

Enterprise Blockchain for Capital Markets

1Q 2019

Report preview

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REPORT PREVIEW

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Key Investors

REPORT PREVIEW

VC INVESTOR	INVESTMENTS				PE	ADD-ON TRANSACTIONS			
					BANKS		INVESTMENTS		



Public vs Private Blockchains

The primary difference between a private and public blockchain relates to who can participate in the network and, consequently, access the network's database.¹ Public blockchains, such as Bitcoin's, can be accessed by anyone, meaning all parties have access to all data on the blockchain. Private blockchains, however, are governed by a more centralized administrator and provide varying levels of permissioned access to select parties. Limiting access to a specified network facilitates data privacy for users and transparency for governors.²

Private blockchains have several advantages for enterprise users. First, private blockchains facilitate privacy and security, a requirement of paramount importance to users of financial services.³ Private blockchains can also benefit from faster processing speeds (throughput) with more efficient consensus methodologies, as opposed to bulky validation processes like Bitcoin's processing-heavy proof of work (PoW) mechanism. While private blockchains lose the benefit of "trustless" verification that comes from thousands of external nodes, monitoring is improved as administrators have insights into all participants in the network.

Private blockchains also have different incentive structures than those used by public blockchains. Public blockchains employ consensus mechanisms that produce cryptocurrencies to incentivize contribution of resources. Private blockchains, however, do not need to produce cryptocurrencies as an incentive because institutions utilizing blockchain for a specific business use-case will bake in proprietary incentive structures for stakeholders to develop and maintain the network, like compensation in fiat currency.

Private blockchains can still benefit from network effects (positive value added from additional users), but rather than depending on adding individual users or nodes, private enterprise blockchains depend on the participation of more institutions in the network. Another complication of private blockchains is integrating them with other non-blockchain systems within the enterprise. Hence, a key challenge to private blockchains is attaining a large enough network of users to realize the benefits of creating a blockchain platform in the first place.

¹ *Blockchain Observer: Disruption by Decentralization? Morningstar. Jim Senegal. April 30, 2018.*

² *The difference between public and private blockchain. IBM Blockchain Blog. Praveen Jayachandran. May, 2017*

³ *Cracking the Code of Privacy in the Blockchain. S&P Global. Eric Turner, Thomas Zakrzewski, et al. Jan 31, 2018.*

SEGMENT DEEP DIVE

Blockchain Infrastructure Providers (BIPs)

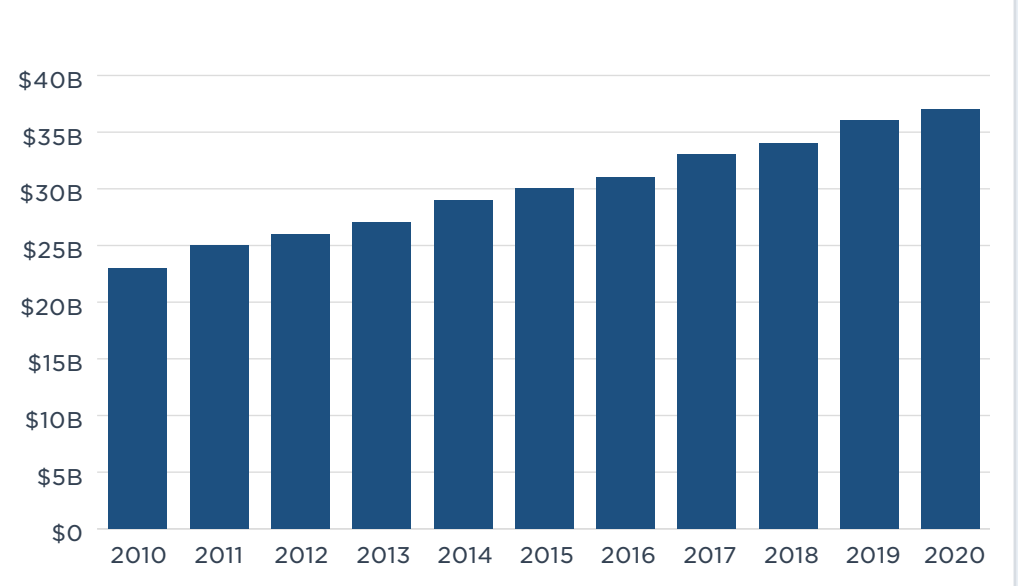
BIPs are companies that provide enterprise-grade blockchain solutions, or lease propriety blockchain platforms, to clients in capital markets (clearing houses, institutional traders, stock exchanges, custodians, etc.). Services may include the creation of customized, permissioned blockchains for a financial institution's network of clients.



REPORT PREVIEW

BLOCKCHAIN INFRASTRUCTURE PROVIDERS (BIPS)

MARKET SIZE



Source: McKinsey and PitchBook estimates. Represents estimated global revenue of capital markets technology infrastructure providers.

BUSINESS MODEL

BIPs seek to sell enterprise-grade software or consulting services to banks and other organizations. Providers primarily focus on the financial industry, developing software that addresses the needs of capital markets operations.

- As the market remains very nascent, companies rely on pilot programs to drive adoption.
- Revenue models include installation fees, subscription services and consulting.
- Training and technical education are another component of service.

KPIS

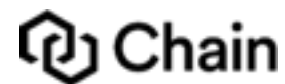
- Product/service: proof of concept and product
- System scalability
- Revenue: # of contracts and monthly recurring revenue (MRR) from software subscriptions
- Margins & efficiency: gross and operating margins
- Cash in hand: Burn rate & runway
- Team: leadership experience and industry relationships

KEY PROVIDERS



* Acquired in Sept 2018

NOTABLE DEALS



September 2018
M&A

Acquired by:



May 2018
\$122M Series A

Investors:

Participation from 47 investors, many top banks

KEY INVESTORS



INDUSTRY DRIVERS

- Willingness of organizations to invest in solutions that drive internal efficiencies and cost reduction, with a focus on pre- and post-trade processing, data reconciliation and record-keeping.
- Banks seeking novel approaches to updating legacy IT infrastructure, and focusing on the cost reduction potential of blockchain.
- Increasing willingness of large organizations to share more data in a secure manner.

SEGMENT DEEP DIVE

Blockchain Compliance Solutions

Companies in this category provide blockchain-based solutions for regulatory compliance in capital and broader financial markets. Examples include transaction monitoring for suspicious activity, authenticating customer identities for Know-Your-Customer (KYC) and Anti-Money-Laundering (AML) compliance, and creating auditable, tamper-proof records for record-keeping and reporting.



Opportunities

Streamlining inefficiencies of data collection, storage and transmission: Many compliance activities involve accurate record keeping and transparent data transfer to regulatory bodies, tasks that can be challenging with poor internal controls. Banks can encounter many issues in compiling customer data including inaccurate information, differences in standards across regions, and lack of visibility into customer activity. Banks are also required to report on transaction monitoring and suspicious activity to regional authorities.

Blockchain is built for transparency: We believe blockchain technology's inherent characteristics are highly synergistic with key regulatory objectives of transparency and risk reduction. Blockchains store data in a manner that is auditable and immutable, improving data integrity and preventing manipulation of records, while allowing regulators and banks greater insight into user transactions. The improved manner of data storage offered by blockchain solutions also makes auditing and regulatory reporting easier, decreasing resources required for such reporting via technological automation and efficiency. These efficiencies can decrease the costs of reporting, staff required for compliance, and fines that result from noncompliance.

Improving KYC/AML due diligence: Fines can also be incurred for failure to comply with know-your-customer and anti-money laundering policies, which aim to curb services provided to fraudulent or criminal accounts. Some banks are limited in the markets they serve because the compliance costs exceed revenue potential. Blockchain-based digital customer/client profiles could ostensibly increase the speed of KYC/AML due diligence and on a grander scale, expand their potential client base.¹

¹ Blockchain KYC/AML Utilities for International Payments. R3. Nov 6, 2017

SEGMENT DEEP DIVE

Clearing and Settlement: Industry Views

Companies in this segment specialize in enterprise-grade blockchain solutions for post-trading processes including data management and clearing & settlement. Services focus on streamlining middle- and back-office operations in securities trading. Proposed solutions include distributing reference data between parties on a private blockchain and using smart contracts (self-executing, programmable contracts) to replace existing settlement systems.



Outlook

For the time being, startups depend on isolated contracts and venture financing: As most startups are still in pilot stages of service testing, we believe revenue models (such as subscription or per-transaction) remain somewhat unclear.

Still too early to pick winners: Despite a handful of notable project-wins from early movers including the Depository Trust & Clearing Corporation (DTCC), Nasdaq, and the Australia Securities Exchange (ASX), widespread adoption remains elusive and these projects have yet to publish outcomes. This lack of deployable production-ready solutions makes it difficult to pick winners in this space.

REPORT PREVIEW

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Independent, objective and timely market intel

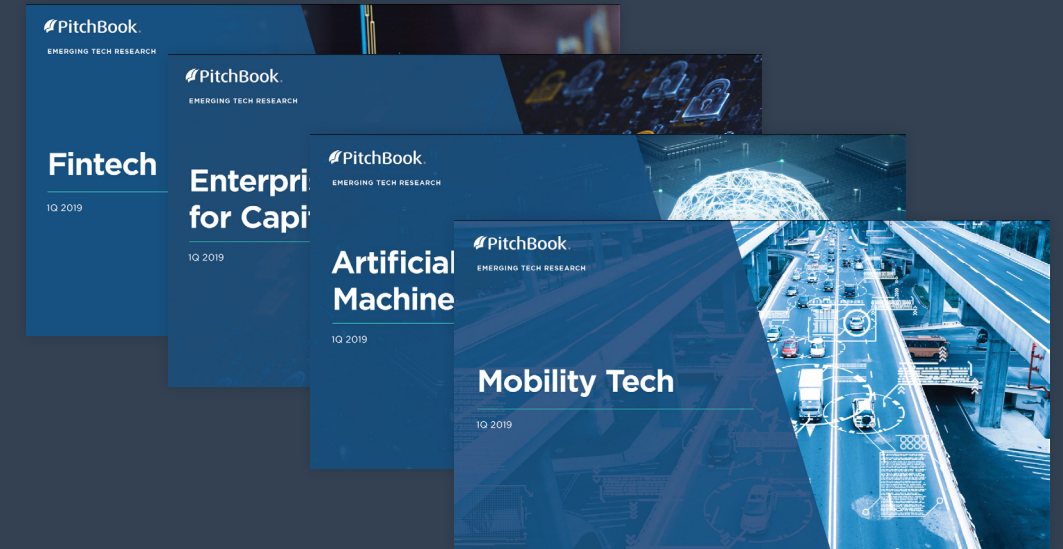
As the private markets continue to grow in complexity and competition, it's essential for investors to understand the industries, sectors and companies driving the asset class.

Our emerging tech research provides detailed analysis of nascent tech sectors so you can better navigate the changing markets you operate in—and pursue new opportunities with confidence.

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