Please note

IBM’s statements regarding its plans, directions, and intent are subject to change or withdrawal without notice and at IBM’s sole discretion.

Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision.

The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract.

The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user’s job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.
Contents:

1. Dawn is coming: Blockchain as a profitable investment 05
2. Trusted marketplaces: Toward a data-driven blockchain economy 09
3. A neutral entity: The global, interconnected blockchain 13
The blockchain economy: Breaking through barriers of global trade

Rising need to share data in the transparent exchange of value throughout the supply chain

Patterns in the use of Blockchain in trade finance, logistics and supply chain networks – introduce trust, transparency and opportunity to create GDP growth with the permissioned sharing of trusted data across any network.

Identify a new validation method to regulatory challenges presented by the movement of data across digital supply chain marketplaces to deliver value to society as well as shareholders.

Non-visible trade friction due to unknown parties sharing paper documents in manual processes is a major cost, risk and trust hurdle.

Context for Global Trade

current global and complex climate
We surveyed over 1000 respondents across 22 industries and 34 countries – to examine the value gained from interconnected blockchain marketplaces and their role in facilitating global trade.
1. Dawn is coming: Blockchain is a profitable investment
3 distinct types of organizations emerged based on blockchain network intent and governance priorities:

- **31% Network Joiners**: Join blockchain networks to seek efficiency. *Example: Walmart joins IFT and brings along food supply chain.*

- **18% Network Builders**: Build blockchain networks that offer value beyond efficiency. *Example: IBM builds IFT.*

- **51% Network Expanders**: Co-create platforms on blockchain networks to grow market size. *Example: Farmer Connect offers innovative service on IFT.*
2019 shows a surge in blockchain adoption, with 41% of the blockchain market activity today generating positive returns.

U.S. and China lead the countries beginning to see early returns on their blockchain investments.

ROI potential progresses with maturity, with the turning point being when organizations move from PoCs to production.

Banking, Electronics and IT lead the industries beginning to see early returns on their blockchain investments.
1. Dawn is coming: Blockchain is a profitable investment

Joiners and Expanders are seeing slower returns today but expect dramatic gains as value redistributes across networks.
2. Trusted marketplaces: Toward a data-driven blockchain economy
Perceptions on the role of data vary by type of organization

- **Network Joiners**
  - Having trusted data is important: 38%
  - Willing to share proprietary data with business partners in exchange for value: 52%
  - Customers will demand transparency and privacy in exchange for data in the future: 74%

- **Network Builders**
  - Having trusted data is important: 80%
  - Willing to share proprietary data with business partners in exchange for value: 77%
  - Customers will demand transparency and privacy in exchange for data in the future: 89%

- **Network Expanders**
  - Having trusted data is important: 86%
  - Willing to share proprietary data with business partners in exchange for value: 76%
  - Customers will demand transparency and privacy in exchange for data in the future: 89%
Organizations see different sources of value through participating in a blockchain-enabled marketplace

New sources of revenue by buying and selling services

New sources of revenue by tokenizing assets exchanged

New sources of revenue from the greater shared value possible

Incentive models that change consumer behaviors in small increments

Network Joiners
Network Builders
Network Expanders
Almost 90% of organizations expect between 1-10 percent boost in GDP from blockchain enabled marketplaces over the next 10 years.

The current COVID-19 crisis is acting as a catalyst for smarter investments in blockchain projects related to:

- secure trusted data sharing
- connected, flexible and resilient supply chain management
3. A neutral entity: The global, interconnected blockchain
As blockchain efforts progress and mature, organizations expect to work with a broad set of blockchain technologies.

CTOs and CIOs prioritize blockchain features for implementation:
- Scalability: 78%
- Interoperability: 77%
- Integration: 74%
Organizations look to different entities to take the lead for blockchain-enabled marketplaces to thrive

### Establishing the marketplace
- Market leaders
- Regulators
- Industry bodies

### Increasing membership
- Blockchain academia
- Government
- Market leaders

### Driving governance
- Regulators
- Government
- Standards organizations

### Driving interoperability
- Blockchain consortia
- Blockchain academia
- Market leaders
Joiners, Builders, and Expanders agree that to facilitate creative exchange, these marketplaces need fair, open governance and standards in addition to common services.

### Open governance

<table>
<thead>
<tr>
<th>Not-for-profit structure</th>
<th>Legal/IP shared ownership</th>
<th>Self-governing rulebook</th>
</tr>
</thead>
</table>

### Common services

| Global trade directory (digital ID, Know Your Customer, payment rails) | Global trade services (provenance, supply chain visibility) | Global trade intelligent insights (trade patterns, machine learning, AI, IoT) |

### Interconnect framework

<table>
<thead>
<tr>
<th>Open standards</th>
<th>Multi-DLT and non-DLT*</th>
<th>Common APIs</th>
</tr>
</thead>
</table>

### Network Builders, Joiners, and Expanders interconnect to exchange value both on- and off-chain

- Trade finance network
- Logistics network (land/sea/air)
- Supply chain finance network
- Insurance/re-insurance network

*Distributed ledger technology*
Action Guide

1. Prepare to participate in multiple ways
   • Score initial success by joining an existing network
   • Build ambitiously, continually innovate to appeal to multiple blockchain networks and industries
   • Look at expanding not just market share, but market size

2. Reap the benefits of sharing data on a blockchain marketplace
   • Design a nuanced approach that protects data when needed and gleans value from data when warranted
   • Determine value on a trusted marketplace - offer new services, digitize assets, influence consumer behavior, pair blockchain with AI & IoT etc.
   • Investigate how information exchanged can drive greater customer satisfaction, partner profitability, shareholder value, and community engagement

3. Support astute governance and standards to increase marketplace success
   • Develop strategies that scale to a wider set of blockchain technologies, span industries and global boundaries
   • Identify common services that you can develop or transactions that you can track
   • Aggregate activities at a cross-industry level and engage with regulators, government bodies, academia, industry working groups and trade organizations to drive interoperability across networks and facilitate cross-industry adoption
Reach out, engage, let’s work together.

Parm Sangha
Global Blockchain Leader for Trade and Trade Finance
IBM Global Business Services
parm.sangha@uk.ibm.com
linkedin.com/in/parm-sangha-65a3464

Veena Pureswaran
Global Blockchain Research Leader
IBM Institute for Business Value
vpures@us.ibm.com
linkedin.com/in/veenapureswaran/

Smitha Soman
Global Blockchain Research Leader
IBM Institute for Business Value
ssoman@us.ibm.com
linkedin.com/in/smithasoman/

Download today’s thought leadership:
https://ibm.co/blockchain-global-trade

Access the entire blockchain library:
https://ibm.co/blockchainseries
Notices and disclaimers continued

It is the customer’s responsibility to insure its own compliance with legal requirements and to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer’s business and any actions the customer may need to take to comply with such laws. IBM does not provide legal advice or represent or warrant that its services or products will ensure that the customer follows any law.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products about this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products. IBM does not warrant the quality of any third-party products, or the ability of any such third-party products to interoperate with IBM’s products. IBM expressly disclaims all warranties, expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a purpose.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents, copyrights, trademarks or other intellectual property right.

IBM, the IBM logo, and ibm.com are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” at: www.ibm.com/legal/copytrade.shtml.