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Blockchain and the Benefits it brings to F&A teams across Industries



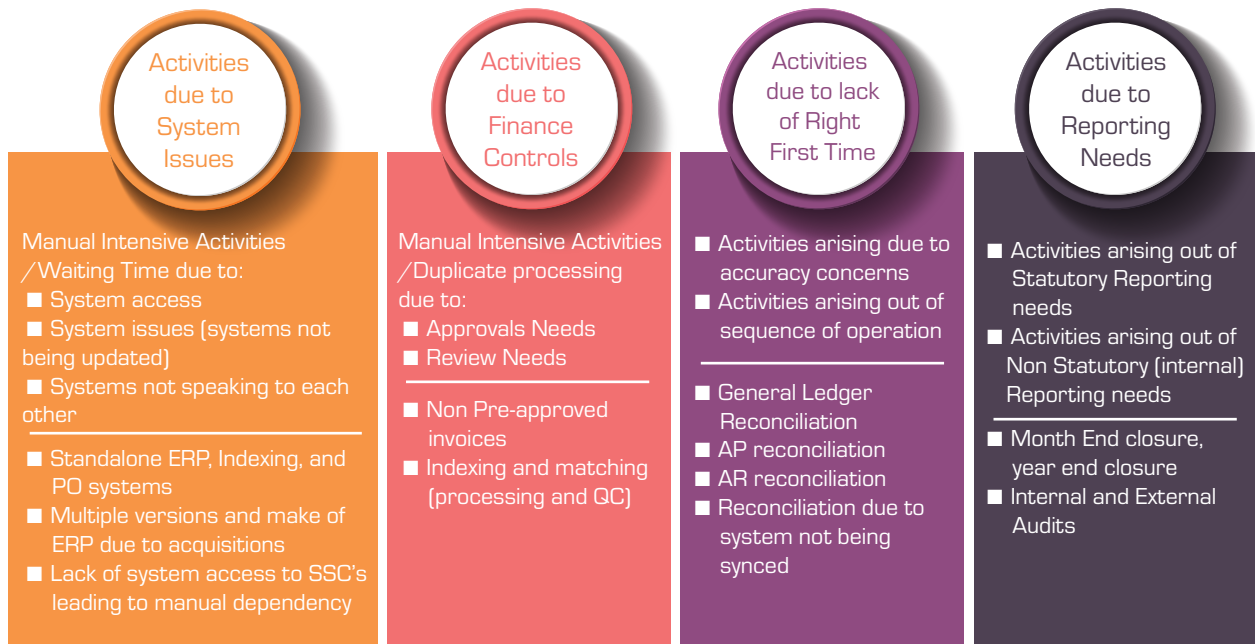
Commercial White Paper

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Abstract

This Whitepaper's core intent is to explore the benefits to F&A domain brought in by the nascent technology named Blockchain. This also explores briefly the opportunities where Blockchain can play a pivotal role in transforming operations in the BPS space.

What the FnA industry looks like:



Current state of FnA practice – Illustrative example using AP:

Accounts Payable – PO processing

Raise PO	Receive Goods	Index	Match	Post to ERP
<ul style="list-style-type: none"> Non standard suppliers (leads to variation of good being sourced) Long approval process Reconcile between internal BOM description vs. Supplier BOM description Outdated material leads to manual effort for sourcing alternate materials 	<ul style="list-style-type: none"> Physical check of goods received Issue GRN Return material 	<ul style="list-style-type: none"> Separate out exception and straight through invoice (kind of reconcile) 	<ul style="list-style-type: none"> Reconcile between PO, Invoice and GRN Use of fuzzy logic for automated matching Use of manual intervention for invoice with exceptions 	<ul style="list-style-type: none"> Automated modules to post to ERP Human intensive effort to post to ERP (exception invoices)

All the above are leading to:

- Manual reconciliation
- Several reporting formats
- Duplicate approvals, reviews
- Unnecessary internal controls (multiple policies, check, and re check)

Several manual reconciliation occurs at vendor and sourcer end with high investment in various tools, technology and manual intervention

Reason:

- Non availability of OEM index with alternatives (common reference point) are increasing product sourcing procedure
- Non-standardized suppliers leading to variation in products being sourced
- Unavailability of a common reference ledger for transactions leading to high number of reconciliations during indexing
- Lack of technology touch points at the point of goods receipt (leading to manual checking of goods received). This is also leading to huge documentation and procedures at both ends (in case of damage, incorrect quantity, and incorrect product received)
- Non availability of single reference point on all transactions, leading to fuzzy logic and inefficient matching operation prior to ERP posting

Future State:

- Reduced movement of documents
- Sourcer AP and Vendor AR will merge seamlessly
- Better transparency
- Low reconciliations



- Purchase Order, Invoicing, GRN documents eliminated
- Possible significant reduction of Non PO invoices
- Cash application done through Smart Contracts leading to significant reduction in reconciliation
- No need for indexing AP in a workflow
- Matching can be done using a pivot kind of tool using the smart contract data
- BOT can be used to interface the data into ERP
- Collections dispute are resolved upfront leading to reduced DSO
- Smart contracts can be made to carry payment terms data so that sourcer can prioritize between payments leading to better vendor discounts and reduced DPO

The above is made possible as everything is done through smart contracts using Blockchain

How to move to Future State (consulting pure play):

- Build industry/organization specific master reference database of OEM using Blockchain (with live streaming of inventory position and payment terms)
- Build industry/organization specific master reference database for non-service goods (with live streaming of inventory position and payment terms)
- Build smart contracts using Blockchain, which can be used for the entire product ordering life cycle (ordering to payment/collections)
- Implement BOTs at strategic points to transfer smart contract data for automated matching
- Implement BOTs at strategic points to transfer smart contract data for ERP posting
- Integrate Blockchain, BOTs, and reporting tools to apply cash, prioritize payments, and process payments
- Arrive at polices and qualifying benchmarks to list prospective vendors into the proposed master reference database of sourcer
- Integrate analytics into smart contracts data to prioritize payments and collections

To move to the future state it is important to understand Blockchain better. The following will support understanding of Blockchain concepts.

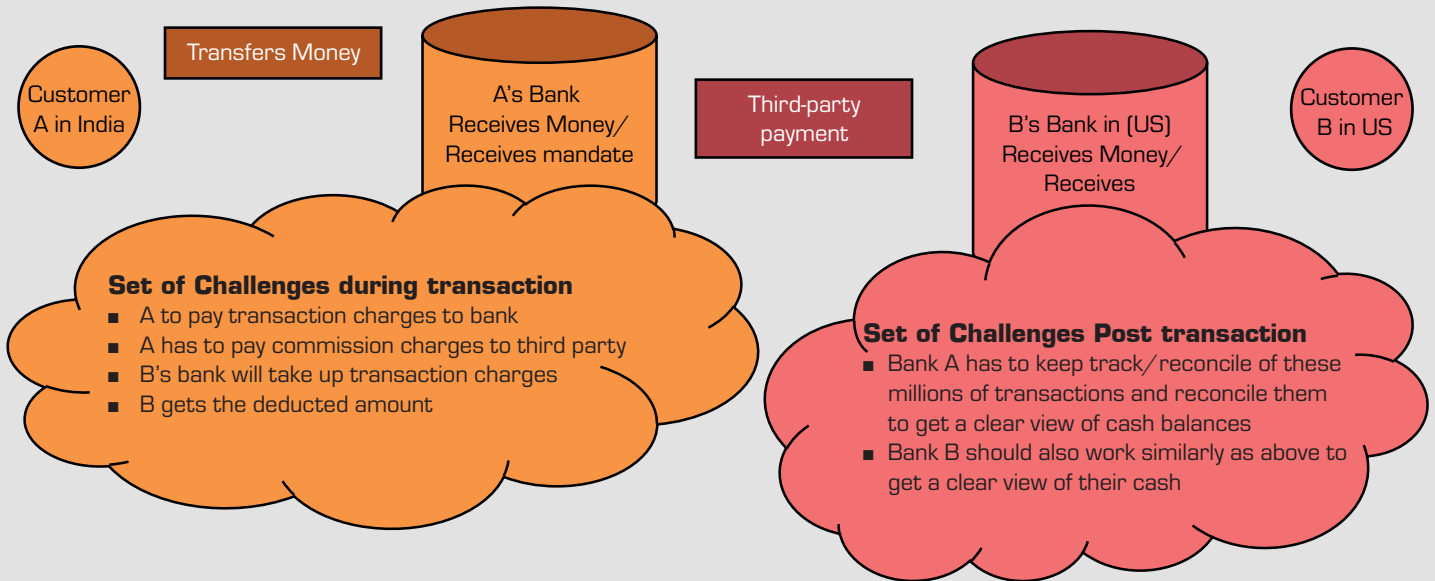
What is Blockchain?

Blockchain is a distributed digital ledger which records the chronological order of every transaction made. While the transaction is being done, the authenticity of the transaction is verified. Once it is done it is stored in a public node popularly called as a block. Please note there are varieties of Blockchain namely – Bilateral, Multi-party, Public to all, Need to Know, and On demand.

Why Blockchain?

Blockchain can challenge the fundamental operating principles of payments and book keeping. Thus making payments much faster, reliable, secure, and cost effective.

How a normal payment transaction works (indicative scenario not exhaustive)

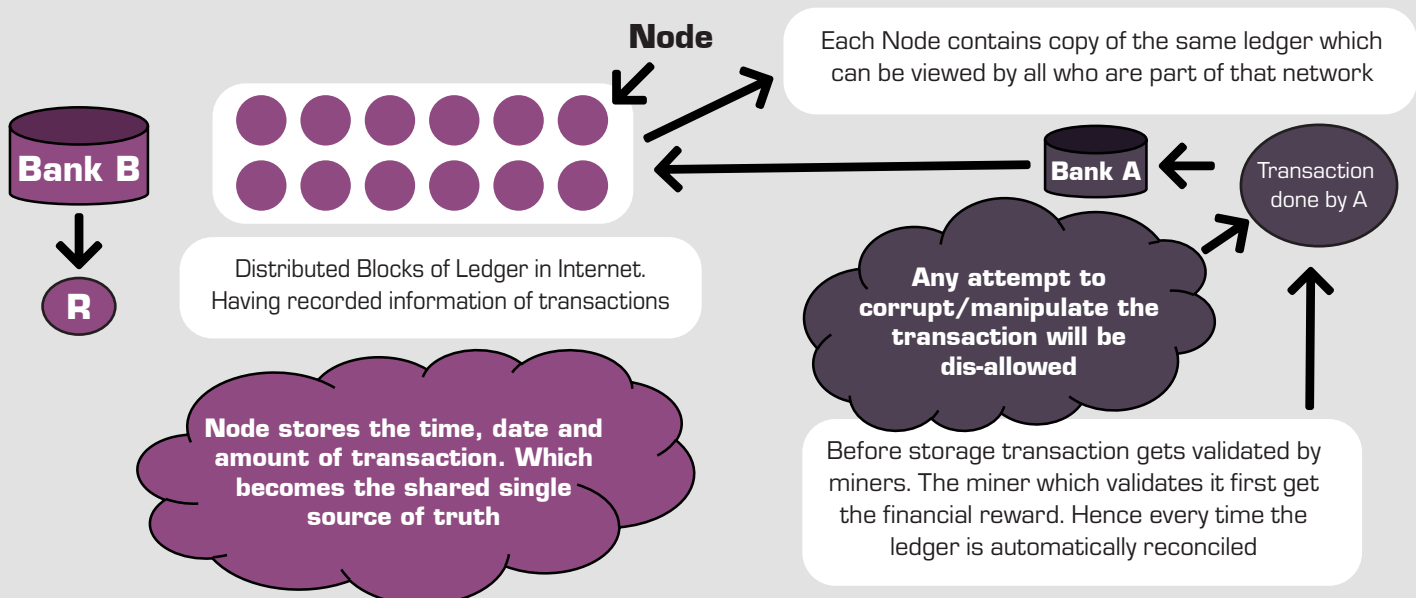


Results of Normal Transaction:

- Third-party transfers are costly affair (for both A, B, and maintenance cost for banks)
- Lot of reconciliation has to be done across entities to ensure accurate book keeping leading to several overhead FTEs working on the books
- High effort for ledger consolidation
- A and B have to wait for several days to confirm whether the transaction is a success. If failure, again reconciliation has to be done across banks and third parties
- Possibility of intruding and corrupting the transaction is high, that B might possibly claim that he has not received the money (if third party and B's bank collaborate with B)
- High effort needed to bring in traceability
- Transactions cannot be done 24/7

PS: Red shaded portions are areas where lot of strain is put on the F&A systems. Leading to high overhead cost, effort and rework.

How Blockchain works in payments processing – The Framework (indicative scenario not exhaustive):



Results of Transaction through Blockchain:

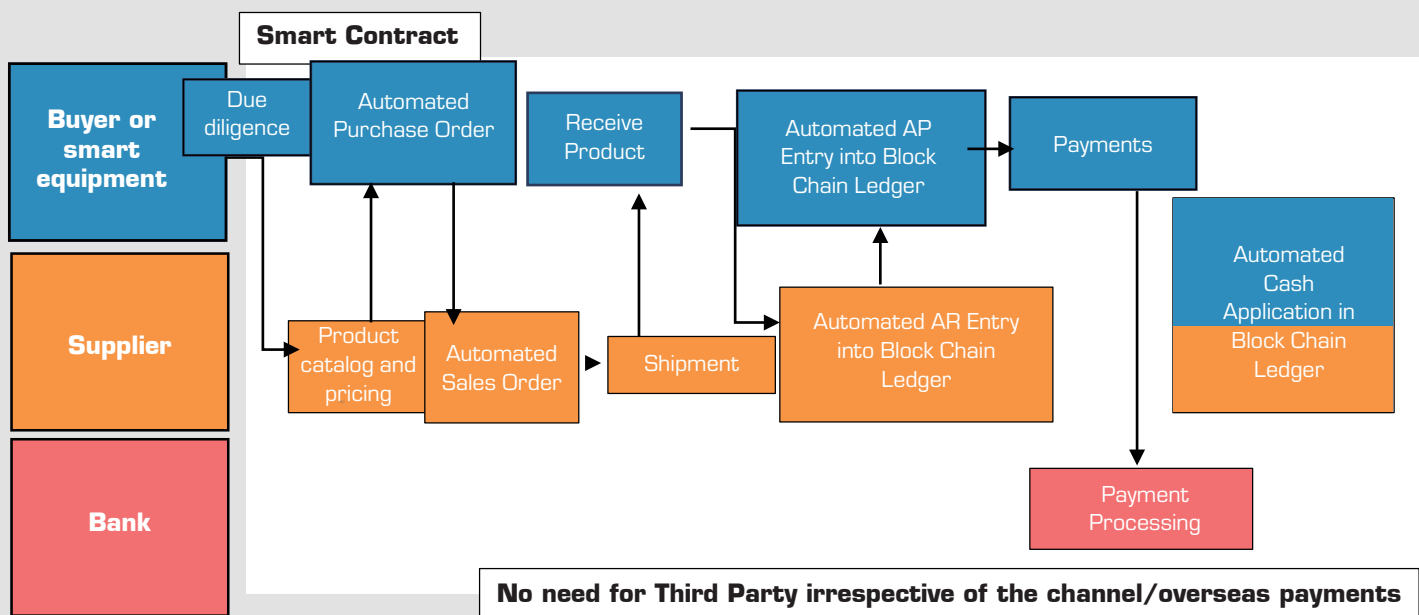
- Brings transparency into the internal audit system (as asset movements are already being captured in Blockchain), so that internal audits are 100% accurate, compliant
- Avoids duplicate invoicing payment resulting in savings on cash leakage (also organization need not spend time matching/re-auditing the invoices)
- As transactions need to be pre-funded, you reduce credit and liquidity risk, which translates as reduction in failed transaction reconciliation at F&A front

PS: Due to the above benefits of Blockchain in a payment scenario, the shaded areas ensures consolidation of ledger within a financial entity (rather having multiple ledgers). Thus reducing the amount of rework.

Blockchain in Order to Cash:

Selling Smart contract: Any seller can post the smart contract on the internet (in platform like Ethereum) with terms and conditions. Buyer having the need, could evaluate the contract. Use the services and pay for it with the overhead. This can be taken one step further as follows:

Through smart equipment (by implementing IOT additionally). Smart equipment can monitor the inventory levels, search for the right smart contract at an optimized price and automatically order and pay for it on receipt. Before doing the payment, the smart equipment could also search for the reputation of the issuer of smart contract and decide accordingly.



Summary

Blockchain helps in significant reduction of document flow, approvals, reviews, intermediate technology tools. It also improves transparency and seamless integration of sourcer and vendors payment and collection systems.

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