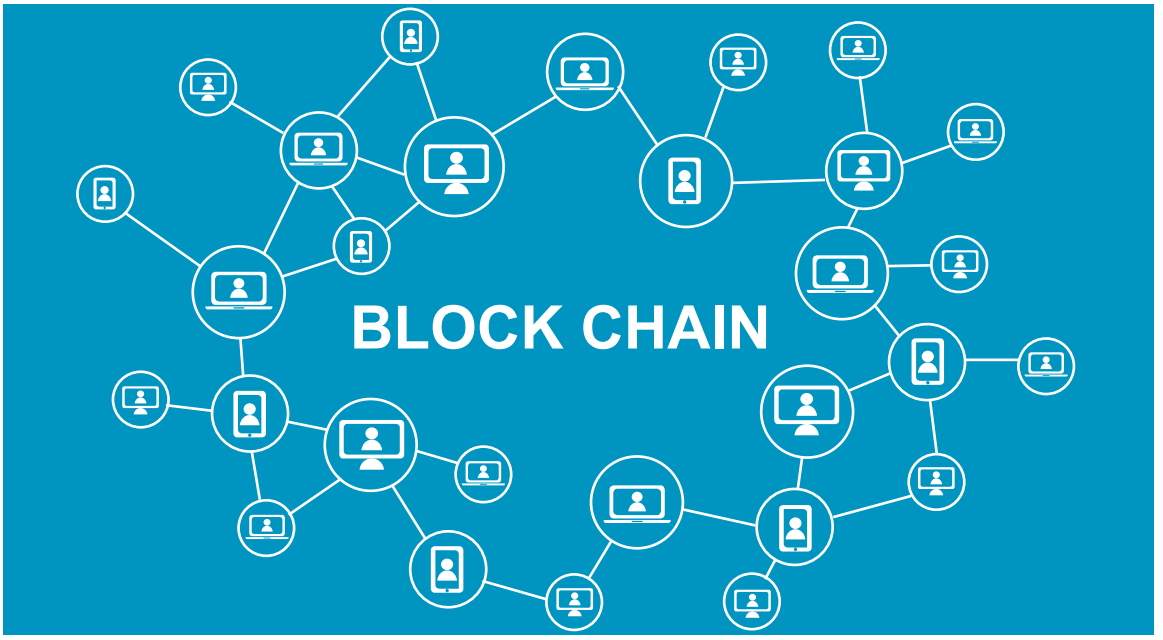

The **new Blockbuster!**

Can blockchain maximize ROI and also solve technology asymmetry problems? Here are some interesting observations.

By Job K Joseph

Cryptocurrency burst into limelight in 2007 heralding the arrival of a new-age digital currency called bitcoin. Over the past 10 years, bitcoin has enjoyed a lot of hype and hysteria, attracting high-profile investments into massive server farm rigs for bitcoin mining, and into trading exchanges for investors who wished to hop on the bandwagon without having to get their hands dirty in mining hardware. Despite being accused of being a highly speculative instrument, bitcoin deserves credit for bringing into the mainstream a radical technology concept that we now call blockchain. Blockchain is essentially a distributed, highly secure, encrypted and immutable ledger of transactions that is accessible to all its participants.

Industry analysts and technology leaders have dubbed blockchain the next big transformation engine. For example, MarketsAndMarkets, a leading B2B research firm, suggests that the blockchain market will grow annually at nearly 80 percent through 2022, changing the way organizations do business. The banking and financial services segment was the first to adopt blockchain-based technology platforms, thanks to the sheer volume and value of the transactions they process. In recent years, multiple competing blockchain technology infrastructure platforms such as Ethereum, Hyperledger, Quorum, Multichain, Corda and Blockstream have emerged vying for increased attention and investments from enterprises. Most large enterprise software platform vendors have also outlined their blockchain-ready product roadmaps, seeking to reduce the barrier to entry for their existing or prospective customers.

> "The leading blockchain platform providers must lead the way by engaging with industries to roll out upgrades that integrate industry specific value-chain personas and roles, coupled with a credit-based smart-contract template that binds the participants and enables profit sharing."

Network effects and technology standardization

Drawing parallels between blockchain and manufacturing/supply chain analytics is inevitable. Both depend on leveraging the power of data, past and present, to generate valuable business insights for the participants. The business value that can be created using blockchain is also contingent on the availability of the complete spectrum of data sources across the value chain – akin to what we know as "network effect." This means

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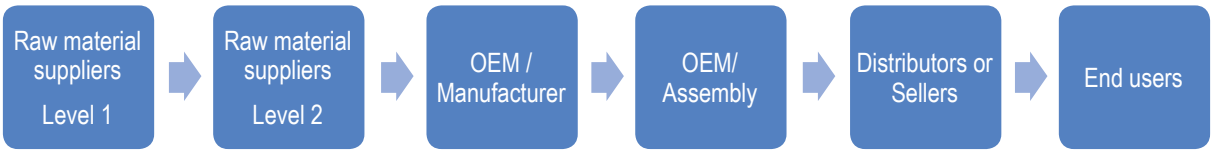

"The business value that can be created using blockchain is also contingent on the availability of the complete spectrum of data sources across the value chain – akin to what we know as network effect."

that for a complicated industry such as the high-tech segment, having all or most of the ecosystem entities as participants in the blockchain becomes necessary for it be successful.

Use cases

The top two blockchain use cases relevant to the high-tech industry are smart contracts and anti-counterfeiting. For example, a multinational electronics manufacturer built an experimental "chained finance" blockchain system for managing payments, movement of goods and contracts, thus enabling and codifying a trusted relationship among its suppliers, partners, factories and customers. To build a blockchain use case, the various participants need to integrate their internal enterprise supply chain/ERP/master data systems and web/mobile applications to the external blockchain network via a standardized integration layer. The major enterprise software platform providers are trying to make these integrations less taxing by adopting a cloud-enabled, blockchain-ready approach in their product roadmaps, including integration interfaces.

The ROI asymmetry problem

In a manufacturing/supply chain ecosystem, if we consider anti-counterfeiting as an example, the maximum direct savings are created for the product owner/OEM. The industry would look forward to the "sponsor" taking the initiative to form a solid business case and guide its adoption in the ecosystem. Similarly, a smart-contracts use case delivers higher benefits towards the forward half of the value chain due to the higher volume of contracts and commission/inventory transactions.

A distributor/seller or a raw material supplier would assume that unless the blockchain indirectly boosts their sales volume and/or revenue by creating more market share for the product owner/OEM, or reduces their costs, they don't stand to gain much. The non-core participants will likely assume the rewards for their participation in the blockchain bear a higher risk and will hesitate to bear the impact of the increased capital and operating expenses.

So, what if there was a way to equitably share the business benefits?

What about a built-in smart-contract?

What if every blockchain platform use case deployment came with a built-in smart contract template, aligned to the target industry segment, which can be used to bind each participant? Such a contract would also define tiers and roles in the value chain, entrusting each with specific transaction volume commitments. It would also provide a means for reasonable "credits" to be earned for their active and sustained participation. The participants can choose to cash the credits periodically from the use case sponsor entities or stay "invested" in the relationship by deferring encashment until they see tangible revenue/cost savings. What if the smart contract can incentivize the participants to stay invested by implementing a tenure or volume-linked credit multiplication scheme? A credit and multiplier mechanism of this nature can serve to reduce risk of the perceived ROI of the participants and encourage the participants to collaborate for mutual success.

Building the ecosystem

This point of view establishes specific implications and takeaways. The leading blockchain platform providers must lead the way by engaging with industries to roll out upgrades that integrate industry specific value-chain personas and roles, coupled with a credit-based smart-contract template that binds the participants and enables profit sharing. The OEMs, their suppliers and partners need to do their part by engaging in industry events around blockchain. They can also participate by giving their key technology, manufacturing and supply chain leaders a time-bound objective of engaging with the consortia and the external technology ecosystem to evaluate, define and realize their blockchain roadmap.

"To build a blockchain use case, the various participants need to integrate their internal enterprise supply chain/ERP/master data systems and web/mobile applications to the external blockchain network via a standardized integration layer."

The author is Senior Practice Manager – Technology BU, Wipro Ltd.