THE IMPACT OF BLOCKCHAIN IN MARKETING

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ABSTRACT

Blockchain has emerged as a highly promising technology in the IT domain. It is an open, immutable, distributed public ledger that can be accessed by several parties involved in the transaction and acts as a universal depository of all transactions between the involved parties. The increasing acceptance of cryptocurrency worldwide is one of the major factors driving market growth. Commercial and central banks across the world are now using blockchain technology for payment processing and issuing of their digital currencies.

In October 2008, Satoshi Nakamoto launched bitcoin with a White Paper, creating and deploying bitcoin's original implementation. Satoshi Nakamoto, the unknown person/group behind Bitcoin, described how the blockchain technology, a distributed peer-to-peer linked-structure, could be used to solve the problem of maintaining the order of transactions and to avoid the double-spending.

The purpose of this research is to investigate the limitations of blockchain technology used in international trade in the field of marketing. In the research, the literature was searched and its use in the field of marketing was examined among the researches on this subject

Each company, by blockchain, digital Marketing, marketing security reaches customers through different channels. Fastest, cheapest, most transparent way increases customer satisfaction. Despite the uncertainties in the field of finance, companies don't appear to attract themselves with technological equipment for their customers with technological equipment in the markets According to the results of blockchain in the field of marketing research that will increase efficiency, reduce costs and accelerate operations that will increase the conventions smart companies provide a way to transparency for customers to other competitors unable to go to food security, digital IDs, Retail loyalty programs in the areas of prescription drugs blockchain belongings tracking was used to monitor supply chains, money transfers and payment transactions in stock trading, accelerating access to energy futures and adapt rewards.Blockchain has important implications for marketing and advertising. But according to The CMO Survey, only 8% of firms rate the use of blockchain in marketing as moderately or very important. According to our research, blockchain is the perfect base platform for generating ideas to prioritize data-driven marketing, collecting, controlling, storing the database

Key Words Blockchain , technology, marketing, Central Bank, Commercial

I BLOCKCHAIN

The technology enables cross-border payments that are less expensive and faster as compared to traditional systems. The blockchain is a shared and synchronized data structure copied between consensus algorithms and many sites, countries and/or institutes. All transactions between states, universities, companies, hospitals can be kept in the blockchain where blockchain is used in many areas. One of them is financial markets. In the U.S. Canada and Japan, there is a 3-day settlement cycle, and in the EU, Hong Kong and South Korea, this cycle takes two days. This one-day difference can bring many risks related to liquidity and

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credits. That is why in the U.S. the Federal Reserve pressed all stakeholders to act on increasing end-to-end payment speed. Managing internet of things networks tax regulation and compliance Immutable data backup food safety, digital IDS retail loyalty rewards programs monitor supply chains payment processing and money transfers equity trading expediting energy futures trading and compliance securing access to belongings Tracking prescription drugs decentralized applications.

Blockchain has caught up with the help of companies that want to give their struggles with customer-oriented marketing in a fiercely competitive environment with globalization by increasing customer satisfaction in alternative ways. The proposal for the solution of the basic problem of 21st century technology is blockchain technology. Provides the necessary confidence to carry out business transactions. Property rights, securities, ownership etc. in Bitcoin. It is made in bitcoin instead of currency. Blockchain technology creates the trust wall in e-commerce. Blockchain technology determines strategies in the field of marketing. In this study, the strategies and effects of marketing related to blockchain in terms of technology are included. Marketing helps companies understand and explain the value a consumer perceives and derives from a product or service (Larivière, 2013) . Each company, by blockchain, digital Marketing, marketing security reaches customers through different channels. Fastest, cheapest, most transparent way increases customer satisfaction. the key goals and challenges associated with consumer engagement remain the same. Despite the uncertainties in the field of finance, companies don’t appear to attract themselves with technological equipment for their customers with technological equipment in the markets. They not only reshape modus operandi for a firm's outreach, but also change and raise customers ' expectations, thus changing the dynamics of customer-brand relationships (Frank T. Lorne S. D., 2018).

Trust and reputation management is becoming prevalent for the success of a global retail marketing system extensive research efforts have been devoted to developing an anonymous reputation system for market places *et al.* proposed a reputation system based on group signature technique. Motivated by Blomer *et al* proposed a feedback-driven reputation system with public link ability. The main goal of the proposed system is to preserve consumer anonymity while preventing double review attack. However, the proposed scheme did not consider purchase–purchase unlink ability for consumers due to the use of the same commitment message for an individual consumer. Bag *et al.* proposed a personalized reputation system taking into consideration the trustworthiness of consumers. Bazin *et al.* designed a feedback-driven reputation system with secure rating aggregations. RSA blind signatures and non-interactive zero-knowledge proofs were leveraged in to achieve

consumer anonymity. Zhai *et al.* proposed a tracking-resistant anonymous reputation system by leveraging an anonymity provider with mix-net technology. However, the proposed scheme in required much computation and communication overhead due to the use of verifiable shuffle operations. Azad *et al.* utilized a homomorphic cryptographic system and non-interactive zero-knowledge proof to design a decentralized reputation system with individual rating score confidentiality. Moreover, the proposed schemes provide insufficient system transparency, which makes them less suitable for the retail marketing environment due to the lack of mutual trust among the involved entities. To build a more transparent marketplace, blockchain technologies have been exploited for reputation system construction Schaub *et al.* proposed a fully decentralized reputation system atop a public blockchain with blind signature to achieve consumer anonymity (Liu, Alahmadi, Ni, Lin, & Shen, 2008). Aside from the inadequate integrated consumer protections and the high price volatility, the leveraging of Bitcoin in corporations' marketing sports can reason undue environmental damage via high quotes of energy intake and emissions which would possibly save you businesses from adopting block chain. From an architectural angle, it is noteworthy that exceptional varieties of block chains exist that can be carried out to advertising sports which includes private, consortium or public block chains. Private block chains can establish exceptional degrees of permission for the events worried within the community. They purpose at imparting a better degree of privateness, take care of big quantities of information, optimize current and future recordkeeping, smoothen the audit method and compliance reporting and offer decision-makers with the unified information they need. Brands wishing to hold their traditional business and governance fashions may also, consequently, consider the adoption of personal block chains (Raju, 2021) . In the new economy, brands no longer focus solely on campaigning one after the other. Instead, they are leveraging new forms of consumer engagement and dialogue to expand their Sunday coverage and implement a more synergistic and harmonious marketing communications strategy. Firms today build a technology portfolio and use a variety of media channels and promotional methods to position their brands and sell their products, services and ideas. Digital marketing takes advantage of new channels in social media that provide companies with new, innovative, cost-effective and effective capabilities to interact with customers (Melewar et al., 2017). In the new economy, brands are no longer focusing solely on running one campaign after the other. Instead, they are capitalizing on new forms of consumer engagement and dialogue to extend their market coverage and strengthen a more synergistic and attuned marketing communication strategy. Firms today are building a portfolio of technologies and exploiting various media channels and public methods to position their

brands, as well as sell their products, services, and ideas. Digital marketing is leveraging new channels across social media that provide firms with (Abderahman Rejeb, How Blockchain Technology Can Benefit Marketing: Six Pending Research Areas, 2020).

*E*ven though loyalty packages shift from an combination level to an character level, they're nonetheless very constrained in phrases of program components. Instead of diversifying praise software features to attraction to new ability individuals, many firms are adopting loyalty programs geared toward preserving their current member base. Customers admire being involved in appealing and bendy loyalty applications. However, a few manufacturers tend to lock in their clients and exert monopoly power on them. The state of affairs is exacerbated if loyalty points are unused or unredeemed. For instance, a report by Bond Brand Loyalty indicated that extra than 25% of the members in loyalty packages never redeem their praise points. The low redemption costs end result from stringent, time-primarily based processes to redeem rewards. This approach may invoke a kingdom of significant frustration among loyal contributors, in particular whilst capability praise expires. When it comes to traditional mobile apps, the rules are dictated by the Play Store or App Store. The same goes for any platform that has a single authority that controls the entire platform. This research focused on how blockchain is used in the market and its impact on the marketing field.

Blockchain is a database that can't be manipulated and hacked for now. This is also called distributed ledger technology. Database is knotted with the computer. The components of this database are blocks and pages. Each block contains a cryptographic signature at the end. This signature (sometimes called a digest or a hash) summarizes all the information in the block, and any trivial change in the data in the block causes the signature to be completely different. Bitcoin orders transactions and groups them in a constrained-size structure named blocks sharing the same timestamp. The nodes of the network (miners) are responsible for linking the blocks to each other in chronological order, with every block containing the hash of the previous block to create a blockchain. Thus, the blockchain structure manages to contain a robust and auditable registry of all transactions. This signature (sometimes called a digest or a hash) summarizes all the information in the block, and any trivial change in the data in the block causes the signature to be completely different. This last line of the block is then repeated as the first line of the next block -- which is where the "chain" comes in. This feature makes a block chain immutable. If anyone tries to edit an old block (rewrite history), the block signature will change, and the network will see that the block signature doesnt match the first line of the

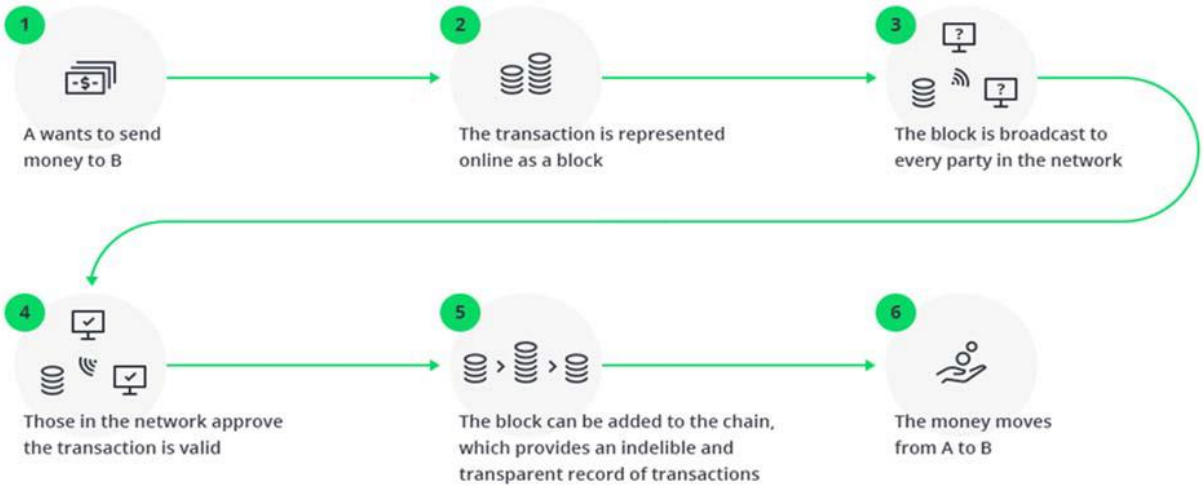
next block. The network throws out the corrupted block and automatically replaces it with the original. Hence, it is practically infeasible to alter history to commit fraud or unwind unwanted transactions. Given that most of the blockchain applications have been focused in finance, the technology has been largely under the radar screen in marketing (Moorman, 2018).

Currently, various crypto currencies differ in their usefulness in the three functions of money. Economic theories could suggest that the first two functions are the most important functions of money in its ability to reduce transaction costs of bartering, implying that when the values of the first two functions are identified and secured, the third dimension, the store of value, will automatically follow. This premise is based on the belief that any disruptive innovation must ultimately solve real economic problems in business and relational transactions, rather than it being innovative just as a new mathematical algorithm. Mathematics, as a stand-alone product, is pure elegance. The value of elegance is metaphysical. Thus, if the branding of a blockchain technology focuses only on the third dimension alone, hypes on a rapid increase in the currency value and that feature only, it will not necessarily lead to values being created in the first two functions. Indeed, persuasive arguments can be provided that risky value assets will mitigate its true intrinsic usages, as people are averse to volatility (Frank T. Lorne S. D., 2018).

The data contained in the system is encrypted. It can't be deleted or modified. Any file or data can be stored in chain blocks according to the blockchain theory. The technology finds use in many domains. In the blockchain system business transactions, financial information and health records are permanent and stay unchanged. Thus, blockchain is a new, transparent, and secure tool for industries such as advertising (https://www.blockchain-council.org/blockchain/impact-of-blockchain-in-marketing-and-advertising-in-2020/).

Blockchain is the digital, distributed, and decentralized ledger underlying most virtual currencies that's responsible for logging all transactions without the need for a financial intermediary, such as a bank. In other words, it's a new means of transmitting funds and/or logging information.

Figure 1 Technologies of blockchain (see online version for colours)



Source: From Redka (2018) (Attaran, 2019).

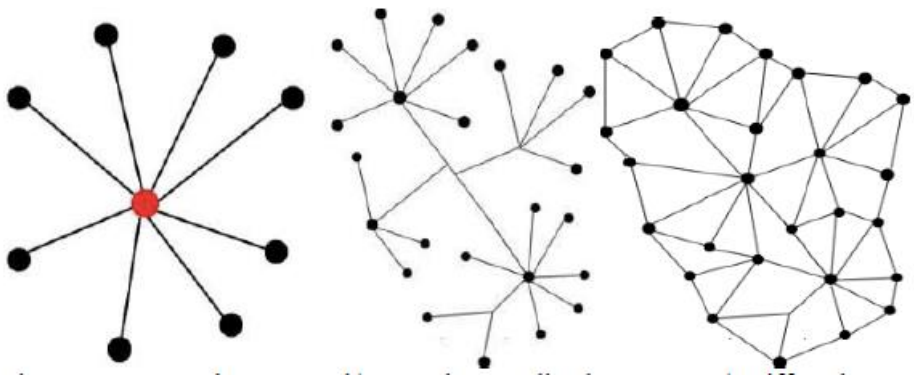
Blockchain is a decentralised technology and has a built-in robustness. It stores blocks of information that are identical across its network. It eliminates the risks that come with data being held centrally. Anything that happens on it is a function of the network as a whole (Attaran, 2019). Blockchain applications are distinguished in the relevant literature in three major ways. The first one classifies applications in financial and non-financial ones, since most of the work done is oriented in cryptocurrencies and fintech. The second one focuses on the evolution of blockchain in 3 waves, the cryptocurrency wave 1.0 (Bitcoin), the smart contracts platforms (Ethereum and Hyperldger) and the 3.0 that describes a programmable society Finally Zheng et al. (2018) identifies five major areas of blockchain applications namely, finance, internet of things (IOT), public and social services, reputation systems, and finally security and privacy. This approach is expanded by Casino et al. (2019), who provide a more detailed listing of the application Cryptocurrencies such as Bitcoin use blockchain-based tokens that enable users to represent and exchange value and tangible externalities without the need for centralized governance architecture to facilitate clearing and to maintain the market's integrity. The diffusion of self-governed decentralized value-exchange solutions marks the advent of various Open-Web services that allow users to exchange goods and services without the need for intermediation or central management. In other words, blockchain-based distributed governance models have emerged to emancipate users from the grip of monolithic, often inefficient, entrusted third parties and replaced them with cryptographic verification. Building on the advent of blockchain technology, a token-based peer-review payment system

could provide market regulation of reviewers' availability while maintaining the full independence of the journals and catering for authors' and reviewers' interests. In the envisioned token-based peer-review scheme, authors pay submission fees with peer-review coins (PRC) and reviewers receive PRC for their services. Thus, PRC is a cryptocurrency that fuels a peer review market in which PRC is exchanged, paid, and earned for review services. Token-based market regulation uses external market mechanisms such as price and competition to establish peer-review standards that can measure and reward individual contributions (Jörg Weking, 2020).

Virtual currencies, which we can't keep in the wallet, can be spent using a password. Without a centralized peer-to-peer (P2P) network, electronic payments can be made from one side the blockchain technology, which is the substructure of the crypto money that enters into our lives from the purchase to the purchase of a service even though it is not used in national currency, is seen as a digital technology that can be used in all service sectors. In 2010, the system produced 184 billion bitcoins by itself, and many users' bitcoins weren't legitimized by government agencies because they were not safe at the time of their disappearance.

According to the 3rd paragraph of Article 3 of the Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions Electronic funds issued by the issuer of money, exported electronically, stored electronically, used to perform the payment transactions defined in this Law and electronic money refers to the monetary value accepted by natural and legal persons other than the issuing organization. In the substructure of crypto coins, block chain structure is located. Without a centralized peer-to-peer (P2P) network, electronic payments can be made from one side to the other, and transaction logs are kept as local copies in the databases on each node.

Figure2 Central Structure b) Non-decentralized Structure c) Diffused Structure



Source: (Oğuzhan Taş, 2018, s. 374).

Some argue that blockchain doesn't only move value, but it also integrates several components of the trading-clearing-settlement value chain in an elegant and efficient way.

At its core, blockchain enables transactions between two parties without the need for third-party verification. Most of the uses for blockchain have been around finance and crypto-currencies, but the underlying technology could be huge for marketing (Newman, 2017).

Table 1 Real-world applications of blockchain technology across different categories

Categories	*Description*	*Real-world applications*
Static registry	• Manage registry of asset ownership • Provide automation on specific assets	• Tracking of containers during the shipping process • Gift and ownership • Digital assets (stocks, bonds, shares)
Digital identity	• Store, confirm and distribute identity-related info • Easily revise personal data or other data	• Enable user to easily access proof of bank/credit card identity
Smart contracts	• Create and execute semi-autonomous contracts on distributed digital platform • Project for implementation of confidential smart contracts	• Cash equity training • Insurance claim payouts • Music distribution • Self-executing wills • Hyperledger fabric
Dynamic registry	• Exchange of physical and digital assets	• Streamlined low transaction settlements to address liquidity mismatches in loans
Payments infrastructure	• Efficient payment transfers with improved record-keeping	• Peer-to-peer lending through bitcoin
Verifiable data-copyright protection	• Low-cost notary services • Easy access to secure, dynamic information	• Events tickets • Storage of intangible assets • Protection of intellectual property • Registry of independent artists' work

Source: McKinsey & Company (2017)

Table 2 Financial services generating biggest revenues using blockchain technology

Sectors	*Advantages*	*Net gains/savings*
Trade finance	• Lower costs • Speed up turnarounds	• Revenue boost of $14 billion–$17 billion
Cross-border B2B payments	• Lower costs and fees	• Saving of $50 billion–$60 billion
Cross-border P2P payments	• Lower costs • Improving speeds	• Saving of $3 billion–$5 billion
Repurchase agreement transactions	• Lower operational costs • Lower systematic risks	• Saving of $2 billion–$5 billion
Over-the-counter derivative	• Reduces operational costs	• Saving of $4 billion–$7 billion
Anti-money laundering management	• Reduces duplicated effort • Smooths the onboarding process	• Saving of $4 billion–$8 billion
Identity fraud	• Fewer damage payouts • Happier customers	• Saving of $7 billion–$9 billion

Source: Parker (2017)

Indeed, the real impact of blockchain in digital marketing is not just in the new use cases being developed. It's in how those use cases will impact entire systems that have popped up as a way to manage the digital marketplace. In a time when digital marketing seems to be changing and growing by the moment, blockchain is changing digital marketing in disruptive, perhaps even irreversible ways. (Newman, 2021).

Long Blockchain Corporation, announced it was going to start mining bitcoin, and saw its shares more than quadruple in a single day.

Hysteria aside, companies are exploring how best to leverage blockchain. For example, brands are exploring whether blockchain can help solve some serious challenges with transparency in marketing and advertising. This is especially pertinent as GDPR and privacy concerns make data security even more important to consumers. There are 30 potential uses for blockchain technology:

1. Payment processing and money transfers

Blockchain is the vision of developers who believed that the current banking system had flaws. In particular, they viewed banks acting as third-parties and pilfering transactions fees as unnecessary. Blockchain funds and money transfer permissions 24 hours a day, 7 days a week without days off. The transaction is carried out quickly without any transaction fee. This transaction, which is processed through the block chain by removing the bank, paying the tax, removing the banks from the equation, returns within seconds. Therefore, the sphere of clearing and settlement trades is one of the potential applications for blockchain. For this reason, blockchain has become one of the forms of payment in logistics. Santander UK in June 2016. Particularly in the U.S., non-depository financial services such as blockchain payment companies have been traditionally regulated. Department of the Treasury's Financial Crimes Enforcement Network (FinCEN) On the other hand, the EU has a uniform legal framework for regulating electronic money.

2. **Monitor supply chains**

Blockchain also comes in particularly handy when it comes to monitoring supply chains. By removing paper-based trails, businesses should be able to pinpoint inefficiencies within their supply chains quickly, as well as locate items in real time. Further, blockchain would allow businesses, and possibly even consumers, to view how products performed from a quality-control perspective as they traveled from their place of origin to the retailer.

3. **Retail loyalty rewards programs**

Blockchain could further revolutionize the retail experience by becoming the go-to for loyalty rewards. By creating a token-based system that rewards consumers, and storing these tokens within a blockchain, it would incentivize consumers to return to a certain store or chain to do their shopping.

4. Digital IDs

Digital IDs within its Authenticator app currently used by millions of people which would give users a way to control their digital identities. This would allow folks in impoverished regions to get access to financial services, or start their own business, as an example.

5. Data sharing

Cryptocurrency IOTA launched a beta version of its Data Marketplace in November, demonstrating that blockchain could be used as a marketplace to share or sell unused data. IOTA has more than 35 brand-name participants (with Microsoft being one) offering it feedback.

6. **Copyright and royalty protection**

The blockchain would provide real-time and transparent royalty distribution data to musicians and content creators.

7. Digital voting

Blockchain offers the ability to vote digitally, but it's transparent enough that any regulators would be able to see if something were changed on the network.

8. Real estate, land, and auto title transfers

If you're buying or selling land, a house, or a car, you'll need to transfer or receive a title. Instead of handling this on paper, blockchain can store titles on its network, allowing for a transparent view of this transfer, as well as presenting a crystal-clear picture of legal ownership.

9. Food safety

Yet another intriguing use for blockchain could be in tracing food from its origin to your plate. blockchain would allow the source of the contaminant to be found considerably quicker than it can be now.

10. Immutable data

Using blockchain as a backup source for cloud data centers or for any data, as Boeing is considering with GPS receivers on its planes could resolve this concern.

11. Tax regulation and compliance

Marijuana companies can use blockchain as a means to record their sales and demonstrate to lawmakers that they're abiding by local, state, and/or federal laws. IRS has paid their fair share of taxes to the federal government, assuming they're profitable.

12. Workers' rights

Coca-Cola, along with the U.S. State Department and other partners, is working on a blockchain registry complete with smart contracts -- protocols that verify, facilitate, or enforce a contract -- to improve labor policies and coerce employers to honor digital contracts with their workers.

13. Medical recordkeeping

Medical sector has already been moving away from paper for recordkeeping purposes for years. Blockchain keep patient records, in this digital records would be in control by blockchain.

14. Weapons tracking

Blockchain could create a transparent and unchanging registry network that allows law enforcement and the federal government to track gun or weapon ownership, as well as keep a record of weapons sold privately.

15. Wills or inheritances

When used with smart contracts, which could divvy out inheritances based on when certain criteria are met (such as when a grandchild reaches a certain age), wills should become crystal clear and legally binding, leaving no questions as to who should receive what assets when you pass away.

16. Equity trading

At some point, blockchain could rival or replace current equity trading platforms to buy or sell stocks.

17. Managing Internet of Things networks

Networking giant Cisco Systems may be behind a blockchain-based application that would monitor Internet of Things (IoT) networks.

18. Expediting energy futures trading and compliance

Even the energy industry is getting in on the act. Similar to the benefits it could bring to equity traders above, blockchain offers the ability to help energy companies settle futures trading considerably faster than they currently do.

19. Securing access to belongings

Smart contracts within blockchain networks also have the ability to be customized to a businesses or consumers' needs.

20. Tracking prescription drugs

Finally, blockchain could be a means of transparently tracking prescription medicines. In a world where prescription returns do occur, and counterfeit medications are a real thing, blockchain offers drugmakers the ability to track their products based on serial and/or batch numbers to ensure that consumers are getting the real deal when they pick up medicine from the pharmacy (Williams, 2018).

21. Smart contracts

Smart contracts may make the negotiation process and performance of a contract easier and more efficient. One of the main features of blockchain in smart contract is enabling “trustless” transactions. This type of transaction defines as validated, monitored and bilaterally enforced transactions over a digital network. Smart contracts can incorporate multiple digital signature for necessary approval of participants. If the conditions of a smart contract depend upon real world data, systems called “oracles” can be implemented to monitor and verify this data (Adıgüzel, 2019).

22. Srupting Marketing with Blockchain Technology

Rigorous academic research on block chain applications in aid of advertising activities is scarce. Despite this, within the practitioner based literature, the benefits of block chain are regarded as indeniable. First and main, block chain era is based on peer-to-peer verbal exchange which alters market structures by way of fostering disintermediation, namely the removal of intermediaries who system and clear out facts streams and add fee. By developing immutable and shared records information, block chain era also can assist to enhance records

first-rate and facilitate data get admission to. From a consumer centric perspective, block chain technology has the capacity to notably rework consumer relationships by means of enhancing data and data transparency and enhancing privateness and safety. It also allows for progressive kinds of patron loyalty packages which might assist to create additional cost. All these capabilities could be mentioned in greater detail within the sections beneath (Raju, 2021).

Digital marketing is lever aging new channels throughout social media that provide firms with new, progressive, value-effective and influential skills to engage with customers. In turn, customers have become an fundamental part of the evolving engagement speak and are strengthening their impact at the advertising and marketing manner (Raju, 2021).

According to the global Blockchain Finance Market report published by "Value Market Research", offers evidence-based information that helps to transform clients business and achieve their business goals. Moreover, the report also highlights the key strategy of top players. Additionally, this report covers a wide spectrum of services such as the latest technology trend, market opportunity analysis, and competitive landscape (Kozanis, 2020). (Antoniadis Kontsas S., 2021) .

23. Improved Cost and Operations Efficiency

Any CFO or COO will appreciate some of the ground-floor improvements blockchain has to offer. For instance, the speed with which transactions can be carried out digitally will greatly increase the number of transactions per second, from many thousands to many millions, and each of those transactions costs a brand something. According to an Accenture report, adopting blockchain could cut infrastructure costs for investment banks by 30%. Perhaps more exciting is that blockchain removes the need for third parties to be involved in transactions, email, or other kinds of advertising. Blockchain gives brands a direct line to each customer, and budgets that used to be devoted to middlemen can now be applied to other areas (Enochs, 2021).

24. A Way to Share Awards

Blockchain automates payments by distributing rewards to customers and transferring them to their bank accounts. Money is sent to the customer's bank account gift cards are paid This is a marketing method that encourages the customer to shop Gifted rewards are transferred via blockchain.

25. Optimized Advertising Value Chain

In marketing blockchain, it becomes easy to manage 'transparent safe ads with Adtech.

Blockchain's Values

Honesty is critical in building lasting relationships with all stakeholders of the brand in a truthful manner, without lying through omission or obfuscation through complexity. Consideration refers to both parties' having good faith in business transaction by respecting to other party's interests and concerns. Accountability refers to making and honoring commitments made to stakeholders of the brand. It involves not putting the blame to others and owning it when it requires. A term closely related to accountability is traceability. Traceability, also known as provenance is the ability to identify and verify the components and chronology of events in all steps of a process chain *(* (Raju, 2021).

26. Verifying Data for Customer Intelligence

Blockchain collects database data, stores it controls. updates. Data-driven marketing is facilitated by blockchain, and it is possible to preserve information in a digital environment.

27. Targeted Content Delivery

The data is automatic. It is produced and distributed. managed.

28. Serverless Architecture

Serverless architecture allows to gain on-demand formatting of stores according to customer requests. It is a better option than traditional cloud hosting to go out. Since blockchain will enable brands to host on-demand campaigns, it allows them to earn indirectly and from zero performance gaps by going serverless.

29. Transparency and Trust

Blockchain ensures that consumers are informed at all stages of the process. It gives confidence. prevents fraud. increases speed and profits

Examples of Marketing Entrepreneurship with Blockchain RadPay implemented marketing applications using blockchain in 2020.

30. Enabling Creative Loyalty Programs

In an increasingly competitive market environment, brands strive to ensure consumers remain loyal to their products and services. To enhance consumer retention, brands have been systematically collecting and storing their customer data, primarily through loyalty programs. These tools serve to increase brand loyalty, reduce price sensitivity, encourage word of mouth, and enlarge their customer base. Moreover, customer loyalty programs may significantly benefit brands as they can generate higher sales and profits. Increasingly, marketers have implemented loyalty programs in a wide variety of industries. They continuously seek to understand which tactics are ideal for reaching consumers and which reward schemes serve them effectively (Ertemel A. V, 2018).

II Blockchain Strategies and Best Practices for Marketing

Blockchain, in marketing, which was considered hype mostly, is now going mainstream brands like Unilever, Nestle. McDonald's, and Virgin Media have signed up for blockchain to improve transparency in digital marketing. The initiative would unlock data inefficiency, fraud, and trust issues, making it the tip of the iceberg. In 2020, there are many ways in which blockchain can benefit marketing based on surveys on future directions and industry standing in 2019 (Kumar, 2021).

Whether offline or online, individuals have some degree of uncertainty when making business transaction with others. Having witnessed to previous bad experience, consumers tend to mitigate the associated risks by avoiding making business with not-acquainted counterparts. This fact greatly limits the possibility to make business over Internet because of uncertainties posed by Internet medium. Well-known brands like eBay and Amazon serve as trusted third parties that consumers can rely on. Having acquired consumers' trust, in the long run, they gain the power to lock consumers into their platforms. Because, a platform like eBay gradually accumulates one's reputation score which serves as some sort of credibility. As a result, consumers become reluctant to switch to other platforms thereby, making the platform gain power (Ertemel A. V., 2018).

There is *8 Blockchain Strategies and Best Practices for Marketing.* Blockchain technology is all set to disrupt industries such as Banking, Financial Services and Insurance (BFSI), real estate, media, retail, healthcare, and legal. Big names such as IBM, Microsoft, Oracle, Intel, Apple have already recognized the potential and started to make inroads into blockchain. With so much hype surrounding the technology, let's look at the blockchain strategies and best practices that are transforming the marketing landscape.

1 Influencer Marketing

Brands are heavily investing in celebrity and micro-influencers to spread their message to a wider audience. But influencer marketing gets a bad rep due to problems such as difficulty in tracking the ROI, lack of transparency, and fake followers and engagement. Blockchain can effectively solve this problem by introducing smart contracts in the ecosystem. Smart contacts will facilitate the payout upon the completion of specific actions or after delivering the desired

results. The technology can also be used to verify the performance and legitimacy of the influencer.

2. Affiliate Marketing

Blockchain regulates the use of money prevent waste. For example, facilitates the payment process with cryptocurrency. blockchain-centric products operate without a limit 3. transparency accountability reduces fraudsters ' scams perform reliable transactions with smart contracts

3. Loyalty Programs

Customers who believe in the quality of the product or service participate in loyalty programs, relying on their brands. An average American household 29 different loyalty **Example**: Loyalcoin, Sandblock, and KeyoCoin are some of the loyalty program solutions developed on blockchain technology.

4. Data Protection

Data protection, which is the most important responsibility of enterprises, is realized with blockchain.

5 User Awards

It is important to attract the customer's attention in marketing. For example Brave has introduced Basic Attention Token (BAT), an Ethereum-based utility token that gets distributed among publishers and consumers depending on the ads viewed.

6. Ad Fraud Prevention

Out of the 332.25 billion USD digital ad expenditure in 2019, advertisers will lose 42 billion USD due to ad frauds.

7. Blockchain-Based Social Platforms

Organizations that attract customers with social media marketing make it safe for customers to shop on social media by facilitating their business with Blockchain-based social media platforms. Platforms such as Peepeth and mastodon.social are solving the exact same problem.

8**. Social Commerce**

Along with these solutions, e-commerce has been bestowed with several other solutions. AT&T is collaborating with Microsoft and IBM to create a suite of blockchain products that includes a solution that ensures the authenticity of products.

Decentralized E-commerce marketplaces and platforms such as OpenBazaar, GAMB, Bezop, and Eligma facilitate vendors to build e-commerce stores and make them the decision makers of their online stores. About $ 6.4 billion will be spent on affiliate marketing in the U.S. alone, according to Statista. Despite such investments, brands unfortunately face problems such as dealing with suspicious affiliates, spending money on sites that bring no value, and paying heavy commissions to affiliate networks. With data breaches becoming more frequent, businesses need to prioritize protecting customer (Writer, 2021). According to Statista, approximately 6.4 billion USD will be spent in affiliate marketing in the U.S. alone. Despite such investment, brands, unfortunately, face problems such as dealing with dubious affiliates, wasting money on sites that bring no value and paying hefty commissions to affiliate networks (https://www.statista.com/statistics/693438/affiliate-marketing-spending/?zd_source=mta&zd_campaign=13337&zd_term=indrajeetdeshpande., 2021).

III How Blockchain Affects Marketing?

In 2020, blockchain is a panacea for all of the advertising worries. The ideas that were mere theory are being replaced with valid and tried solutions solving transparency, efficiency, and tackling fraud. Identity-solving applications are becoming more real. Here we list down what all blockchain has to offer to the industry:

1. A Way to Share Rewards

The distributed ledger technology automates payments at any scale, making it possible for brands to send micro-amounts to the consumers. This has massive implications as it is used to transfer money directly into bank accounts, replacing gift cards and online credit with limited redemption possibilities. This lets customers have a monetary incentive, no matter how small the interaction is.

2. Optimized Advertising Value Chain

One of the focus areas for blockchain in marketing is Adtech. Managing digital ads is a prime candidate for moving to a secure, transparent, and accountable distributed ledger.

3. Verifies Data For Customer Intelligence

Blockchain can gather, check, store, and automatically update databases with a little human intervention. This is believed to transform the customer insights' approach. Blockchain is the perfect underlying platform to generate ideas because it prioritizes data-driven marketing.

4. Targeted Content Delivery

Data can be linked to a hyper-personalized segment of insight generation rather than using automated insight generation for effective targeting.

5. Serverless Architecture

Serverless architecture is a better option than traditional cloud hosting to deal with thousands of transactions as it allows stores to scale as per customer demand. Blockchain directly enables brands to gain from zero performance gaps and indirectly by going serverless as it will enable them to host on-demand campaigns.

6. Transparency and Trust

Blockchain helps advertisers select the right publishers, quantify the results of an advertising campaign, helps build trust, and prevent fraud. This reduces cost and speeds up transactions. Consumers are aware of the entire process before the distribution of goods is visible (Sharma, 2021).

IV . Marketing and Blockchain

With the widespread use of the internet, marketers, who had the opportunity to reach consumers quickly through social media and SNS, moved marketing management from traditional management processes to digital platforms. Digital marketing has made it easier for digital companies to tackle the challenges of the competitive market. Changing the marketing mix and the way we manage marketing programs, blockchain has implemented new solutions.

Facebook is in the process of creating its own blockchain-based cryptocurrency system for use on SNS platforms. Blockchain has important implications for marketing and advertising. But according to The CMO Survey, only 8% of firms rate the use of blockchain in marketing as moderately or very important (Moorman, 2018). Although Morabito recognized that the applications of blockchain based governance are significant for marketing, there has not been a systematic recording of those potential usages As Annalect (2017) states "blockchain pulls marketing in unchartered territory", so reports on the issue are limited on websites and blogs

that refer potential fields of applications for blockchain in marketing and lists of start-ups and firms that provide solutions to marketers through blockchain platforms (Kontsas, 2020) .

First, blockchain technologies are a market in themselves. As per 25 May 2020, the price-tracking service for crypto assets Coinmarketcap listed 5500 crypto currencies with an impressive total market capitalization of USD 258 bn for this newly created market segment. Although Bitcoin dominates this market with a share of 66.5%, the increasing number of new currencies makes this market a universe that is difficult to oversee. As a common denominator, these cryptocurrencies use cryptology for accessing and storing data in distributed databases, which comprise procedures for synchronizing the distributed data in order to achieve consistency (Alt, 2020) .

Blockchain can make data-driven marketing more transparent by validating and analyzing every consumer's journey through verified ad delivery, confirming that a real person saw the ad as per the specifics of a media contract. Marketers will able to control how their assets are delivered by monitoring exactly where their ads are being placed, alleviating ad fraud from automated bots by ensuring that real followers and consumers are engaging with their ads, and ensuring proper ad engagement tracking that will lead to more precise digital attribution (Ghose, 2018).

Cryptocurrencies such as Bitcoin use blockchain-based tokens that enable users to represent and exchange value and tangible externalities without the need for centralized governance architecture to facilitate clearing and to maintain the market's integrity (Avital, 2018).

A recent study from Market Reports Center found that the global blockchain market was worth $708 million in 2017 and is expected to rise to $60.7 billion by 2024. The tech itself has been around for a decade already, and after a slow start with a detour into cryptocurrency trading, blockchain is on the verge of upending markets and industries around the globe (https://emarsys.com/learn/blog/blockchain-changing-marketing/, 2021).

According to the global Aviation Blockchain Market report published by Value Market Research, the entire aviation blockchain market has been sub-categorized into end-user, application, deployment and function.

Blockchain technology can create a more secure, and interoperable environment that is unattainable with centralized loyalty databases. The technology appeals for both B2B and B2C loyalty programs as auditability of critical transactions and data is necessary to curb fraudulent activities and support customer advocacy Through real-time access to the blockchain platform, marketers can gain visibility over members' profiles, points, purchase patterns, payment history, and promotion responses, which will help them to craft more attractive,

valuable, and customized loyalty programs. For example, American Express has integrated the Hyperledger blockchain to provide reward points to members based on individual products, instead of the spending behavior at a particular merchant Besides, the decentralized nature of blockchain technology also allows members to track their loyalty and reward points, freeing them and marketers from the physical possession of coupons. Additionally, the technology can help to create more value for members by enabling them to trade and exchange their loyalty points (Raju, 2021).

V Erosion of Trust to Marketers

Recent research pinpoint that trust to marketers is at all time low level. The steady decline on the level of trust to marketers has come to such a point that only less than 20 percent of consumers have considerable or high level of trust to brands. Likewise, C-level executives are found to be the least credible information sources. In the pre-blockchain world, trust in transactions derived from individuals, intermediaries, or other organizations acting with integrity. Let alone integrity, in online commerce, we can't even know who our counterparties are. Therefore, intermediaries that undertake the functions such as maintaining records, performing transaction logic to empower online commerce. Visa, PayPal, eBay and Google are examples to such intermediaries, which harvest much of the value (Ertemel A. V., December).

The global blockchain technology market size was valued at USD 3.67 billion in 2020. It is expected to expand at a compound annual growth rate (CAGR) of 82.4% from 2021 to 2028. The market players are focused on partnerships, product innovation, research and development, and geographical expansion to strengthen their market positions. For instance, in March 2019, Circle Internet Financial Limited completed the acquisition of seed. Invest, is an equity crowd funding platform. The acquisition was aimed at delivering a token marketplace that would allow individuals and businesses to raise capital and interact with investors through the open crypto infrastructure.

The market players are also focused on enhancing their product offerings to better cater to the changing needs of users and stay competitive. For instance, in July 2016, IBM Corporation announced the launch of a cloud solution for blockchain networks. This cloud solution ensured the security of asset transactions against theft, counterfeiting, and other threats. Some of the prominent players operating in the blockchain technology market are:

- IBM Corporation

- Microsoft Corporation
- Linux Foundation
- BTL Group Ltd.
- Chain, Inc.
- Circle Internet Financial Limited
- Deloitte Touche Tohmatsu Limited
- Digital Asset Holdings, LLC
- Global Arena Holding, Inc. (GAHI)
- Monax
- Ripple

Table 3 .Blockchain Technology Market Report Scope

Report Attribute	Details
Market size value in 2021	USD 5.88 billion
Revenue forecast in 2028	USD 394.60 billion
Growth rate	CAGR of 82.4% from 2021 to 2028
Base year of estimation	2020
Historical data	2016 – 2019
Forecast period	2021 – 2028
Quantitative units	Revenue in USD million and CAGR from 2021 to 2028
Report coverage	Revenue forecast, company ranking, competitive landscape, growth factors, and trends
Segments covered	Type, component, application, enterprise size, end-use, region
Regional scope	North America; Europe; Asia Pacific; South America; Middle East & Africa
Country scope	U.S.; Canada; Mexico; France; Germany; U.K.; China; Australia; India; Japan; Brazil; UAE; Saudi Arabia

Key companies profiled	IBM Corporation; Microsoft Corporation; Linux Foundation; BTL Group Ltd.; Chain, Inc.; Circle Internet Financial Limited; Deloitte Touche Tohmatsu Limited; Digital Asset Holdings, LLC; Global Arena Holding, Inc. (GAHI); Monax; and Ripple.
Customization scope	Free report customization (equivalent to up to 8 analysts working days) with purchase. Addition or alteration to country, regional, and segment scope
Pricing and purchase options	Avail customized purchase options to meet your exact research needs. Explore purchase options (Blockchain Technology Market Size, 2021)

VI . Empowering Digital Marketing Security

Kalakota and Whinston(1997) define a security threat as a "circumstance, condition, or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosure, modification of data, denial of service and/or fraud, waste and abuse". Information security can be viewed as the heart of information systems, both at the technological and organizational levels . This implies that ensuring a high level of preventative measures and transaction security is a crucial differentiator for many businesses. In the digital world, the delivery of products and services with well-communicated and adequate security is acrucial success factor for brand trust. Similarly, information security is turning into a must-have feature as brands become the stewards of consumers' PII (Madhavaram et al., 2005). This development is referred to by Greenlow (2018) as "Marketing security" which is the real-time control and management of consumers' PII to prevent data leak ages and abuses. Previous research has shown that information security concerns are a significant barrier to online marketing (Sathye,1999; Udo, 2001). This is because online shopping and e-commerce are based on individuals' credentials and sensitive information such as home address and credit card details (collectively PII), much of which consumers are very reluctant to provide. The reason for this negative perception is the multitude of potential online threats, which involves data loss or theft, identity theft, credit card information theft, content manipulation, unauthorized account access, database attacks, patent and copyright violations. In the online marketing context, Internet banking still faces security threats through data transaction and transmission attacks or unauthorized uses of bank cards enabled through false authentication Moreover, the application of behavioral targeting (Beales, 2010) requires the need for cookies

that are susceptible to cloning or misappropriation by a malicious party. A cookies-based approach and weblog records for tracking shoppers online activities might compromise e-consumers' privacy . The many security threats are now so prevalent that by 2021 the costs of cybercrimes are expected to reach $6 trillion annually (Abderahman Rejeb, How Blockchain Technology Can Benefit Marketing: Six Pending Research Areas, 2020)

VII . We Don't Need Cookies Anymore to Know Who You Are

Cookies have been around for over 20 years and are still the primary way brands can track traffic and behavior on their websites. While cookies are good for this kind of data collection, they do expire, making them a temporary tool. A bigger problem is that cookies only gather the data of a customer when she is on that brand's website. The strength of blockchain's security is in large part due to its decentralized data storage structure and is exactly why blockchain has played such a big role with cryptocurrencies. To hack into the data, one would have to hack into every place where the data is kept (Enochs, 2021).

Blockchain's decentralization not only makes it harder to crack an individual account, but it also makes it much harder to bring down an entire network.

VIII . MARKET DYNAMICS

The aviation blockchain market is still in its infancy. Growing awareness about blockchain technology; that can benefit the aviation industry will drive market growth. The blockchain technology for aviation comes with huge promises. Aerospace businesses could benefit from sharing data about aircraft history, maintenance, and operations. Blockchain technology showcases great opportunities for securing and managing data. The airline industry may shortly consider implementing blockchain to its advantage, which will ultimately help in increasing efficiency and accuracy levels. Blockchain can be useful in tracking baggage and cargo, identity verification, ticket overbooking, aircraft maintenance, automated payments, and loyalty programs. The report Covers Porter's Five Forces Model, Market Attractiveness Analysis and Value Chain analysis. These tools help to get a clear picture of the industry's structure and evaluate the competition attractiveness at a global level.

Additionally, these tools also give inclusive assessment of each application/product segment in the global market of aviation blockchain. ipating nodes. (Nalawade D. , Aviation Blockchain Market Size Forecast Report to 2026, 2020).

In recent years, the issue of blockchain has been focused on, while brands have been thinking about how the revenue generated in advertising and marketing is spent.

In digital marketing, high speed of data from 4 Big Data (such as Volume, Speed, Diversity and Accuracy) ensures customer satisfaction on mobile devices.

Blockchain technology comes as a solution in the field of marketing related to data in the icon of high diversity data accuracy and reliability transparency. Marketing and advertising fraud will cost the publishers a significant amount of money obtained. Co-Creation and Monetization of Value by Customers Traditionally, when new businesses start to gain traction in a two-sided market, they face a challenge achieving network effects. In network effects, as the number of nodes increase, the total value of the network increases as in the case of email, Whatsapp, Skype etc. However, reaching the critical mass is fairly difficult, hence building an enormous barrier to new entrants. For instance, when the number of sellers is relatively low, buyers become reluctant to use the network and vice versa. 3.4.1. Network Ownership Effect Blockchain technology has the potential to democratize starting a new business by coining a new concept, network ownership effects also known as token network effects (Ertemel A. V., Implıcatıons Of Blockchaın Technology On Marketıng, 2018)

Blockchain can make data-driven marketing more transparent by validating and analyzing every consumer's journey through verified ad delivery, confirming that a real person saw the ad as per the specifics of a media contract. Marketers will able to control how their assets are delivered by monitoring exactly where their ads are being placed, alleviating ad fraud from automated bots by ensuring that real followers and consumers are engaging with their ads, and ensuring proper ad engagement tracking that will lead to more precise digital attribution.

The science of story telling and brand performance. Another fundamental pain point in the mobile economy is experienced by consumers. Companies are overwhelming their customers with too many ads, emails, coupons, and messages. The reason they send out a dozen different messages is that they don't know much about consumer preferences, as astonishing as that might seem in todays' data intensive economy. The current practice is often akin to throwing a dozen darts in the air and hoping one will hit the bullseye. A survey of brand and agency marketers revealed that 94% of marketers don't have a single view about their consumers that could have facilitated cross-platform continuity. Therefore, there's a disconnect between consumers and marketers with respect to what people want, when they want it, where they want it, and how they want it. This problem manifests itself when you see that same display ad for a hotel following you from one website to another, even though you already made a booking

for that hotel two days ago. Blockchain technology can prevent the same display ad from being over-served to anyone, ensuring the optimal frequency of ad serving for each consumer. A smart contract on blockchain can fix this by providing a level of tracking and transparency that is currently not available to brands (Ghose, What Blockchain Could Mean for Marketing, 2020).

The advent of blockchain technology offers tremendous potential for mitigating such consumer concerns by giving consumers a transparent look at how their data has been used by marketers and advertisers. This will likely give rise to markets for consumer data that will not only give users a transparent look at how their data has been used by advertisers, but will also give them more control over how their data should be used. It also has the potential to allow newer ad tech vendors, such as telecom providers like Verizon and AT&T, a credible chance to compete against the likes of Facebook and Amazon. The key roadblock that needs to be fixed is the speed of transactions. Because of its distributed nature, where transactions are verified by "miners" around the world, blockchain generally takes between 10–30 seconds to validate transactions.

Forrester reported that 56% of all display ad dollars were lost by fake inventory in 2016. And globally, the cost of ad fraud is expected to rise to $ 50 billion over the next decade. A recent study of the state of programmatic advertising found that 79% of advertisers surveyed expressed concerns about transparency, with over a third of them being a key concern of third-party visibility (https://www.marketingmuses.com/what-blockchain-could-mean-for-marketing/, 2020).

It is stated that Blockchain will replace search engines such as Google, yandex yahoo, which act as an intermediary in digital marketing today.

Google, which is preferred because it is safe and will attract more customers commercially, earns income by advertising a website. A company that owns every website clicked charges Google for each click. With Blockchain, there will be no need for brokerage houses. In other words, thanks to Blockchain, the profit in advertising and marketing will increase and the costs will decrease. Blockchain ensures transparency and security to the customer. Most of the marketing strategies are provided by blockchain.

Blockchain provides corporate responsibility with digital contracts, making these contracts visible to the public. Increases customer satisfaction in marketing due to its transparency of documentation.

Drives Public Accountability

Corporate social responsibility (CSR) is another murky term. The transparency and documentation of blockchain can be used to create digitized contracts which the public can view, and use to hold companies accountable. Blockchain stores information about the consumer's consumption habits.

Singapore-based Aqilliz has been using blockchain in marketing by focusing on adtech. Advertisers earn income from their advertisements. uses blockchain application for ads, fraud detection and consumer targeted advertising.

Hysteria aside, companies are exploring how best to leverage blockchain. For example, brands are exploring whether blockchain can help solve some serious challenges with transparency in marketing and advertising. Numerous brands are seeing what blockchain can do – here are four prime examples. Asian airline Cathay Pacific and its rewards program, Asia Miles, have teamed up with Accenture to launch their first application of blockchain technology. The airline will issue air miles to customers over a single distributed ledger, allowing customers, airline partners, and the airline itself to manage member rewards in real-time. Air Asia has announced that it will migrate its rewards program to a new cryptocurrency called "BigCoin." The firm may also hold an initial coin offering (ICO) to fund the development of a new financial services division. Ad agency Havas is making significant moves in the blockchain market. In March the company announced the launch of Havas Blockchain, an integrated communications offering designed to support blockchain tech businesses and entrepreneurs. Havas Blockchain is initially focused on supporting ICOs, an area of significant investment over recent months. However, typical communications support is also offered to blockchain startups. And as a display of further blockchain ambition, Havas collaborated with TD Ameritrade to create the first ad placement on the bitcoin blockchain. In March 2017, IBM launched its Blockchain-as-a-Service (BaaS) solution and has long been involved in a range of trials in several different industries. E, Marketer recently reported that, in 2017, around 55 percent of client budgets allocated for programmatic ad spend went toward paying the ad tech supply chain, one that is crowded with a large number of players, many that add very little value to transactions. This may explain why the 500 largest publishers in the U.S. cut their supply-side platforms (SSPs) by 20 percent in 2017. Meanwhile, Unilever is working with IBM Blockchain and IBM iX, IBM's business consultancy arm, on a

blockchain solution for media buying that aims to improve efficiency and transparency across the digital media supply chain and ad trading processes. In March 2017, Nasdaq announced the launch of NYIAX (New York Interactive Advertising Exchange), the world's first guaranteed advertising contract exchange. The central idea behind mesmr is that content creators upload their creative work into channels and then buy and sell value around that content (O'Leary, 2020).

In addition to the convenience that blockchain provides in marketing, there are also some issues that companies should pay attention to. a few of them are: Currently, firms do not have clarity over the laws and regulations that will apply to DLT implementations in cases of fraud, bankruptcy, and other failure scenarios. This is especially a problem for firms that operate in multiple jurisdictions. While the reduced reliance on a central authority and the fact that copies of the ledger are stored in more than one place ameliorate the single point of failure problem present in many legacy systems, blockchain's distributed nature also creates security concerns. The more participants in the network, the more points of attack there are for cybercriminals to target. If cybercriminals are able to steal the information of a user necessary to submit a trade, they could create fraudulent, and immutable, transactions. The use of a blockchain for title transfers could drastically reduce the risk associated with current settlement conventions, but it will increase the importance of liquidity; funds and assets must be in proper form and location for such expedited settlement. Blockchain's potential impact on the confidentiality and speed of information transfer about record changes may also be of concern to some users. For example, in finance, the acquisition and analysis of data are key to a firm's competitive advantage. Some firms may be reluctant to participate in a shared database in case of information leakage that could cost the firm's business. Blockchain technology may be subject to legal challenges and costs that could impede innovation. Industry participants involved in blockchain research are increasingly patenting blockchain-related technologies; the number of blockchain-related patents filed doubled between January and November 2016.7 The patents could make firms working with blockchain technologies vulnerable to legal challenges and prevent new firms from entering the market. There is currently uncertainty over rules across various regulatory agencies. Existing regulations may be major hurdles for DLTs. To enable innovation, regulatory agencies should work alongside DLT firms as they test new products and services. Central banks will have to find ways to maintain control over digitized currencies. If central banks were to allow commercial banks to place money in special accounts and then

digitize the money on the bank's blockchain, regulators would need a mechanism for overseeing its use and ensuring that the digital currency issued did not exceed the amount held as central bank reserves (Rebecca Lewis, 2021).

CONCLUSION

Blockchain ensures data security and transparency, enables us to manage data. Companies need qualified manpower on blockchain. This manpower will form the marketing platform of the future and facilitate the work of many companies in international trade. After this technology is combined with artificial intelligence, many needs that the customer dreams in digital marketing will be produced and distributed to the customer in a unique way.

After Covid 19, the use of alternative digital money that can replace the world money gained momentum. Blockchain, which has many different functions of being a digital money payment method, performs multiple times by forcing human intelligence. When the customer makes payments in distributed ledgers, it can be distributed to blockchain security with transparency, storage together. Blockchain, which is a supportive application in every link of the supply chain such as health, education, service, product production distribution, with a transparent and honest marketing approach, is continuously developed as a highly effective and efficient application in the field of marketing. While training qualified personnel in international trade, the employment of qualified personnel who have a command of blockchain technology has become a problem for international companies. With the rapid participation of Artificial Intelligence in international trade and logistics, the professions and the qualifications of the sought-after personnel have changed. For this reason, it is important to employ manpower trained in blockchain in international trade at universities. Since banking transactions and foreign trade payments are carried out with blockchain transactions in America and Europe, qualified manpower is required in this field. In the beginning, however foreign marketing was to us, Blockchain seems very foreign to us. However, marketing methods in international trade are developing rapidly. Thanks to blockchain, consumers can learn the answers to the questions of the procurement process. Companies demonstrate their transparent management approach with Blockchain. Where the product is produced or grown, how many workers will be paid whether it is organic or not. Consumers will be able to follow the business processes of the company. Unilever and IBM, the advertising blockchain, have made millions of dollars by minimizing advertising spending. Blockchain is reimagining the digital market

While the security of the data you provide in digital shopping is in danger, the new technology Blockstack, "as a new type of network, protects the data of the consumers. It is not possible with Blockstack to pass the data that customers fear from e-commerce to third parties.

n 2020, blockchain brings in banking advertising, digital marketing, e-commerce, transparency can be communicated through chats with fraud. Distributed ledger technology enables brands to send micro-volumes to consumers. Transferring money directly to bank accounts, blockchain in marketing manages digital ads securely, transparently and accountably with Adtech. Blockchain is the perfect base platform for generating ideas to prioritize data-driven marketing, collecting, controlling, storing the database with little human intervention. Instead of using automated insight generation for effective targeting, the goal can be linked to a hyper-personalized insight generation segment. Serverless architecture, blockchain enables brands to earn from zero performance gaps and indirectly, as it will allow brands to make a comeback to the champagne. Blockchain helps advertisers choose the right publishers, measure the results of an advertising campaign, build trust and prevent fraud. This lowers the drop and speeds it up. Consumers are aware of the entire process before the distribution of the goods becomes visible. Blockchain mainstream in 2020. It has a wide range of marketing applications including shopping cart abandonment, revenue generation, and unlimited business. Blockchain can securely manage and record, execute reliable transactions, increase automation and reliability, enable data flows between partners.

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