Transforming Payments with Blockchain

Finacle Payments Connect
The global payments business continues to experience widespread disruption. However, cross border payments have continued on a healthy growth trajectory. International cross-border payments revenues exceeded $200 billion globally, split roughly evenly between transaction fees and foreign exchange; and estimated revenue of nearly $45 per transaction for business-to-business payments1.

Customers today demand faster, seamless, cost-effective international payments. However, most of the widely used international payments processes today, are saddled with significant drawbacks and are simply not aligned to the speed of communication and operations of the digital age. New-age digital payment providers looking to expand their share of the payments market are quickly spotting the market opportunity, indicating a dire need for banks to improve the traditional corresponding banking model to be able to compete effectively and retain their primacy in the payments business.

The time-to-set-up new transaction relations or onboarding a new partner is typically long, with no consolidated view of the relationship with the partner bank.

Processes require manual interventions for reconciliations and disputes and are not amenable to real-time transactions creating significant inefficiencies and lag in final settlement of funds.

Complex transaction tracking and reconciliation capabilities with low transparency on fund availability at partner banks and real-time transaction reporting.

Most importantly, failure rates and the total cost of transaction are high.

Traditionally, progressive banks have tried to reduce costs and accelerate payments by creating host-to-host connections within payment partners but the approach requires sizeable amount of effort and cost to establish and maintain such connections.

A distributed and shared network built on blockchain has the potential to enable speed, vastly improve visibility, increase efficiency, enable automation and lower costs for payments transactions.

(Source: McKinsey Payments Practice; Global Payments 2018: A dynamic industry continues to break new ground)
Finacle Payments Connect eliminates the time lag and process complexities due to system disparities among the various partner and corresponding banking relationships. The blockchain-based solution brings all partners on a single, trusted distributed ledger, simplifies global payments processes and enables banks to provide a frictionless experience across all relevant transaction areas. Finacle Payments Connect is completely agnostic to the underlying distributed ledger technology and works with all the major platforms including R3 Corda, Hyperledger and Ethereum. This helps banks future proof their technology investments to grow their international payments business and compete with new digital providers effectively.

**KEY FEATURES OF THE FINACLE PAYMENTS CONNECT**

- **Real time transfers** - Instant, on-demand, real-time transfers and payments. With its bi-directional messaging capability on a distributed ledger, it radically reduces the processing time for payments across business partners to real-time.

- **Improved transparency and traceability** - Ability to track granular status of transactions and visibility of Nostro/Vostro balance in real-time.

- **Improved transactions visibility** - Single operational dashboard to track macro as well as micro level flow of transactions. The platform allows participating banks to have complete visibility of the payment flow across the value chain. The banks now also have an opportunity to offer connectivity to their clients to enable transparency.

- **Low reconciliation time** - Significantly lower reconciliation time due to automated processes and improved transparency.

- **Messaging capabilities** - Comprehensive pre and post transaction messaging capabilities.

- **Rich transaction pipes** - Rich transaction pipe allowing transfer of documents in addition to messages. Rich-data attachments with payment instructions allow pre-disclosure of the required information helping avoid failures and errors.

- **Multiple remittance models supported** - Pre-funding, nostro-based, tokenized value transfer and agency banking.

- **High automation and STP** - Digitization, automation and straight through processing (STP) across the inter-organization payments process ensures high efficiency.

- **Low operational costs** - Indirect costs incurred due to legacy messaging systems, reconciliation and tracking processes are minimized with automation. Plus, simplification of system and protocol landscape leads to lower maintenance costs.

- **Reduced host-to-host connections** - Eliminates the complexity, effort and cost of maintaining host-to-host connections. The solution enables all corresponding payment partners to join on a common distributed ledger based ecosystem ensuring connectivity and direct communication.
Realize your payment strategy for multiple remittance models

Finacle Payments Connect

- Pre-funding
- Nostro-based
- Tokenized value transfer
- Agency banking

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## Enhanced payment business propositions

Unlock the path breaking benefits with blockchain

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<th>Payments process on Finacle Payments Connect</th>
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<td>Very low transparency on fund availability at partner bank and status of transactions</td>
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<td>Low operational efficiency due to manual processing</td>
<td>High digitization, automation and STP ensures high efficiency</td>
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<td>Every new partner onboarding requires complete cycle of integration and testing</td>
<td>Faster onboarding process into network enabled by model replication, standardized processes and message formats</td>
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<td><strong>Versatility</strong></td>
<td>Different channels required for different kinds of inter-bank transactions</td>
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<td><strong>Transaction channels</strong></td>
<td>Separate channel siloes need to be maintained for every partner bank</td>
<td>Simplified system and protocol landscape, which allows integration of multiple partner banks on the same blockchain network</td>
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Built on advanced architecture

Future proof your business

- **Ledger agnostic**: Finacle is designed to provide flexibility and choice to banks in selecting distributed ledger platforms. The solution is ledger-agnostic and runs on a number of technology platforms, such as R3 Corda, Hyperledger and Ethereum and also offers a complete stack of open source technologies. This approach makes the banks future proof their investments on the technology front.

- **Open APIs**: Finacle Payments Connect is designed with API-first strategy. The solution offers an extensive suite of Open APIs to empower banks to integrate with any backend payment host system and co-innovate within their internal and external payment partner ecosystem.

- **Cloud ready**: Finacle’s cloud-native applications support Kubernetes for deploying and operating in the cloud of your choice. Banks can go cloud-first with their Finacle blockchain deployments on leading cloud platforms.

- **Permissioned**: Finacle recognizes the security and confidentiality concerns of enterprises in a business network and has built the solution on the principles of permissioned blockchain. This requires the participants to be explicitly admitted to the network with appropriate roles and permissions, ensuring that only an identifiable participant can perform actions allowed by its assigned role.

- **Need-to-know privacy model**: Finacle Payments connect solution is built on a need-to-know data privacy model where transaction data is shared only with participants that require it.

- **Extensive security capabilities**: The solution has robust security features built at multiple levels like network level, DLT level, application level and hosting level. For example, client-authenticated-SSL for internode communication in the network level and role-based access control in the application level.

- **Document support**: The solution allows you to share documents like images and pdfs along with business transactions in a secure and tamper-free manner.

- **Smart contracts ready**: Smart contracts allow the performance of credible transactions without the involvement of third parties. Finacle Payments Connect solution leverages smart contracts for automating business processes that transcend bank payment processes saving time and conflict.

- **Backend host-agnostic**: Our solution can work seamlessly with any backend host system be it Finacle or non-Finacle. The platform comes with infrastructure and connectors that help the distributed business payments application interface with existing infrastructure at banks including core banking systems and other allied payment engines.
Industry’s most advanced architecture empowering you to do more

**Open Source Components**

**API First Principles**

**Cloud Native**

**Backend Host Agnostic**

**Business Functions (Indicative list)**
- Remittances
- Pre-funding
- Nostro-based
- Tokenised value transfer
- Agency banking

**Technical Services (Indicative list)**
- Identify Service
- Secure Document Service
- Asset Agnostic Protocol
- Smart Contract Service
- Transaction Consensus Services

**Finacle Blockchain DLT Framework**
- Ledger Agnostic Connector
- Allied Systems Connector

**Corda | Hyperledger | Ethereum**

**Support Services**
- E-Signature
- OCR
- CIF
- 3rd Party systems
Helping banks strategise blockchain journeys

Accelerate your payment business

Banks can leverage blockchain technology for faster international payments by adopting one of the following key strategies:

• Firstly, banks can build an **intra-group payments network**. Banks that operate in multiple countries can use this option for communicating and transacting with their international subsidiaries, entities and clients. Banks can eliminate SWIFT costs, enhance speed and realize reduced cycle time across their payment business processes.

• Secondly, banks can curate an **inter-banking network** which requires other corresponding banking partners in the global market to participate with the bank for cross-border payments. This is a network that comprises the bank’s partners, exchange houses, payment agencies and customers. Banks can drive unprecedented efficiencies and customer value through synergies among network participants.

• Thirdly, banks can drive their ecosystem platform strategy forward with **remittance-as-a-service** offering using the solution to create a white-labeled payment network in strategic corridors by creating payment hubs and unlocking new revenue opportunities for business growth and expansion. Customers and smaller banks can now leverage such services for anywhere-to- anywhere payments across the globe saving on significant time and money.

Types of business network

1. **Intra banking group network**
   - Network between your international subsidiaries/ entities and corporate clients

2. **Inter banking partners network**
   - Network between your banking partners, customers, remittance agencies, exchange houses

3. **As-a-service network**
   - Network for Trade or Payment service offering with banking partners and clients
ICICI Bank and Emirates NBD, two leading banks from the UAE and India respectively, worked with Infosys Finacle to pilot a blockchain network on the UAE-India payments corridor, one of the busiest corridors in the world for international remittances. The pilot project was completed in 8 weeks and today both banks have moved to the production stage.

Real value can be derived

- Improved transparency
- Reduced fraud
- Increased digitization of documents
- Strengthened security

“Our pilot project with Infosys Finacle and ICICI Bank, a first for the banking sector in the UAE, demonstrates blockchain’s immense potential to change how organizations and governments conduct business.” - His Highness Shaikh Ahmed bin Saeed Al Maktoum, Chairman, Emirates NBD

“We have also marked a milestone by piloting a blockchain network with Emirates NBD and Infosys Finacle as partners and have successfully executed cross-border open account trade finance and remittance transactions. I envision that the emerging technology of blockchain will play a significant role in banking in the coming years by making complex bilateral and multilateral banking transactions seamless, quick and more secure.” - Ms. Chanda Kochhar, Former Managing Director & Chief Executive Officer, ICICI Bank
ICICI Bank Remittance as-a-service network
Network between bank, its international subsidiaries, partner banks, and clients

ICICI Bank, a leading private sector bank in India has enabled remittance as-a-service among its partner banks in global strategic corridors. The bank has set up captive networks with its subsidiaries and offers a “landing hub” to partner banks and exchange houses, enabling them to fulfill transactions even in countries where they do not have a presence. The landing hub receives remittance requests from various partner banks – typically small institutions – and forwards them to the appropriate international office for further action. Partner banks need not invest in any hardware and can plug and play with the “Landing Hub” to do trade and send remittances to any location within the subsidiary network where ICICI bank operates.

Resetting remittance indexes for the digital world

- Offer ‘remittance as a service’ to exchange houses and partner banks seeking to transfer funds to any geo where ICICI bank operates
- Drive speed and agility
- Cost optimization
- Unlock new revenue generation opportunities

7+ landing hubs in strategic corridors

Canada
Dubai
Germany
UK
India
Srilanka
Hongkong
Singapore
Experience that speaks for itself

We build winning partnerships with clients

Global solution built on the experience of servicing 1.05 billion customers, estimated to be nearly 16.5 percent of the world’s adult banked population.

100 Countries

1.05 billion Consumers

81,560 Branches

1.3 billion Accounts

Industry recognition for our work

Most innovative use of Blockchain in Banking - Infosys Finacle & ICICI Bank

Best Use of Emerging or Innovative Technology - Infosys Finacle & Royal Bank of Scotland

Juniper Future Digital Awards - 2018
Best Blockchain Deployment in Banking & Payments
Best Blockchain Platform – Trade Connect
Best B2B Payments Platform

‘Emerging Innovation’ 2017
‘Trade & Supply Chain’ 2018

‘Innovative Excellence’

‘Innovation in Emerging Technology’
Infosys Finacle has launched a blockchain-based network for banks with the goal of evaluating the Finacle Payments Connect solution. Multiple banks have partnered to be on the network already, to transform their international payments business. We invite you to collaborate with us and lay the foundation of the next-generation global remittance ecosystem.

- Join our pilot network in just two days and conduct a 6-8 week pilot to evaluate Finacle Payments Connect.
- Take our functionally rich, enterprise grade solution to production today and transform and grow your international payments business.
- Join existing networks or create your own networks using our solution as an accelerator to move money faster and at low costs, globally.

Start your journey, today.

Get in touch with us at contact@edgeverve.com to know more.
Finacle is the industry-leading digital banking solution suite from EdgeVerve Systems, a wholly owned product subsidiary of Infosys. Finacle helps traditional and emerging financial institutions drive truly digital transformation to achieve frictionless customer experiences, larger ecosystem play, insights–driven interactions and ubiquitous automation. Today, banks in over 100 countries rely on Finacle to service more than a billion consumers and 1.3 billion accounts.

Finacle solutions address the core banking, omnichannel banking, payments, treasury, origination, liquidity management, Islamic banking, wealth management, analytics, artificial intelligence, and blockchain requirements of financial institutions to drive business excellence. An assessment of the top 1250 banks in the world reveals that institutions powered by the Finacle Core Banking solution, on average, enjoy 7.2% points lower costs-to-income ratio than others.

For more information, contact finacle@edgeverve.com www.finacle.com