

INTRODUCTION

The past two decades have seen a surge in the rate of technological advancement, and the practice of law has certainly not been stranger to these developments. The smart contract is one of the most important developments in recent times. A computer programme executes such agreements on behalf of both parties. These are electronically encoded agreements that carry out their terms automatically. In order to create a smooth and trouble-free experience, these contracts utilise block chain to assure the due execution and execution of contracts digitally. Smart contract is defined as an agreement whose fulfilment is handled in an automated fashion, typically by computers. These types of contracts are written to ensure performance without relying on the judicial system in any way. They are frequently referred to as a specialized protocol that has the purpose of either contributing to, verifying, or implementing the negotiation or performance of a contract in a way that is both traceable and irreversible, without the involvement of any third parties. Smart contracts are described as "computerized transaction protocols that execute the terms of a contract" this definition has been given by Nick Szabo who is often regarded as the first person who defined smart contracts.¹

One of the most clear and simple illustrations of a smart contract is a vending machine that sells cans of fruit juice. If the vending machine is functioning normally after it is opened and money is placed inside, it will generate a contract to sell the item finalised at the conclusion of the transaction.² the above example of a smart contract is where there is no requirement for a hardcopy of the written contract; the only requirement is the fulfilment of certain predetermined conditions; and once these conditions are fulfilled, a computer programme will automatically complete the contract. The most contentious facet of smart contracts, is whether or not they are a contract. As a result of the fact that there are particular aspects of a

¹ STA Law Firm, "The Enforceability of Smart Contracts in India", "Mondaq (December 13, 2019)

² Alok Vajpeyi and Gauri Bharti, "India: Smart Contracts: a Boon or a Bane?", Mondaq (December 3, 2019).

contract that have to be satisfied in order for it to be considered a valid contract. As of yet, there is no legislation in India that deals with smart contracts.

The main reason that has been the key reason for selecting this topic is TECHNOLOGY. We are surrounded by technology and often it has been seen people show reluctance in adopting to new technologies. So, the author in this paper will explain the functioning and also the legal validity of the Smart Contracts. Every Field is adopting to new technologies as it reduces chances of human error and is more efficient, law being a field which is dominated by humans we need new technologies to reduce human labour also it would be more efficient and less time taking.

The study expects to investigate the key areas throughout the course of the paper: -

1. To Understand how smart contract function.
2. To Analyse the legal validity of Smart contracts.

HOW DO SMART CONTRACT FUNCTION

A smart contract works on a blockchain technology. Blockchain technology helps in eliminating the role of intermediaries which reduces a lot of time and effort. Once the terms and conditions of the Contract is finalised it cannot be changed even if the parties want to change it in their favour for their gain.³ The Multination corporations can do cost cutting by making use of smart contracts to enter into any agreement. In order to make a contract which is traditional in nature one needs experts of law to make the contract, and the experts then charge huge fees by using the technology one can make smart contracts, so in this way the cost will be reduced which otherwise would be incurred.

The primary feature of a smart contract is its ability to execute itself.⁴ The term and conditions of contract that the parties want to and other symbols are written into the code themselves. Apart from this it consists of information that enables execution of transaction also keeps a track of the transaction and ensures that it is fully tracked and is permanent and irreversible.

³ Vijay Pal Dalmia, "India: Blockchain and Smart Contracts – Indian Legal Status", Mondaq (February 5, 2020).

⁴ *Supra* note 1.

Blockchains are decentralised databases of information. A block is the fundamental element of a blockchain, including information like as credit and debit balances or property ownership. A huge number of computers in a network, known as nodes, verify a block, which is then attached to the previously validated blocks. The term for this network of data blocks is blockchain. Therefore, members of a peer-to-peer network verify a blockchain, which is a decentralised collection of data.⁵ The idea became popularised in the Bitcoin community, where information is gathered in the form of a time-stamped ledger of monetary operations. The Bitcoin blockchain is a solution to the problem, the above-mentioned perception by humans, and self-assessment of one's personal situation. There are two essential properties of Blockchain that must be discussed.⁶ First, the data registered on a Blockchain is dispersed and cryptographically secured throughout a network. As a result, it's quite challenging to break into the system without employing significant resources. Secondly, once data is registered on a Blockchain, it cannot be altered by anyone. Therefore, in simple terms A smart contract is an agreement among two parties using computer code. They are immutable as they are recorded in a distributed ledger called the blockchain and are accessible to everyone. Secondly the transaction that happen in In this context, smart contracts are executed using blockchain which means they has the potential to be delivered mechanically without the third-party. Finally, the deals close only under certain circumstances. The functioning of smart contracts on blockchain needs four elements in order to function properly. Firstly, the sources codes then the wallet which contains cryptographic keys. Thirdly the storage files it is the digital space where transaction is stored before registration. Lastly the register, it's the place where transaction is stored most of the time it's the blockchain.

The functioning of smart contract can be best explained by an illustration. For Instance, say a person named M wishes to buy a car from a showroom which is owned by N, but can't quite afford the car on their own. So, A goes to Bank O, to avail the facility of car loan. If the bank uses the traditional method, then M has to show various personal details and she would also go through other processes which would be both time and cost consuming. All this time and overhead cost could be saved if the bank uses the blockchain technology. Bank O would be able to download the information necessary from M's block so as to check whether she is

⁵ *Supra* note 2.

⁶ Punit Shukla, "How India's government can build better contracts with block chain", World Economic Forum (October 4, 2019)

eligible to get a car loan or not, if she meets all the criteria, she would be awarded the loan. The loan would be transferred from Bank O to account of N and the possession of Car would be given to M by showroom N. However, if M fails to pay the loan amount in estimated period the Bank O would take possession of the car from M. All this transaction is saved on a block chain, which can be seen by all the participants on the block.

The data protection of the individual is done through cryptography. Each block constitutes of information and if someone wants to change that, each and every block in the chain needs to be hacked since they are inter-related. This practice is been done by Ethereum.

LEGAL VALIDITY OF SMART CONTRACTS

Essentials of a Legally Binding Contract are, offer and acceptance, there must be ability to contract, consideration, and willingness to establish a legal relationship. Hence, now it needs to be checked whether smart contract fulfils the requirement of smart contract or not according to the established rules.

Offer and Acceptance

Be it the traditional contract or the smart contract both go through this basic but one of the essential stages of agreement. This is a must because the parties of the contract need to agree to the set of contractual obligation before any further step.

Offer and acceptance, and the conduct of the parties, are reviewed first. This suggests that committing resources to a blockchain-based smart contract requires the provision of cryptographic private keys. Due to the fact that one party must publish his "contract" on blockchain platforms (like as Ethereum) and other party must accept the cryptographic key, this communication will undoubtedly be considered an offer.

Acceptance in smart contracts is only possible through conduct. For instance, financial transactions, cryptocurrency exchanges, and digital representations of physical assets are all examples of situations in which control of a digital asset is transferred to a smart contract. The act of uploading this asset to the smart contract conveys acceptance in a clear and unambiguous manner. Normally, Clearly, the regulations governing Neither the offer nor the acceptance would indeed act as substantial obstacles to the development of smart contracts,

given that the mechanism for generating such agreements encompasses offer and acceptance aspects.

One aspect of contract law's treatment of "automatic contracts" should be discussed. As is evident from cases such as *Thornton v. Shoe Lane Parking*⁷, when coins are inserted into a vending machine, a contract is formed. Contract formation is not precluded by the fact that the subsequent process occurs without human intervention. Similarly, in *R (Software Solutions Partners Ltd) v. HM Customs & Excise*⁸, it was determined that a "automatic medium for contract formation" can result in legally binding agreements. In this scenario, once the broker inputs the criterion into software, it will automatically seek and conclude contracts on the broker's behalf. The court determined that a contract had been fulfilled. Consequently, it is highly probable that the formation of smart contracts on platforms such as Ethereum will be held and recognised as valid formation of a legally binding contract.

Consideration

Under contract law, there has to be a valid consideration for a contract to be legal. For a consideration to be valid, it only needs to be enough, not adequate. So, one could say that the consideration requirement is easy to meet in smart contracts because the offer is only considered accepted when the payment is made.

On the other hand, one more argument comes into the picture that can be explained by following example, for instance if someone keeps a glass of water on the top of the gate, he hasn't promised that he has done the setup so the glass of water falls on the person who opens the gate but he has only made a mechanical setup to do the same. So Smart contract is not an exchange of promise and commitments.

Intention to create legal relationship

In common law, the intention to make legal relations is presumed in commercial relationships. As a result, it could be argued that intent to have legal relations will be presumed for each and every smart contracts made into in commercial settings, whether the transaction is between two different corporate business or seller to consumer. As a result, it is clear that by agreeing to the terms of smart contract, the parties intend to use an alternative

⁷ *Thornton v Shoe Lane Parking* [1978] 2 QB 163 (Lord Denning MR)

⁸ *R (Software Solutions Partners Ltd) v HM Customs & Excise* [2007] EWHC 971, para. 67.

regulatory system rather than conventional contract law. As a result, there may not be a genuine intent to establish legal relations.

Also, the parties don't want to go to court to enforce their contracts because they think it won't be necessary if a smart contract is sure to be carried out. That, however, is not the same as hoping that if the smart contracts issue is taken to the court, the court won't uphold them. If offer is accepted at the end of a smart contract, it has also started to be carried out. Based on this, it is unlikely that a reasonable person would not see this as a binding agreement that can be enforced. So, it is almost certain that most smart contracts, especially in business settings, will be made with the goal of making legal relationships.

Capacity to Contract

For a contract to be enforceable, both parties must be able to legally enter it. But Ethereum and most of the other blockchain platforms don't check if a person is eligible to be a legal adult. Instead, anyone can open an account, even if they don't have sufficient capacity to do so. Since smart contracts don't have a way to check if a person is able to understand them, they can be signed by minors, Intoxicated person, or anyone else who isn't able to, Because of this, people who can't sign contracts in the real world might be able to do so on the blockchain platform. However, if a party lacked capacity, the transfer of any asset after the completion of contract might be legally invalidated by an action in unjust enrichment and through a reverse transaction. But it may be tough to identify who to sue. In addition, a reverse transaction can only rewind the contract but not make it legally void, the transaction as it may remain on the respective blockchain since the blocks are immutable. Despite to what has been said, it remains a issue that even if someone doesn't satisfy legal requirements, still he will be able to enter into the contracts.

STATUTORY PROVISION WITH RELATION TO SMART CONTRACTS

According to Section 5 of the "IT Act," digital signatures are valid and enforceable under any contracting circumstances where they are used. The law states that if a document or piece of information produced needs to be verified or authenticated by the attachment of signatures, then a digital signature can be used to satisfy this requirement.⁹ Therefore, a digital signature is useful for demonstrating agreement in the context of a digital document. In addition, digitally signed documents and other electronic records are admissible in court under Section

⁹ Rishi A, "The Legality of Smart Contracts in India", India Corp Law (December 10, 2017)

65B of the Indian Evidence Act of 1872. Section 35 of the IT Act, however, specifies that in order to obtain an electronic signature certificate, one must go through a certifying authority approved by the government. Block chain technology generates a hash key, which is necessary for a smart contract to begin. Instead of relying on a court of law to authenticate the contract, the same is used as an identifier. The electronic signature produced by blockchain technology is therefore autonomous and distinct from the one permitted by the IT Act. As an added layer of security, "Section 85B of the Indian Evidence Act says that an electronic document will be considered valid only if it has been authenticated with a digital signature." Section 88A of the Indian Evidence Act, which states that "the Court makes the assumption that an electronic record put as evidence is legitimate, but does not make any assumptions about the originator of such message," exacerbates the issue. Because the signature was not obtained in accordance with the IT Act, the admissibility of the document will be further compromised if it is used to authenticate the smart contract via blockchain technology. This not only undermines the "admissibility of such contracts as evidence in a Court of law," but it also undermines the legal validity of the encryption method used for smart contracts.

CONCLUSION

A study done by a US-based Institute shows that if smart contracts are used well, companies can save a lot of money, which in turn saves money of the people. This shows that building and using smart contracts could become the "next big thing," saving billions of dollars in overhead costs and making the whole process more efficient. When it comes to how contracts are carried out, block chain has the potential to change everything. Some fields, like financings, still use fax machines and paper, which reduces their efficiency. It's time for them to start using smart contracts and other new technologies. But for this to happen, the government needs to stop being quiet about it and come up with solutions for both companies and individuals to switch to much more efficient and cost-effective systems. Smart contracts are part of a growing number of technological innovations that aim to lower the risks and costs of human capital. In fact, they make it much less likely that a person will make a mistake. But you can't deny that machines can make mistakes, and it's hard as hell to control how they work. So, it's hard to make sure people follow the law because there are a lot of problems.

Governments and legislators may be unwilling to spend the necessary financial and human resources to pave the way for the development of smart contracts, particularly in

underdeveloped countries. However, the potential advantages of adopting this technology cannot be disregarded. To include smart contracts in the scope and adapt to the changing times. In order for smart contracts to become operative on a global scale, the government will need to change certain existing statutory provisions and face several hurdles. It will be intriguing to observe whether legislators can keep up with the rapidly expanding world of block chain and smart contracts. If anyday in India, Smart contract would become a thing then the legal industry must be ready to adapt to the changes. The current workers of the industry may see this technological advancement as a threat to their jobs. But if one thinks in a positive manner technological advancement increase the way for collaborations between law firms and software firms. So, the Smart contract shouldn't be seen as a threat instead government should take initiative to makes laws on this at the earliest.

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