Why We're Excited about Distributed Ledger Technology

Blockchain has tremendous potential to impact the real world due to its ability to enhance transparency, security, and efficiency across various industries. Blockchain offers immutable record-keeping, enabling traceability and trust in data. The technology can streamline processes by reducing paperwork and intermediaries, saving time and resources. Smart contracts can automate tasks and transactions, improving accuracy and reducing the potential for fraud.

We believe in a future that brings the entire credit ecosystem on-chain. Blockchain and on-chain assets have emerged as a reaction to opaque, centralized, and top-down systems. It is a technology that enables greater trust, offers full transparency, and can use immutability to provide greater authenticity to digital services. We believe that these fundamentals can be used to develop improved financial infrastructure that can better serve the needs of financial market participants.

A Refresher on the Many Benefits of this Technology

Cost reduction and disintermediation

Distributed Ledger Technology (DLT) allows for more efficient clearing and settlement, eliminating or reshaping the role of certain intermediaries and reducing costs. This technology can reduce fraud and errors, improve transparency, and eliminate inefficient processes for asset verification and account reconciliation. DLT adoption can result in cost savings and value creation, similar to successful technology protocols such as HTTP and SMTP. There are a myriad of rent-seeking third parties involved in structured finance transactions profiting from redundant tasks that blockchain technology renders unnecessary.

The blockchain's transparent and immutable nature allows us to trustlessly keep records of current and historical ownership of financial assets and track movement through the marketplace. This lowers the risk of fraud and mistakes, allowing for a more efficient market by reducing the number of intermediary participants that do not provide independent value-added functions.

DLT has the potential to enable new business models and inspire changes in how organizations collaborate in competitive markets. There are ongoing efforts to build blockchain-based solutions that are interoperable across institutions, markets, and borders. The benefits of DLT compound with increased collaboration, and as more market participants onboard into web3, including many current financial intermediaries, the benefits of this technology will create a virtuous cycle, inevitably hitting an inflection at which point crypto-skeptics will start to understand why we're so excited about this technology's potential.

Transparency, Risk Management, and Analytics

Transitioning key market participants from the traditional financial services industry to blockchain-based systems would provide both these participants and market regulators access to large volumes of auditable, immutable real-time data. From a regulatory perspective, access to a constantly updated, auditable set of agreed data can also allow a myriad of regulatory benefits, including more efficient Know-Your-Customer (KYC) and Anti-Money Laundering (AML) checks. This data can power new private sector analytics solutions, create jobs, bring new players to the financial markets, and give regulators greater insight into relevant data and processes.

One of our favorite platforms that we believe will play a key role to increase transparency across the industry and reduce information asymmetry is Dune Analytics. Dune Analytics provides data and analytics tools specifically tailored for the cryptocurrency and blockchain industry. It enables users to create, share, and explore interactive and customizable dashboards that visualize on-chain data from various blockchain networks, primarily focusing on Ethereum. By offering transparent and easily accessible insights into the blockchain ecosystem, Dune Analytics helps bring transparency to the cryptocurrency industry in several ways:

1. On-chain data analysis

: Dune Analytics extracts, decodes, and organizes raw on-chain data, making it more understandable and accessible to users. This data can include information about transactions, token balances, smart contracts, and decentralized finance (DeFi) protocols. This helps users analyze blockchain activity and gain valuable insights into the ecosystem.

1. Customizable dashboards

: Users can create and customize dashboards, allowing them to visualize and analyze the data most relevant to their interests or needs. This flexibility makes it easier for users to track specific metrics or trends, promoting transparency and understanding of the cryptocurrency market.

1. Collaboration

: allows users to share their dashboards and analyses with others, fostering collaboration and promoting the dissemination of information across the industry. This openness encourages collective learning and ensures a broader range of stakeholders have access to vital information, leading to more informed decision-making.

1. Real-time data

: the platform updates its data in real-time, ensuring users have access to the most up-to-date information on blockchain activities. This timeliness contributes to greater transparency by reducing the potential for outdated or inaccurate data.

1. Community-driven insights

: encourages users to contribute queries and analyses to the platform, creating a repository of knowledge that is constantly being updated and expanded. This crowdsourced approach democratizes access to data and promotes the exchange of ideas within the cryptocurrency community.

1. Open source

: All queries and dashboards are open source, fostering collaboration, encouraging innovation, promoting inclusivity, and driving higher quality development. The transparent nature of the code allows for continuous peer review and testing by a large community of developers. This scrutiny can help identify and address inaccuracies or other issues more rapidly, resulting in more robust and reliable data.

The Spring team plans to leverage this platform extensively, so that all members of the community can have access to free, real-time data for all of the subDAO's on-chain activity.

New Financial Market Solutions

In addition to the increased efficiency and transparency described above, Blockchain and DLT can revolutionize the financial industry by increasing efficiency, transparency, and enabling the development of new products. Innovations include the use of smart contracts to automate aspects of traditional securities or create securities in a natively digital form. For example, insurance-linked bonds with smart contracts could be triggered to pay out investors based on predetermined events. These smart contracts can also track securitized assets, enforce regulations, and enable new financial products and processes while maintaining consumer protection and market confidence.

For larger-scale achievements, interoperability between new technologies and existing markets is essential. The progress of DLT adoption will falter if only a few market participants adopt the technology. Because of MakerDAO's prominent role in the DeFi industry, we believe it has a unique opportunity to shape the standards of the new financial system. Combining this with our team's diverse relationships across the financial industry, we'll have the necessary tools to build the future of finance.

Improved Data Processing and Security

The distributed nature of blockchain systems, combined with the highest available levels of cryptography can also dramatically improve the security of information used in the financial markets. The widespread adoption of a new technology, with the assent of regulations as appropriate, may have the added benefit of motivating financial services firms to transition from a multiplicity of legacy IT systems subject to significant vulnerabilities to a combined, mutualized platform that will be both more resilient to security breaches and more efficient.

Regulatory Technology

The growing field of "RegTech" uses technology to help regulated industries, like financial services, comply with requirements more easily and efficiently. Integrating DLT-based solutions into securities industry processes would allow regulators to access real-time data, monitor transactions, and potentially halt non-compliant behavior.

Blockchain technology integration could make regulatory compliance obligations more efficient and less costly for securities industry participants. For example, DLT could simplify compliance reporting for Regulation AB II, provide investors with easier access to reliable loan-level data, and facilitate asset perfection, reducing the risk of double-pledging assets (something that has repeatedly occurred with centralized actors in this space).

However, further steps need to be taken to fully integrate the current regulatory infrastructure with this rapidly evolving technology. As advances are made, it is crucial for participants to maintain focus on investor protection, soundness, and the integrity of financial markets.

Increased Financial Access and Opportunity

DLT and DeFi have the potential to revolutionize financial services in emerging markets, particularly for those areas which have been historically underserved by the legacy market participants. By leveraging system's like Maker's lending protocol, individuals and business across the globe can access capital anywhere in the world with an Internet connection and smart phone, reducing barriers to entry and providing the capital formation necessary to spur growth in local economies. DLT enables greater financial inclusion, as individuals and businesses in emerging markets gain access to a wider array of financial products and services, such as lending, borrowing, insurance, and remittances. The increased access to capital offered by these solutions will ultimately foster economic growth, job creation, and entrepreneurial opportunities in these regions.

Rapidly Developing Blockchain Infrastructure

There is tremendous innovation around DLT infrastructure that is quickly enabling faster, cheaper, and more secure transactions. Over the past year, the Ethereum community deployed major updates to the protocol, changing the consensus mechanism from proof-of-work (PoW) to proof-of-stake (PoS). This resulted in a >99% reduction in energy costs associated with securing the Ethereum protocol. This past month, the community upgraded the protocol once more with the long-anticipated Shanghai hard fork, allowing validators to withdraw ETH that had been staked on the beacon chain since as early as December 2020.

Layer twos have also been rapidly innovating and executing on their road maps. Arbitrum launched their 'Nitro' upgrade at the end of last August, introducing new architecture that increased throughput and lowered fees, then followed it up by airdropping the long anticipated ARB token. The network has seen strong momentum both in TVL and activity as seen from the below two charts courtesy of L2beat. Network activity has even spiked above ETH Mainnet in recent months.

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In February, Coinbase took the industry by surprise by announcing they were launching their own layer two, "Base", an optimistic roll-up secured by Ethereum, that will make it easy to build decentralized apps with access to Coinbase's products, tools, and 110M+ users.

The world's first zkEVM Mainnet, zkSync Era, was launched in March by Matter Labs, allowing the world to permissionlessly access what many consider the next generation of layer twos.

In addition to the Ethereum ecosystem, many of the largest financial and technology companies in the world have started exploring and implementing blockchain technologies.

1. JPMorgan Chase

: developed Quorum, an enterprise-focused version of Ethereum, to enable secure and efficient processing of private transactions. The bank has also introduced JPM Coin, a digital token used to facilitate instant payment transfers and to simplify the payment process.

1. IBM

: has been actively involved in blockchain technology with its IBM Blockchain Platform, providing a range of services for industries like supply chain management, trade finance, and insurance. It has also partnered with several organizations, including Maersk, to create TradeLens, a blockchain-based global supply chain solution.

1. Visa

: launched a blockchain-based business-to-business (B2B) payment service called Visa B2B Connect, which aims to provide a more secure, transparent, and efficient way for businesses to make cross-border payments.

1. Mastercard

: has been investing in blockchain technology and has launched a blockchain-based system to improve B2B transactions, focusing on increasing transparency, reducing costs, and simplifying payment processes.

1. Santander

: The Spanish banking giant has been using blockchain technology for various purposes, including international money transfers through its One Pay FX platform, which leverages Ripple's blockchain technology to facilitate faster and cheaper cross-border transactions.

1. Microsoft

: Microsoft has been exploring blockchain use cases through its Azure Blockchain Service, which allows businesses to build, govern, and expand blockchain networks using various platforms like Ethereum and Quorum.

1. Nasdaq

: In 2015, Nasdaq launched the Nasdaq Linq platform, a blockchain-based platform for managing shares of private companies. Linq aimed to streamline the issuance, transfer, and management of private company securities using blockchain technology. Nasdaq has been actively exploring ways to use blockchain for various purposes, such as improving the proxy voting process, managing securities settlement, and clearing and collateral management. Nasdaq has also partnered with Chain, a blockchain technology company, to test the use of blockchain in managing and settling securities transactions, specifically in the Nasdaq Private Market.

1. Intercontinental Exchange (ICE)

: ICE established Bakkt, a digital asset platform that focuses on providing a regulated ecosystem for trading, clearing, and storing digital assets, including cryptocurrencies like Bitcoin. Bakkt also launched Bitcoin futures and options contracts to enable institutional investors to gain exposure to cryptocurrencies.

Network Security and Data Protection

Blockchains offer significant potential for network security and data protection, which are increasingly critical topics in today's digital environment. DLT is inherently more secure than many existing systems in the securities industry due to its cryptographic protections and system redundancy stemming from its distributed nature. However, the implementation of DLT-based solutions also presents unique challenges that need to be addressed.

Depending on the specific application, personal data can be held either on or off a DLT system. DLT systems also vary, with some using open or public ledgers and others using permissioned ledgers where only certain trusted financial institutions can participate.

DLT has the potential to improve the efficiency of data safekeeping and record-keeping due to the immutable way that blocks of information are linked together and the high degree of resistance to network breaches or malfunctions (known as Byzantine Fault Tolerance).

To reap the benefits of DLT, it's crucial that regulations, such as those concerning data privacy, do not stifle private sector innovation in the development of this technology. The right balance will allow DLT to positively impact network security, data protection, and other areas of the securities market lifecycle.

Ownership and Governance

The inherent mutuality of DLT-based solutions, along with the distribution of responsibility for ledger maintenance, promotes security and immutability. Both public and private DLT networks offer different governance solutions, demonstrating the technology's adaptability to various environments and conditions, and highlighting its potential for disruption and landscape-changing possibilities.

For example, the Linux Foundation has introduced an open-source "operating system" that enables engagement for marketplaces, data-sharing networks, micro-currencies, and decentralized digital communities. The "Hyperledger Project," backed by major conglomerates like IBM, J.P. Morgan, Wells Fargo, and The Depository Trust and Clearing Corporation, features permissioned chains that facilitate easier consensus among nodes on the chains.

This decentralized governance structure promotes flexibility and autonomy without sacrificing safety, protection, and trust. It allows permissioned nodes to operate freely within the system and engage with parties who share the correct encryption keys on their own terms. This showcases how DLT can balance freedom of operation with secure and trusted engagements.

MakerDAO's Opportunity

We believe MakerDAO and Dai have been presented with an incredible opportunity to create a lasting positive impact on society. The protocol enables users around the world to access financial services without the need for traditional banking infrastructure. This is especially important for people in developing countries or those without access to traditional banking services, as they can now participate in the global financial system with as little as an Internet connect and Ethereum wallet. Dai provides a decentralized and stable store of value that can be used in transactions and DeFi applications, reducing the need for reliance on centralized and volatile currencies or traditional financial intermediaries. As scaling solutions proliferate, transactions will get cheaper and cheaper, inevitably driving them to be more affordable than existing financial services, leading to more financial inclusion.

The Spring Ecosystem Actor has deep conviction in Maker. We believe we'll be able to harness the fundamental utility of the Maker protocol while continuing to expand real world asset financing with Dai. As we mentioned in our original introduction to the community, we believe that the best way to accomplish these goals and make a positive impact in the world is to build it collectively, with a community of like-minded experts and practitioners who share our vision of the future. If you believe in building a more transparent, accessible, and inclusive financial system and integrating blockchain technology with traditional finance, the Spring community is the place for you!

Sources:

1. https://www.finra.org/sites/default/files/Blockchain-SFIG-Comment.pdf
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3. https://www.coinbase.com/blog/introducing-base
4. ChatGPT4