working with one of our counterparts. However, we only work with counterparts which are AML/CTF compliant.

JMG: Can you describe the payment process?

SF: It is very simple: our client contacts us with a payment order which includes an amount, a currency, and a beneficiary. We ask our correspondents in the relevant country for exchange rates, and we transmit our best offer to our client. This includes a small margin on top of the offer received from our correspondent. We do not charge any fee and the amount asked is exactly the amount paid.

Our client decides whether the rate we offer them is acceptable or not. At this stage, our client may seek alternative rates from other sources. In practice, most clients only check from time to time. Once the deal is done, we ask our correspondent to pay the funds to the beneficiary in the local currency, usually two days later as is currently the norm in foreign exchange markets, and we ask our client to cover us in dollars, euros … it is as simple as that.

JMG: You mentioned that central banks may seek alternative rates. Does it mean that you do not require exclusivity?

SF: Absolutely! First of all, our service can be customised to better serve the needs of our clients. Some central banks have specific relationships in some countries which allow them to obtain the best rates directly from the local central banks. Other central banks prefer to use the balances that they maintain, in particular in reserve currencies. In practice, we see only the transactions that our client entrusts to us and, as I mentioned, they may even contact one of our competitors in parallel to check that we have the best price.

JMG: Do central banks often put you in competition with other currency providers?

SF: Most of our clients do, but central banks are special. The relationship with them tends to be more difficult to establish and they typically test us at the beginning. But then, once they have measured how much they can benefit from us, in terms of price, speed of execution and quality of service, confidence grows, and they tend to entrust us with most of their foreign exchange transactions in “exotic currencies.” But they may, from time to time, compare our exchange rates with competitors.

JMG: Central banks are seeking ways to improve cross-border payments. Would these attempts not threaten your business case?

SF: We do not think so because if we are providers of currency services, we are also users of them. We are committed to offering the best customer services in a wide range of currencies and we welcome new initiatives to improve cross-border payments; we are keen to see new ways of making cross-border payments so that we always remain the most efficient company in our field of competence.

JMG: If a central bank wants to know more about Stone X and its global payment service, what should it do?

SF: I would suggest that they first look at our website to know us more and then if they wish, they may send a message to me at Samia.Ferradj@stonex.com.

ABOUT STONEX GLOBAL PAYMENTS

StoneX Financial Ltd's Global Payments team specializes in transferring funds to the developing world. We offer competitive and transparent pricing, along with guaranteed and secure delivery, in approximately 140 currencies across 170 countries. This includes a fully-fledged domestic payments capability for both in-bound and out-bound payments in Brazil.

We specialize in providing payments service and market intelligence to nonprofit clients such as international aid and development organizations, UN agencies, government agencies, NGOs and religious organizations, as well as to multinational corporations and financial institutions.

Our network of more than 325 correspondent banks enables us to engage in price discovery in over 180 local markets, bringing pricing transparency for local currency payments to our clients. We leverage the strength of our partner relationships to guarantee timely and secure delivery of payments – in the full amount.

Payment System Modernization in Kenya


By Valdis Janovs, Head of Instant, Retail Payments and Cards, Tietoevry and Seun Owoeye, Chief Operating Officer, Integrated Payment Services Limited (IPSL)

SUCCESS STORY—TIETOEVRY & IPSL

Payment systems are critical components of the digital banking world. They are dynamic and fluid, creating even greater implementation challenges for financial institutions. Over the last decade, complexities in payment systems, dynamic consumer needs for faster retail payments, complex regulatory requirements, legacy infrastructure and an increasingly competitive marketplace, all put pressure on financial institutions to evaluate opportunities for payments transformation.

Furthermore, the evolving business landscape for incumbents and new entrants in the financial services industry has inevitably resulted in significant investment in payment system modernization and transformation of domestic real-time payments systems, more specifically those that are based on the ISO 8583 message protocol.

Kenya is one of the few countries globally that has launched a real-time payment system on ISO 8583 card rails. As globalization of real-time payments and digitization of cashless payments gains momentum, it has become imperative for financial institutions and central banks to support real-time payment modernization initiatives, leveraging globally acceptable messaging standards. Through Integrated Payment Services Limited (IPSL), Kenya has become one of the trailblazers in the industry, migrating to a modernized real-time payment platform by leveraging an ISO 20022-enabled instant payments solution delivered by Tietoevry.

THE NEW PAYMENT SYSTEM

The new instant payments system (IPS) delivered by Tietoevry was designed and implemented jointly with IPSL. The newly launched system utilizes the latest payment technology to meet the global transformation agenda for payment market infrastructure modernization and the race for real-time payments based on ISO 20022.

“During the design and implementation stages of the project, I provided leadership and direction on business requirement definition, scope design, functional description and project implementation based on banking industry needs for a fit for purpose real-time payments rail, regulatory compliance and future business needs,” said IPSL Chief Operating Officer Seun Owoeye. “Worthy to note, the new instant payment switch will open up new business opportunities and enable IPSL to launch new use cases in conjunction with banks and other ecosystem partners in Kenya (fintechs, PISPs, PSPs, MNOs), allowing them to innovate and offer consumer choices for faster payments.”

Owoeye added that the switch to ISO 20022 instant payments will offer a data-enriched platform for faster payments for businesses and large corporates, improved KYC and efficient AML activities. It also ensures banks comply with regulatory requirements for migration to ISO 20022.

“As a technology provider and a digital consulting company, we believe it’s our role to support digital transformation and enable our customers to utilize the latest advances in technology,” said Valdis Janovs, Head of Instant Retail Payments and Cards at Tietoevry. “We are keen on working with IPSL long-term and to continue supporting them in their transformation journey.”

Tietoevry’s Instant Payments Solution is scalable and simple to configure, allowing the ecosystem players to launch new use cases that go beyond person-to-person transactions and include capabilities that provide consumers with wide-ranging payment choices.

Overall, the initiative’s fundamental benefits include improved operational efficiency; message standardization with regulatory mandates for all banks to move to ISO 20022; an enhanced open-loop system with the capability for account–to-account, account-to-wallet, wallet-to-account and wallet-to-wallet; and finally, strengthened security protocol for financial message exchange.

A FULLY REMOTE DEPLOYMENT

With the global effects of Covid-19 and international travel restrictions, the project was fully implemented remotely. Remote implementations of large-scale projects such as these require full dedication from all the parties involved in the execution of the project. Despite various degrees of challenges involved as a remote greenfield installation, the project went live successfully.

Clear definition of project objectives, KPIs and milestones ensured clarity on deliveries. The key to success was having one unified team that worked towards a common goal. Consequently, this ensured close collaboration and timely project implementation. The experience of Tietoevry's team – gathered from many years of working on large-scale projects with many leading global banks – combined with the experience and commitment of the IPSL team, proved to be one of the critical success factors of the project.

"During the project, I was responsible for managing the project lifecycle, orchestrating cross-functional teams, setting tasks and due dates and following-up on the execution of project milestones," said Judith Mwangoe, Head of Technology at IPSL. "I believe the collaboration between IPSL and Tietoevry and the commitment on deliverables by the Tietoevry development team, significantly contributed to the success of this project."

Solution architecture, robust testing procedures and a well-articulated project plan were key enablers to the project's success. Prior to launch, the system went through multiple cycles of user acceptance testing (UAT), and errors found were fixed before the go-live. Several mock live tests were conducted to simulate technical and operational dependencies on production systems. These were well orchestrated by the IPSL team and the go-live went as planned.

"With large-scale projects such as these, there are always challenges," said Dzintars Kalnins, Project Supervisor at Tietoevry. "Together, with the team of IPSL, we were always able to find the right approach and meet the set goals on time."

FEATURES AND CAPABILITIES

An outstanding Graphical User Interface (GUI) enables users and administrators to securely perform administrative and support functions. The GUI also allows users to oversee all existing functionalities, as well as receive updated information on system health. Users can easily set up and change different parameters, as well as manage participants and oversee ongoing payments.

ACCESS TO INSTANT PAYMENT SYSTEM SERVICES

The Tietoevry Instant Payments Solution was built on a robust micro services architecture with unified API services. The unified API leverages the latest technology in web services development – RESTful web service — so participants can seamlessly access the IPS services and message routing to and from all other connected participants. In addition, the system's flexibility allows IPSL to define which services are available for a particular participant, in case there is a need to restrict any of the services.

HIGH AVAILABILITY

The system operates in 24/7/365 mode with 99.9% availability. Furthermore, the system component upgrade process is performed on-the-fly with zero downtime.

OTHER FUNCTIONALITIES

Additional key system functionalities include:

- Highly scalable and automated payments processing
- Participant management
- Limit management
- Fee management
- Fraud management
- Built-in system monitoring
- Reporting
- Administration portal

The instant payments system is built with the robust processing capability of millions of transactions daily, with a response time of one second for every individual payment.

To learn more about Kenya's newly implemented instant payments system, please directly contact IPSL at info@ipsl.co.ke and Tietoevry at financial.services@tietoevry.com.

ABOUT IPSL

Integrated Payments Service Limited (IPSL) is the real-time payment services company of Kenya’s Bankers Association. IPSL was established in 2015 under the National Payment System (NPS) Act to address the challenge of inter-bank money transfers in the country.

The company provides secure and instant money transfer rails using advanced technology. The inter-bank money transfer service, branded PesaLink, allows customers to send money from one bank account to another bank account in real time on all banks’ retail payment channels including mobile, ATM, Internet banking, agent networks, bank branches and POS.

ABOUT TIETOEVRY

Tietoevry creates purposeful technology that reinvents the world for good. We are a leading technology company with a strong Nordic heritage and global capabilities. Based on our core values of openness, trust and diversity, we work with our customers to develop digital futures where businesses, societies, and humanity thrive.

With over 25 years’ long experience in the payments business, we deliver solutions for national instant payment infrastructures, card and financial product management, open banking, cash management, and payment processing, and ensure connectivity to financial networks.

Tietoevry's solutions play a key role in many national instant payments solutions including Swish in Sweden, Siirto in Finland, PesaLink in Kenya, and the Instant Payments System in the Maldives.

By collaborating with customers, we identify business opportunities and build a strategic plan for growth based on your needs, the market, and benchmarks from instant payments schemes around the world.

Thanks to our extensive experience in running payment systems on a 24/7 basis, we ensure customer solutions are robust, providing ongoing continuity of business operations.

The Human Impact of Cross-border Remittances

How digital inclusion can alleviate global poverty–and what policymakers can do to help
By Ruben Salazar Genovez, Global Head, Visa Direct

When I was growing up in El Salvador in the 80s, people living in extreme poverty were defined as those "who spend their daily purchasing power on food and still go to sleep hungry." Today, the definition is a function of daily income indexed to US Dollars. Based on World Bank data, from 1990 to 2015, the global rate of extreme poverty—living on less than $1.90 per day—dropped an average of one full percentage point per year, from nearly 36% to 10%. A factor in this decline is the fact that, during the same period, the accumulated value of worldwide remittances to low and middle income countries (LMICs) was $4.7 trillion.

In 2019, the total value of remittances sent by some 200 million migrant workers to their home countries was a record $706 billion—$554 billion of which went to LMICs. In 2021, remittances to LMICs were projected to reach $589 billion. Remittances also more than tripled the value of official development assistance to LMICs. And despite predictions of a potential downturn at the onset of the pandemic, remittance flows declined less than 2% for 2020, an amazing testament to the resilience of migrant workers.

I expect demand for digital remittances to increase in a post-pandemic world. A recent US Visa study found that almost a quarter (23%) of surveyed US adults have sent money from the US to another country already, and 15% of total US adults surveyed plan to send money to another country within the next year.

These figures hold true even though the process of sending remittances can still be fragmented—in terms of technology, economic models, providers, and user experiences. Immigrant workers depend on a multitude of remittance methods, providers, intermediaries, agents, and channels to provide financial support to their families every month.

BEHIND THE MILLIONS

In the abstract, the hundreds of millions of dollars migrant workers send cross-border to their families each year is striking. In the concrete, though, behind those figures are hundreds of millions of individuals—hard-working people doing their best to make sure their loved ones have what they need. Globally, it is estimated that 800 million people receive remittances to pay for things like food, utilities, and education—and the method for doing so has not always made it easy.

Personally, I'm intimately familiar with the challenges of sending cross-border remittances to family. In 2000, I immigrated to the US to take a job with Citibank. Eight years later, my career took me to Spain and later to Singapore. During the first few weeks in any new country, "How do I send money back home?" was a recurring question. The answer, though, has rarely been the same in any two places.

I have been in supermarkets, filling out seven forms and waiting for the cashier to confirm the transmission. I have visited bank branches to physically identify myself with national IDs so that a transaction could be initiated. I have gone to small remitters that guaranteed better foreign exchange rates. And I have used several apps and websites.

As a consumer, my decisions were always driven by the speed, cost, and security of the remittance. But every user experience left me with some degree of stress and frustration. The larger remitters were limited by the technology of that time. Of course, things move faster now with new fintech remitters accelerating their digital transformation. Despite much technological progress, there is still room for improvement—for user experience to improve and costs to fall. And at Visa, we're doing our part, with Visa Direct bringing global scale, security, and efficiency to cross-border P2P payments, helping enable real-time payments for gig workers and some of the best-known P2P apps.

In partnership with global remitters, Visa Direct helps enable digital remittances by simplifying cross-border payments, creating new opportunities for financial inclusion and wealth building. One example is an announcement we recently made with the Canadian Imperial Bank of Commerce (CIBC) and Simplii Financial, who are using Visa Direct Payouts to enable cross-border remittances and B2C payouts as part of their Global Money Transfer service.

THE HIGH COST OF REMITTANCES

Digital remittances are making real progress on costs in many areas, but still, barriers remain. For instance, regulatory requirements may lead to entry barriers for new providers who might improve user experience and provide transparency to money movement.

DIGITAL INCLUSION AS THE NEW URBAN MIGRATION

During the Industrial Revolution the mass migration was to urban areas—areas with large factories that offered steady work, affordable housing, electricity, better living conditions, and the opportunity to prosper. In the digital revolution, people are looking for connectivity and technology. Where you are doesn't matter as much, so long as you're connected.

The best contribution the ecosystem can make is to accelerate financial inclusion, a core component of which is streamlining the process of digital remittances.

Want to learn more about how Visa is powering cross-border P2P remittances? Check out Visa Direct.

ABOUT THE AUTHOR

Ruben Salazar Genovez is the Global Head of Visa Direct, a real-time push payments platform and one of the fastest growing products within the Visa portfolio. In his current role, Ruben is responsible for expanding Visa's global money movement capabilities beyond the card for Visa Direct. He also leads Yellowpepper, part of the Visa Direct portfolio of solutions that helps facilitate global money movement.

As a global technology leader with several patents under his belt, Ruben is continuously looking for opportunities to leverage innovative assets in the architecture of new payment solutions to introduce easier-than-cash products. Ruben holds an MBA from Florida International University. He is also a graduate of Universidad Nueva San Salvador (El Salvador), as well as the University of New Mexico, from which he holds degrees in marketing & communications and journalism & mass media, respectively.

Since 2018, Central Bank Payments News has been dedicated to keeping the global central bank payments & market infrastructure community up to date with the most relevant payments issues impacting the central bank today.

As a monthly e-publication we proudly feature contributions from central banks—as well as regulatory authorities & other global payments players—on their latest payments initiatives. CBPN also regularly monitors the landscape for the latest news, research, and developments in the central bank payments ecosystem.

Central Bank Payments News

Currency Research | The World's Resource for Currency Knowledge

Thanks to our valued charter members for their support and for generously subsidising annual CBPN subscriptions at central banks in 30+ global jurisdictions.