



## BLOCKCHAIN TECHNOLOGY AND CRYPTO ASSETS: CURRENT LEGAL POSITION IN INDIA

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### INTRODUCTION TO BLOCKCHAIN TECHNOLOGY

In layman terms, Blockchain is a chain of blocks that contains information. It was originally described in 1991 by Stuart Haber and W. Scott Stornetta who worked to build a cryptographically secured chain of blocks that was originally intended to timestamp digital documents so that it is not possible to tamper with them. However, it is in 2008 that the Blockchain History started to gain relevance when this unused concept was adapted by Satoshi Nakamoto (the name used by pseudonymous person or persons) who developed bitcoin, authored the bitcoin white paper, and created and deployed bitcoin's original reference implementation. However, the identity of Nakamoto has remained a secret and one of the internet's most tantalizing mystery.

Unlike the centralized fiat currency payment systems which were necessary to keep a track of spending and prevent double-spending of the same unit of currency, the technology behind the bitcoin was to distribute the ledger containing all the information among each

user in the network. This is the reason it is also called 'distributed ledger technology'.

It is in its early stage just like the internet was in the 90s and is indisputably capable of being as big as the internet. It isn't the used case of the internet rather it is as fundamental and parallel to the internet. It possesses the potential to revamp currently existing processes to unlock new sources of efficiency and value. It is capable of revolutionizing interactions between governments, businesses, and citizens in a manner that was unfathomable just a decade ago.

Given the scale, diversity, and complexity of processes involved in the delivery of varied public services, the governance in India faces multiple and unique challenges. Thus, Blockchain Technology offers unique possibilities for addressing issues relating to improving governance.<sup>1</sup>

Andhra Pradesh is the first state in the country to introduce blockchain in land records and is also setting up a Blockchain Centre of Excellence to set up India's first Blockchain state. Other states like Maharashtra, Karnataka, Kerala, and Rajasthan are also following the lead.<sup>2</sup> Most of the Financial Institutions, Tech giants, and MNCs have also started exploring its application not only in India but all across the world.<sup>3</sup>

<sup>1</sup> Arnab Kumar, Tanay Mahindru, Punit Shukla and Aalekh Sharan, NITI Aayog, Blockchain: The India Strategy Part I, (May 15, 2020, 10:00 AM) [https://niti.gov.in/sites/default/files/2020-01/Blockchain\\_The\\_India\\_Strategy\\_Part\\_I.pdf](https://niti.gov.in/sites/default/files/2020-01/Blockchain_The_India_Strategy_Part_I.pdf)

<sup>2</sup> E Venkatesan, Challenges in adopting and implementing Blockchain in the Indian market, (May 8, 2020, 03:05PM)

<https://yourstory.com/2020/01/blockchain-technology-cryptocurrency-indian-market>

<sup>3</sup> Nishith Desai Associates, Building a Successful Blockchain Ecosystem for India, (May 10, 2020), [http://www.nishithdesai.com/fileadmin/user\\_upload/pdfs/Research\\_Papers/Building-a-Successful-Blockchain-Ecosystem-for-India.pdf](http://www.nishithdesai.com/fileadmin/user_upload/pdfs/Research_Papers/Building-a-Successful-Blockchain-Ecosystem-for-India.pdf)



## MODUS OPERANDI OF THE BLOCKCHAIN

To comprehend the applicability and legal implications of blockchain technology it is important to understand how it works. It is a ledger of transactions i.e. a diary which is almost impossible to forge. Unlike physical ledger which is typically maintained by a centralized authority, blockchain technology is a distributed ledger that resides on each participant's device.<sup>4</sup>

Each block contains some sort of information(data), the hash of the block, and the hash of the previous block. Data stored inside depends on the type of blockchain for example Bitcoin contains the details about the transaction.<sup>5</sup> The hash is the fingerprint of the block as it identifies the block and all of its contents and is always unique. Once a block is created, its hash is being calculated therefore a change in something inside the block will cause the hash to change. The hash of the previous block effectively creates a chain of blocks and it is this technique that makes it so secure.<sup>6</sup>

So, a change in a single block will make all the following blocks invalid. But using hashes is not enough to prevent tampering since computers these days are highly fast which can calculate thousands of hashes per second so you could effectively tamper with a block and recalculate all the hashes of other blocks to make your bitcoin valid again so to mitigate this, blockchains have something called proof-of-work. It is a mechanism that

slows the creation of new blocks. In case of bitcoins it takes about ten minutes to calculate the required proof-of-work and add a new block to the chain, this mechanism makes it very hard to tamper with the blocks because if you tamper with one block you need to recalculate the proof-of-work for all the following blocks so the security of a blockchain comes from its creative use of hashing and the proof-of-work mechanism. But there are more ways by which blockchain secure themselves and that is by being distributed instead of using a central entity to manage chain it uses a peer to peer network and everyone is allowed to join. The ledger copy of each individual is updated on the completion of a transaction or a set of transactions. The device of each participant is referred to as a 'node', which is a part of the network of nodes. It is unique because every node must authenticate every transaction in the network. This is why when a new node joins the network, the entire record of transactions is downloaded onto its system.

## APPLICABILITY ACROSS THE INDUSTRIES

Most of the institutions offering financial services have been involved in exploring Blockchain technology in some or the other way and many other industries have also started to realize its potential as well as the new opportunities that it can create. Although cryptocurrency is the first application of Blockchain technology, it is not the only one.

<sup>5</sup> Jonathan B. Turpin , Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework , (May 11, 2020, 04:10PM),

<https://www.jstor.org/stable/10.2979/indjglolegstu.21.1.335>

<sup>6</sup> Nishith Desai Associates, The Blockchain, (May 13, 2020, 11:05 PM), [http://www.nishithdesai.com/fileadmin/user\\_upload/pdfs/Research%20Papers/The\\_Blockchain.pdf](http://www.nishithdesai.com/fileadmin/user_upload/pdfs/Research%20Papers/The_Blockchain.pdf)



Some of its possible applications are:

- ❖ Financial Services/Fintech: The banking industry is a huge potential market and has been investing in blockchain to simplify its record-keeping for payments.
- ❖ Telecom Industry: The TRAI in July 2018 notified the TCCPR Regulations which mandates the usage of DLT by telecom operators to solve the problem of unsolicited commercial communications.
- ❖ Smart Contracts: They are digital and self-executable contracts i.e. when certain conditions in the code of the contract are met, they automatically get deployed.
- ❖ Real Estate and Government Services: Time consuming and bureaucratic real estate transactions can be revamped by removing the need of middlemen, disrupting existing ID verification processes, reduce the risk of fraud and track regulatory compliance by the property.
- ❖ Intellectual Property: Blockchain for registration of IP will help the original owner to get clear copyrights. Once registered online, the work will be evidence and tamper-proof. The owner will have overall authority over ownership and distribution.
- ❖ Government Elections: The current manual system of voting possesses chances of fraud and security breaches hence, automating the entire process will provide a modern system through which these issues can be eliminated.
- ❖ Identity Management: The DLT used in blockchain offers advanced methods of public-private encryption through which identity can be proved and digitized.
- ❖ Supply Chain Management: Registering trades on a blockchain offers a way to check the history of a product. By feeding data on a blockchain it could be possible to have a transparent tracking mechanism and the risk in the supply chain is minimized.

- ❖ Healthcare: With this technology medical history of the patients could be controlled and securely stored.

### **BREAKTHROUGH TECHNOLOGY BEHIND THE BLOCKCHAIN: IS THE HYPE JUSTIFIED?**

Though the Blockchain technology remains the breakthrough of the internet, it may not be suitable for every situation as per the unnecessary hype. The core attribute of the blockchain is that it is a decentralized ledger i.e. a system of distributed account books which are recorded at different locations and synchronized continuously. This enables secure and transparent changes in the ledger without the need to trust a single centralized entity. Another characteristic of blockchain that may be a bit problematic is the character of immutability. This means that once a transaction is processed, it cannot be reversed, this results in a difficulty in reversing fraudulent and faulty transactions. This connotes that the blockchain should be used for very particular kind of transactions. One example of such transaction can be a situation where there is a multiplicity of parties and there is a lack of trust between parties like a global market which doesn't have a trusted intermediary. Such a network can use the blockchain technology for secure and transparent transaction without the need of a trust factor. It is also very useful in situation where there is no regulatory framework for the protection of transactions. Transaction or operation time is also an issue with the technology as bitcoin has seen an average transaction time ranging from as little as eight minutes to as many as eight days. Its transparency is also a facet that can function as a double-edged dagger. In some blockchain entities such as bitcoin, every



transaction that is made on the network is made available publicly. But from a consumer's perspective there is a loss of financial privacy and from a commercial perspective a business may not be willing to share some information as it may lead to disclosure of its trading strategies. However, a few computer science researchers have criticized blockchain technology to be just shared databases and nothing else and once the decentralized element is removed, the technology remains the same as the ones found in 1991. Therefore the hype regarding blockchain may be highly overvalued and due to this reason, during the implementation of this technology to any sector, points like the requirement of a decentralized, trustless and disintermediated system should be kept in mind or else other existing technology can better serve the same purpose and the extended cost of implementation of a new type of technology can be saved.

### LEGALITY OF BLOCKCHAIN AND CRYPTOCURRENCY IN INDIA: A BRIEF TIMELINE

With the rise in demand and popularity all over the world, multiple cryptocurrency exchanges had started to function in India between 2012 to 2017. With the prices booming and the widespread popularity all over the world, regulators started taking notice of this new technology. In India the RBI issued a press release<sup>7</sup> on December 24<sup>th</sup>, 2013 cautioning the users, holders and traders of Virtual Currencies (VCs), including Bitcoins, about the potential, financial, operational, legal, customer protection and security related risks that they are exposing

themselves to. However, the actual purchasing and market rise of the cryptocurrency truly arose after the demonetization of the high-value currency notes on 8<sup>th</sup> November 2016, with the government's focus towards online payment alternatives. This forced the RBI to release another press release<sup>8</sup> on February 1<sup>st</sup>, 2017 recapitulating its concerns raised in the earlier press release.

⇒ On March 15<sup>th</sup> 2017, the then Finance Minister Arun Jaitley announced the formation of an interdisciplinary committee under the chairmanship of Dinesh Sharma, Special Secretary, Department of Economic Affairs (DEA) to look into the legitimacy of virtual currencies. While it is believed that the panel has submitted its report but the government did not make its recommendations public.

⇒ On October and November 2017, two PILs were filed in the Supreme Court of India, one by Siddharth Dalmia a Law student from JGLS along with his father Vijay Pal Dalmia a Supreme Court Advocate, and the other one by Dwaipayyan Bhowmick, the former PIL questioning the legality of Bitcoin and other cryptocurrencies and the latter seeking a regulatory framework for it.

⇒ On November 2017, the government of India constituted an Inter-ministerial committee under the chairmanship of Shri Subhash Chandra Garg, to examine policy and legal framework governing virtual currencies.

⇒ On December 2017, both the RBI<sup>9</sup> and the Ministry of Finance<sup>10</sup> issued a press release warning general public against the possible

<sup>7</sup> Press Release: 2013-14/1261

<sup>8</sup> Press Release: 2016-17/2054

<sup>9</sup> Press Release: 2017-2018/1530

<sup>10</sup> Release ID: 1514568, Posted On: 29 DEC 2017 9:55AM by PIB Delhi



dangers and the risks associated with it, wherein the Ministry of Finance compared the cryptocurrency to Ponzi schemes.

⇒ On February 2018, the then Finance Minister Arun Jaitley, in his budget speech<sup>11</sup> stated that the government is willing to do everything to discontinue the use of bitcoin and other virtual currencies in India for illegal uses. He reiterated that India does not recognize them as a legal tender and will instead encourage blockchain technology in existing payment systems.

⇒ On April 6<sup>th</sup>, 2018, the RBI via a circular<sup>12</sup> prevented Commercial and Co-operative Banks, Payment Banks, Small Finance Banks, NBFCs and Payment System Providers, not only from dealing in virtual currencies themselves but also directing them to stop providing services to all the entities which deal with virtual currency. As a result of this, the cryptocurrency exchanges, that depended on normal banking channels for transfers could not access any banking services within India. This affected their business operations since converting cash to cryptocurrency or vice versa was an important part of their operation. As a result of such an existential threat, several exchanges who were members of the Internet and Mobile Association of India (IMAI), filed a writ petition in the Supreme Court of India on May 15<sup>th</sup>, 2018, titled Internet and

Mobile Association of India vs. Reserve Bank of India<sup>13</sup>.

⇒ On April 18<sup>th</sup>, 2019, the RBI issued a draft framework<sup>14</sup> for regulatory sandbox inviting innovative fintech product and services, including blockchain and smart contract applications and explicitly excluding cryptocurrency.

⇒ On July 22<sup>nd</sup> 2019, the Inter-ministerial committee formed in November 2017 published its report<sup>15</sup> and the Draft Bill: 'Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019'.<sup>16</sup> It has recommended a blanket ban on all kinds of private cryptocurrencies beside a fine up to ₹ 25 Crore and imprisonment of as much as 10 years for anyone dealing with it. It also backed the use of blockchain in selected areas. However, the committee wants the RBI and the government to look at the introduction of an official digital currency.

⇒ On August 2019 the Supreme Court directs the RBI to reply to the petitioners' May 30, 2019 Representation.

Finally, on March 4<sup>th</sup> 2020, the legality battle fought in the court for nearly two years resulted in what would be counted as a historical verdict, the Supreme Court of India lifted the blanket ban on all virtual currency including Bitcoin. The verdict also deemed the RBI circular issued on April 6<sup>th</sup> 2018 as unconstitutional. This means that the position

<sup>11</sup> Para 112, Page 20, <https://www.indiabudget.gov.in/budget2018-2019/ub2018-19/bs/bs.pdf>

<sup>12</sup> RBI/2017-2018/154DBR.No.BP.BC.104/08.13.102/2017-18

<sup>13</sup> Internet and Mobile Association of India vs. Reserve Bank of India (04.03.2020 - SC): MANU/SC/0264/2020

<sup>14</sup> Press Release : 2018-2019/2485

<sup>15</sup>[https://www.prsindia.org/sites/default/files/bill\\_files/Report%20of%20the%20Inter-Ministerial%20Committee%20on%20Virtual%20Currencies.pdf](https://www.prsindia.org/sites/default/files/bill_files/Report%20of%20the%20Inter-Ministerial%20Committee%20on%20Virtual%20Currencies.pdf)

<sup>16</sup>[https://www.prsindia.org/sites/default/files/bill\\_files/Draft%20Banning%20of%20Cryptocurrency%20%26%20Regulation%20of%20Official%20Digital%20Currency%20Bill%202019.pdf](https://www.prsindia.org/sites/default/files/bill_files/Draft%20Banning%20of%20Cryptocurrency%20%26%20Regulation%20of%20Official%20Digital%20Currency%20Bill%202019.pdf)



prior to the imposing of ring fencing and banking restriction by the RBI shall be put back again and crypto-assets shall regain access to banking in India.

However, this verdict remains only an interim relief as it does not impact activities on the policy level. It exclusively addresses only the circular by the Reserve Bank of India. The Court apparently gave the verdict in favor of the cryptocurrency industry as it operates in the grey legal area. This means that the judgment would not hold if there is an anti-crypto regulation in place and there might be re-thinking on the issue by our legislators. In other words, the draft bill could still be discussed and passed in the Indian parliament, despite the verdict by the Supreme Court.

## CONCLUSION

In the light of above analysis, it can be inferred that although centralization brings with itself efficiency and accountability; while decentralization is useful in cases where there is a multiplicity of parties who wish to transact with each other and do not have a trust factor or regulatory authority. This makes cross-border transactions between multiple untrusted parties suitable. This is the reason why the Bitcoin network has gained such a hype in the market.

Like any new technology or business model, the blockchain technology brings along with its rewards, a swarm of legal, strategic, and operational challenges. While a plethora of emerging cryptocurrencies such as Bitcoin is posing challenges to the efforts to combat money laundering and other illegal activities. But what makes them appealing also makes them extremely dangerous as they may be used to trade in illegal drugs, firearms,

hacking tools, body trafficking, and toxic chemicals. On the other hand, the fundamental technology behind blockchain will most likely transform finance by making transactions fast and safe. Hence, from a futuristic approach, emerging technologies in any sector should be regulated and not banned, since banning is likely to be disadvantageous and may also lead to legal maladies.

An outright blanket ban on the ownership or trading of virtual currencies would affect the rights to trade, privacy and liberty, and to be free from excessive and arbitrary State action, as well as the right to property. Any restriction on the fundamental rights is required to be proportional and rational. Alternatively, less restrictive measures are available and misuse by a few should not warrant an extensive measure which intrudes on the rights of everyone. This is proved by the approach of other countries like Australia, Canada, the E.U., Japan, Singapore, South Korea, the U.S., and the U.K. These countries have opted against any kind of ban, and have instead intended to curb the risks associated with it. Thus, an extensive prohibition depriving the entire population to access a legitimate technological and financial opportunity, and leaving millions of people trapped with a 'dead asset', based on the threat of ill-use by some, is likely to be found inconsistent with the law. A prohibition may, therefore, face multiple constitutional challenges in the coming future. Thus, regulatory frameworks need to ensure customer protection and financial integrity while still supporting efficacy and innovation.

Therefore, in my view, a balanced regulatory approach should be taken to promote various benefits of the technology and mitigate the



risks. As banning crypto-asset exchanges from the financial system will show side effects on the blockchain ecosystem. For instance, the absence of any clear definition of the term ‘Virtual Currency’ could impact any blockchain-based platform. Hence, the only feasible governmental stance should be a balanced regulation and not any form of prohibition, and the government should not consider a prohibition but recommend a detailed regulatory plan so that consumer interests can be protected while innovation and trade continue.

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