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Why Blockchain's Impact On The Retail Sector is Growing

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This was a breakout year for blockchain, the technology providing the platform for cryptocurrencies and the emerging market for initial coin offerings and token sales. With bitcoin capturing headlines because of its soaring price, blockchain's impact is often misunderstood as narrowly affecting the financial sector.

In fact, the retail sector is among the early adopters of this disruptive technology, and retailers are actively implementing blockchain solutions to improve inefficiencies and enhance consumer experiences. Retail and consumer products companies can no longer afford to ignore blockchain as a passing trend; rather, blockchain should be thought of as a potentially valuable tool.

Blockchain 101

Blockchain is a technology that allows for the immediate and secure transfer of assets on a distributed ledger that records and settles transactions through the participation and verification of the participants in the blockchain. Each participant in a blockchain has an identical record of all the transactions related to the assets being traded within that blockchain.

When a new transaction is initiated, rather than rely on a central intermediary (like a bank or trustee) to validate and settle the transaction, each participant's ledger is matched and the consensus of the group authorizes the transaction. After each new transaction, every participant's ledger is updated to reflect the new ownership of the assets within the blockchain.

Blockchain is disruptive because it has the potential to lower the cost of transactions and make transactions more secure. By eliminating the need for central intermediaries to settle transactions, blockchain reduces the cost of transactions as third-party fees are erased from the process.

Additionally, because the record of each transaction on a blockchain is maintained in so many identical copies among the participants, any security breach that manipulates any one record will not have an impact. In order to manipulate the history of transactions in a blockchain, enough copies of the distributed ledger would need to be manipulated in the exact same way to create a consensus around the manipulated record.

Attempting to understand what exactly blockchain is is far less important than understanding what blockchain can do. Taking the internet as an example, understanding how a technology works is not a prerequisite for the widespread implementation of that technology. In fact, an analogy has been made that blockchain will do for the transaction of assets what the internet did for communications.

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Supply Chain and Inventory Management

Leading retail companies are rushing to implement blockchain solutions for supply chain and inventory management.

For example, in partnership with International Business Machines Corporation, Wal-Mart Stores Inc. is developing a blockchain solution that tracks its inventory from source to consumer with an eye toward product safety. By creating a digital record of each product and maintaining a record of the transfer of the products on a distributed ledger, the source of a product can be verified almost instantaneously. In marketing this blockchain, Wal-Mart has indicated that the time it takes to track the source of a contaminated food product has decreased from roughly a week to 2.2 seconds.

Similarly, IBM is also working on an international supply chain solution in partnership with shipping giant A.P. Moller-Maersk. This blockchain is being tested with retailers and has the potential to eliminate some of the costly inefficiencies of international trade, particularly related to the regulatory and paperwork burdens of shipping across borders.

Consumer Trust

By tracking the source of a product, blockchain is also being used to enhance consumer trust by verifying the authenticity of rare and expensive products.

Diamonds are being tracked on Everledger, a blockchain that verifies both the authenticity of a diamond and its status as conflict-free. The authenticity of rare art, expensive wines and even sashimi-grade tuna are being verified on blockchains and enhancing a consumer's trust in the value of assets. Retailers that implement blockchain to verify the authenticity of their products may begin to see a competitive advantage in the market.

Consumer Rewards

Underutilized and administratively burdensome consumer loyalty programs are missing opportunities to enhance consumers' relationships and loyalty to a brand. Companies like looyal are building blockchain solutions that address the reasons consumers abandon loyalty programs, while simultaneously easing the administrative burdens associated with running a loyalty program.

Loyalty reward points are already a form of digital currency, so the evolution of issuing and redeeming loyalty reward points on a blockchain is a natural application of the technology. By maintaining loyalty programs on a blockchain, the frictions involved in earning and redeeming rewards will ease, and companies can better track consumers' behaviors as they earn and redeem their rewards.

By enhancing the experience of consumer reward programs, companies can enhance their brand loyalty and take advantage of the additional data gathered through the programs.

Blockchain's Broader Impact

The retail sector will also be affected by the broader impact blockchain is having, and will continue to have, on securities offerings, securities trading and corporate governance. Major players in the financial industry, including Nasdaq Inc., the DTC and major banks, are all working toward the digitization of securities on blockchain. This transition will allow for faster trading and more accurate and less expensive record-keeping for trades.

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In addition, corporate governance is also being impacted by blockchain. This year, Delaware amended its corporate code to affirmatively allow the use of blockchain technology to create and maintain a corporation's stock ledger and to communicate electronically with stockholders. These changes open up the possibility of issuing stock and distributing stockholder communications on a blockchain.

Blockchain stands to revolutionize not only the process of doing business in the retail sector, but also the fundamental structure and corporate governance of retail companies. Investment in blockchain technology is growing rapidly, and the retail sector is among the first industries to experience the practical applications of this new technology. Blockchain has the potential to become a necessary, rather than novel, tool, and the retail sector is already seeing the impact of its implementation.

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