



REDEFINITIONS: BLOCKCHAIN POTENTIALS FOR REAL ESTATE ECOSYSTEM IN NIGERIA



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“
If we never do anything which has not been done before, we shall never get anywhere.
The law will stand still while the rest of the world goes on and that will be bad for both
- Lord Denning in *Parker v Parker (1954) All ER 22.*
”

INTRODUCTION



The historical antecedent of man is inundated with changes orchestrated majorly by man's quest for a better and easier means of survival. Starting from the era when according to Thomas Hobbes, “*the life of man was solitary, poor, nasty, brutish, and short*” to the modern technological age, change has

remained constant in almost all spheres of life. This quest for change led Satoshi Nakamoto¹ in 2008 into developing a new technology offering, ‘*Bitcoin Blockchain*’ It is widely believed that Blockchain (BC) could potentially be a significant driving force behind the next wave industrial revolution,² due to its versatile and trust characteristics.

Blockchain Technology (BT) which was initially created to facilitate peer to peer transfer of digital currency is now considered, through ingenious creation of *Ethereum* (technology behind Smart Contract by Vitalik Buterin),³ to have many more underlying benefits. It is thus fast becoming

a fertile ground of interest for several industrial and institutional sectors including real estate, health, financial services, energy, media, public sector, and intellectual property. To underlie the global effects of BT, Estonia has kick started its use to secure health records, UK Government considered using BT to pay and control research grant in 2016 and the Catalan Government (in Spain) recently introduced ‘*Catalan Blockchain Strategy*’ aimed at implementing a BC ecosystem for regional administration.

This article aims to discuss how BT can reposition real estate ecosystem in Nigeria, and its attendant legal cum regulatory implications.⁴

1. Satoshi Nakamoto, ‘*Bitcoin: A Peer to Peer Electronic Cash System*’, White Paper, 31.10.2008: <https://whitepaper.io/document/> (accessed 23.12.2020).
2. Mina Down, ‘*How Blockchain is Driving the Fourth Industrial Revolution*’, Hackernoon, 02.03.2019: <https://hackernoon.com/how-blockchain-is-driving-the-fourth-industrial-revolution-1abdc053588> (accessed 23.12.2020).
3. Vitalik Buterin, ‘*Ethereum White Paper: A Next Generation Smart Contract & Decentralised Application Platform*’, Ethereum.org, November 2013: https://blockchainlab.com/pdf/Ethereum_white_paper-a_next_generation_smart_contract_and_decentralized_application_platform-vitalik-buterin.pdf (accessed 23.12.2020).
4. This includes an Identification (ID) system, sharing of health Data to boast body organ's donations and a system to self-consumption energy. See Rosa M. Garcia-Teruel, ‘*Legal Challenges & Opportunities of Blockchain Technology in the Real Estate Sector*’ *Journal of Property, Planning and Environmental Law*, January 2020: <https://www.emerald.com/insight/content/doi/10.1108/JPEL-07-2019-0039/full/html> (last accessed 24.12.2020).

Impediments: Problems of Real Estate in Nigeria



As applicable globally, Real Estate (RE) is an important sector in Nigeria; it is so important that other critical sectors such as information and communication technology (ICT), agriculture, manufacturing, financial services, utilities and infrastructure, etc. depend on it. Indeed, they often provide a veritable platform for the RE sector to thrive, when there are booms in those sectors. However, Nigerian RE is still very

much laced with so many challenges that stymie its potential. Paramount amongst these issues are the cumbersome RE transaction processes and high transaction costs, involvement of numerous intermediaries⁵ and the fraud potential, corruption arising from undue bureaucracy, human errors in 'manual' land registries⁶ etc.

All these result in inefficiencies to the detriment of the sector's

contribution to the national economy, and constitute huge impediments to the ease of doing business in Nigeria. Even though Lagos and Abuja have digitised land registries,⁷ the World Bank's *Doing Business 2020*⁸ (the *WB Report*) has shown that there is more to be done. According to the *WB Report*, it takes 105 days to register property in Lagos with 12 procedures, costing 11.1% of property value. In Abuja it takes 53 days with 12 procedures and costing 12.1% of property value. In Kano it takes 47 days with 11 procedures and cost 11.8% of property value.

Even Kaduna that ranked first in Nigeria RE registration transactions, takes 44 days with 8 procedures and 9.4% of property value. These metrics are simply a drag on the RE sector – other African countries like Rwanda (ranked 3rd globally in property registration) are obviously doing better.⁹ That

5. Persons intending to undertake RE transaction (sale, purchase or lease) may need to engage the services of professionals such as estate agents and valuers, land surveyors, solicitors, financiers/mortgagees, trustees, etc. The involvement of some of these third party intermediaries aside from contributing to elongated transaction timelines, increases transaction cost; at most they should not all be needed at every transaction cycle. On top of this are the inefficiencies in land registries. BC is looking at how to bypass some, if not all, to minimise cost and time implications of RE transactions.

6. In the words of a real estate practitioner, (Jide Ogunleye, CEO of Denaro Properties Limited), regarding Lagos State Land Registry: "Whatever has been done has still not solved the problem of titling, forget the e-certificate. The people that will provide the e-certificate can be bottlenecks in the process... People won't move your file, except they are paid or something, and such as it is likely that in some cases you can be on your land title for a very long period of time". See Endurance Okafor, '*Land Documentation Process in Nigeria: A Mixed Bag of Experiences*', *Businessday*, 19.03.2019: <https://businessday.ng/real-estate/article/land-documentation-process-in-nigeria-a-mixed-bag-of-experiences> (accessed 25.10.2020).

7. This is a right step towards BC land registries, which can only be implemented in digitised land registries. The underlining difference between digitised land registries and Blockchain land registries is that while the former is centralized under a controlling authority making it susceptible to manipulations, the latter is decentralised with immutable ledger thereby promoting transparency and trust in the system.

8. World Bank, '*Doing Business 2020: Comparing Business Regulations in 190 Economies*', October 2019: <https://www.worldbank.org/en/news/feature/2019/10/24/doing-business-2020-sustaining-the-pace-of-reform> (last accessed 22.12.2020).

9. See WB Report, '*Economy Profile Rwanda*', p.4: [_https://www.doingbusiness.org/content/dam/doingBusiness/country/r/rwanda/RWA.pdf](https://www.doingbusiness.org/content/dam/doingBusiness/country/r/rwanda/RWA.pdf) (last accessed 26.12.2020). Rwanda's impressive metrics are as follows: "Score of registering property (0-100) - 93.7; Procedures (number) - 3; Time (days) - 7; Cost (% of property value) - 0.1; Quality of the land administration index (0-30) - 28.5."⁹

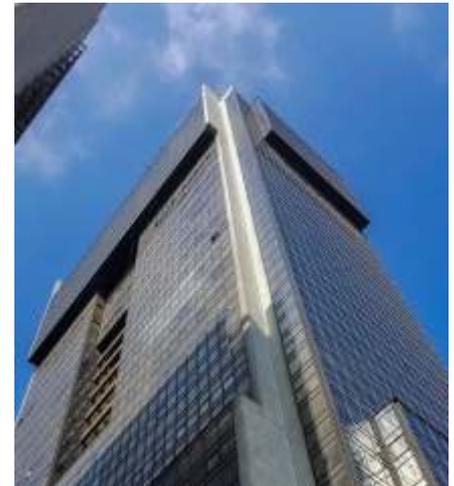


seamless property administration element must have been a significant contributor to Rwanda's 38th global ranking on ease of doing business!¹⁰

Rwanda's ranking is not surprising; in 2009, the Rwandan Government delivered a nationwide digital based land registry system leading to more "improved income security for many rural citizens, while opening the door to a new wave of rural development, allowing many, often for the first time, to apply for credit against the value of their property".¹¹

Undoubtedly, Nigeria's GDP will continue to be hamstrung unless it unlocks its RE's potential!¹² BC backed land registries will reduce the procedures, time and cost involved in property registration and greatly scale the ranking of Nigeria in the ease of doing business. This is because the technology deploys a special algorithmic features that can automate documents with timestamp; self-execute contracts and remove the incidence of intermediaries. As a distributed ledger technology (DLT) which helps to store information in a decentralised manner,¹³ the BC network has no

central authority and thus the "very definition of a democratised system". Since it is a shared and immutable ledger, anything that is built on it, is by its very nature transparent.¹⁴



10. See 'Ease of Doing Business Ranking' in the *WB Report*: https://www.doingbusiness.org/content/dam/doing-business/pdf/012020/Doing-Business-2020_rankings.pdf (last accessed 25.12.2020). In its commentary, on the WB Report titled 'Doing Business 2020–Sustaining the Pace of Reforms', the WB stated *inter alia*: "Regulation exists to protect workers, public safety, businesses, and investments. **But inefficient or inadequate regulation can stifle entrepreneurial activity and business growth and impact the ease of doing business.** ... Burdensome rules may drive businesses away from the oversight of regulators and tax collectors into the shadows of the informal sector or out of the country in search of a more supportive business environment. Foreign investors may shun economies where rules prevent economic activity from flourishing. **Cumbersome red tape holds back more than individual businesses or investors: an economy's ability to grow sustainably may suffer. Economic freedom to do business goes hand in hand with economic development and a thriving private sector, and these in turn underpin poverty elimination and the pursuit of shared prosperity.** ... Economies that score highest on the ease of doing business ranking share several common features, including the widespread use of electronic systems. The top 20 economies have online business incorporation processes, electronic tax-filing platforms, and **allow online procedures related to property transfers...** In general, the 20 top performers have sound business regulation with a high degree of transparency... However, the incentives are clear. Economies that score well on Doing Business indicators benefit from a higher level of entrepreneurial activity. This in turn generates better employment, greater government revenue and higher incomes. In addition, where burdensome and protracted regulatory processes exist, the temptation to resort to corruption to get things done may be greater. **The results of Doing Business 2020 demonstrate that in almost every economy in the world, there is some scope to streamline or expedite rules to make it easier to do business, allow entrepreneurship to flourish, and make it possible for economic activity to reach its full potential.** (Emphasis supplied).

11. Godan, 'Land Rights in Rwanda: Transparency, Land Rights, Land Tenure Regularisation': https://www.godan.info/sites/default/files/documents/Godan_Success_Stories_Land%20Rights%20in%20Rwanda.pdf (last accessed 23.12.2020). According to the publication, "In its 2013 Annual Report, Rwanda Land Tenure Regularisation Programme, the UK's Department for International Development (DFID) heralded Rwanda's digitization process as the first large-scale land registration programme of its kind in Africa, demonstrating the use of open source software and open data as the first of its kind based on digital technology. The Rwanda Natural Resources Authority (RNRA) reports that the immediate result of the process was its ability to record 84% of all land with identifiable owners and establishing approved title. More than 11M individual parcels of land are now defined and all those records are accessible online."

12. See for example, Endurance Okafor, 'Nigeria's GDP Will Continue to Decline Unless it Unlocks Real Estate Potentials', *Businessday*, 01.09.2020: <https://businessday.ng/real-estate/article/nigerias-gdp-will-continue-to-decline-unless-it-unlocks-real-estate-potentials-stakeholders/> (accessed 25.10.2020).

13. Prashanth Ram, 'Blockchain Surge: An Indian Perspective', *Impact Lawyers*, 09.06.2020: theimpactlawyers.com/articles/blockchain-surge-an-indian-perspective/ (last accessed 14.12.2020).

14. Ameer Rosic, 'What is Blockchain Technology? A Step by Step Guide for Beginners': <https://blockgeeks.com/guides/what-is-blockchain-technology/> (last accessed 14.12.2020).



BC has special features that enables it achieve trust in the absence of trusted third party(ies): Immutability and a tamper proof ledger and this means that any transaction recorded on the BC ledger cannot be altered. Secondly, it is distributed and by this it means that data entered in BC ledger does not sit on one all-powerful server but scattered among several thousand nodes. Lastly, it is decentralised and we mean here the network operates on a peer to peer basis.

To illustrate the possibilities, we will tell an adapted story. Femi

an investor in Lagos who has been looking for a house for commercial purposes happens to find a suitable property. He quickly opens his BC ledger on his phone or computer with his private key and searches the property on the State's Land Registry database using the property ID provided by the seller in the advertisement. The BC gives him access to key property details and a summary of the property taxes, maintenance receipts, title reports, encumbrances, mortgage lender, approvals, and so on.

To get further details, he messages seller for his private key and price negotiation. On agreeing to terms, he adds his banker to the BC who approves the mortgage after going through the property papers and title history. The sale deed is signed digitally and the payment is released to the seller's banker or wallet (also on the BC). Finally, the registrar in the land registry is intimated of the sale and the title is transferred in his name.¹⁵

This entire transaction can be completed in less than a month. This is the world BC tends to create in Real Estate Ecosystem (REC), as this article highlights in further details below.

Land Registries

It is saying the obvious that the importance of land registries in the REC cannot be overemphasised. This is because every transfer of title to land must be registered within a stipulated time; otherwise, such transfer will be void in terms of legal estate: *Onashile v. Idowu*.¹⁶ Land registries are public offices where land records are kept.

15. Adapted from Kunal Moktan 'Why India Needs to Implement Blockchain in Real Estate', Property Share, 15.01.2018: <https://www.propertyshare.in/articles/why-india-needs-to-implement-blockchain-in-real-estate> (last accessed 14. 12.2020). A verbatim reproduction of another illustration by the author is as follows: "Rahul and his wife have been in the market for a three-bedroom flat in Bangalore for over a year but they are yet to find one that suits their needs. While browsing for properties on one of the online platforms, they finally think they have found the right one. The size looks good and the price is just within their budget. Rahul opens the blockchain ledger on his computer with his private key and searches the property on the government's Land Registry database using the property ID provided by the Seller in the advertisement. The blockchain gives him access to key property details and a summary of the property documents - owner, property taxes, maintenance receipts, title reports, encumbrance, Khata, mortgage lender, approvals, broker and so on. To go into the details he needs the Seller to share his private key. He messages the Seller, schedules a viewing, negotiates a price and gets access to the full property blockchain. He adds his banker to the blockchain who approves the mortgage after going through the property papers and title history. The sale deed is signed digitally and the payment is released to the Seller's banker (also on the blockchain). Finally, the sub-registrar is intimated of the sale and the title is transferred in their joint names name in the blockchain. Welcome to the future of real estate purchase and ownership."

16. [1961]1 All NLR 313. Section 5(1) Registration of Titles Act 1935 provides that, registration of title must be completed within two months or any authorized extension thereof after execution of instrument. The failure to comply with the stipulated time or extension will render the grant void in relation to legal estate: Adewale Taiwo, 'The Nigerian Land Law', (Princeton & Associates, 2016), 165.

Nigerian RE Transformation Possibilities via Blockchain



Thus a register of title is an authoritative record, kept in a public office, of the rights to clearly defined units of land as vested for the time being in some particular person or body and of the limitations, if any, to which these rights are subject.¹⁷

In essence, this record is to evidence title and prevent fraud. Unfortunately, land registries in Nigeria have substantially failed to fulfil this objective. Aside the fact that not many titles are registered in Nigeria, even the registered ones cannot be authoritatively relied upon due to many shortcomings and failures of the system.

According to the **WB Report**,¹⁸ most countries that made it to the global top 10 have online presence in property registration. Notwithstanding a general jump in ranking (from

146th in 2019 to 131st in the **WB Report**), Nigeria's improvements in RE transactions process and timelines still leaves a lot to be desired.

Basically, when property title and its associated encumbrances are automated on the BC, a simple click by any interested party will show all the authenticated details of the property, thus easing the cost of, and fast tracking property search; also, its immutability will preclude any person from tampering with the records. It will basically bring all the procedures of property registration under the BC and instead of having to undergo twelve (12) procedures of property registration in Lagos, everything becomes streamlined and seamless, through BC.

Furthermore, it has been acknowledged that the adoption of BC could be a veritable means of preventing corruption in land registries by providing more transparency through public verifiability.¹⁹ Therefore, land registries in Nigeria would perform better as BC based registries.



17. Simpson, S.R, '**Land Law and Registration**', (Cambridge Univ Press, 1976), cited in Adewale Taiwo, (*supra*), at 333.

18. The **WB Report** (*supra*), p.vii.

19. Rosa M. Garcia-Teruel (*supra*), 135.

In Eastern Europe, Georgia has leapfrogged its property administration regime by implementing BC land registries. The National Agency of Public Registry in Georgia uses BC system to register titles to land and validate property transactions after partnering with Bit Fury, - a San Francisco based provider of Bitcoin Blockchain Infrastructure (BBI).²⁰ Also, Georgia currently ranks 5th globally in the **WB Report** on property registration, and 7th globally on the ease of doing business.²¹ Whilst Georgia ranked 15th on ease of doing business and 1st on property registration respectively in 2015;²² its current standing on both scores (one upward and one downward movement), typifies the fact that other countries are upping the pace and widening the scope of their own reforms.

Nearer home, in 2018 the Ghanaian government signed a

memorandum of understanding with IBM to adopt BC based land register, albeit not much has been heard about its implementation afterwards; implementation is probably still in the pipeline.²³ Also, Sweden, Australia and United Kingdom among others are exploring the use of BC for title registration for certain covenants.²⁴ Nigeria can as well borrow a leaf from these jurisdictions, as BC land registries in Nigeria will mark a new dawn in property transaction and proof of title ownership.

Governor's Consent

The enactment of the **Land Use Act**²⁵(**LUA**) transferred all land in each State of the Federation to the Governor of the State to hold same in trust for the citizens of the State.²⁶ By **section 22 LUA**, no interest or part thereof of any land shall be alienated either by assignment, mortgage, transfer of possession, sublease or

otherwise without the consent of the Governor. In **Savannah Bank Ltd v Ajilo**,²⁷ the Supreme Court reinforced this position when it held that the consent of the Governor must be obtained otherwise such transactions will be inchoate. Therefore, obtaining Governor's consent (GC) takes a prime position in real estate transactions and is a significant compliance requirement. However in practice, this has often turned out to be as difficult as "passing through the eye of a needle". According to the **WB Report**,²⁸ it takes at least ninety (90) days to obtain GC in Lagos.



20. Laura Shin, 'Republic of Georgia to Pilot Land Titling on Blockchain with Economist Hernando De Soto, BitFury', Forbes, April 2016: <https://www.forbes.com/sites/laurashin/2016/04/21/republic-of-georgia-to-pilot-land-titling-on-blockchain-with-economist-hernando-de-soto-bitfury/?sh=6fd98fad44da> (last accessed 22.12.2020). Valery Vavilov, BitFury's CEO reportedly said: "We are launching the property rights registration project for Georgian citizens so that they can register property on the blockchain... Why the blockchain? It will help do three major things... First, it will add security to the data so the data cannot be corrupted. Second, by powering the registry with the blockchain, the public auditor will also make a real-time audit. So the auditor will audit the registry not once per year, but every 10 minutes [for example]. Third, it will reduce the friction in registration and the cost of property rights registration, because people could do this in the future using their smart phones. Blockchain will be used as a notary service." (Emphasis supplied).

21. See **WB Report**, 'Economy Profile Georgia', p.4: <https://www.doingbusiness.org/content/dam/doingBusiness/country/e/georgia/GEO.pdf>; and 'Ease of Doing Business Ranking': <https://www.doingbusiness.org/content/dam/doingBusiness/pdf/082020/Doing-Business-2020-rankings.pdf> (both accessed 26.12.2020).

22. See WB, 'Doing Business 2015 Going Beyond Efficiency', p.4; pp 147 and 187: <https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB15-Full-Report.pdf> (accessed 26.12.2020).

23. Georg Eder, 'Digital Transformation: Blockchain and Land Titles', OECD Anti-Corruption and Integrity Forum, March 2019: <https://www.forbes.com/sites/laurashin/2016/04/21/republic-of-georgia-to-pilot-land-titling-on-blockchain-with-economist-hernando-de-soto-bitfury/?sh=6fd98fad44da> (last accessed 22.12.2020).

24. Rosa M. Garcia-Teruel (*supra*), 130.

25. **Cap. L5, LFN 2004.**

26. **Section 1 LUA.**

27. [1987]2 **NWLR** (Pt. 57), 421.

28. The **WB Report** (*supra*), 38.



A commentator has opined that:²⁹

“Anyone who has undertaken application for GC (for example at the Lagos State Lands Registry, Ikeja), would know its strenuous nature. A prospective purchaser/investor has to jump through many bureaucratic hoops to get GC. Due to the fees involved (currently 1.5% of assessed value in Lagos State), some land owners neglect or prefer not to perfect their title; this creates a chain of incomplete documentation of title in respect of that particular land. The buck would definitely stop on the table of a purchaser who needs to perfect his title (for example, in order to use their property as security for a loan). He has two choices (a) go back to the previous transferor with ‘perfect title’ and request that both parties deal directly; or (b) pay the consent fees for all previous transactions including the present one (‘double consent’).”

An immediate consequence is ‘dead capital’, because imperfect or ‘non-existent’ title cannot be used to raise or secure capital.³⁰ Thus, huge outcry that GC should be scrapped as it does more harm than good has been ongoing for years; however this seems to have been falling on deaf ears.

A Smart Contract (SC) backed BC has the potential of striking a balance between contending interests of stakeholders. Whilst

the GC requirement can still be retained in the **LUA**, the associated delay in its processing will become a thing of the past. Thus, in BC based land registries GC process is automated such that GC is issued immediately to applicants who fulfills the requirements by uploading the requisite documents on the BC and making applicable payments. It works like Massive Open Online Course (MOOC) platform whereby upon the completion of a course, an automated certificate will be immediately issued to successful course participants. Therefore, a decentralised application can be built to always connect purchasers, land registries and departments in charge of issuing GC for easy and swift reaction to GC applications.

Leases and Conveyancing Contracts

Smart Contracts (SCs) are decentralized agreements built in computer code and stored on a BC.³¹ SC is self-automating, executing and independently self-enforcing. It does not need the pronouncement of the courts for it to be enforced. The SC is created just like a normal contract though under code; a landlord armed with the property details, tenant details

and consideration will create SC using BC built application. Upon both of them digitally signing it with their various private keys, the contract will be published on the BC application.

The application is always built in such way to connect necessary parties and departments involved in lease transactions. For instance, in Nigeria it could connect the landlord with the tenant, land registries (where necessary) insurance companies, banks, etc. By so doing, the landlord will get the opportunity to verify the financial standing of the tenant and the insurance cover where the tenant is to insure, and thus make a holistic decision about the rent. This also empowers the tenant to ascertain from registries, within short periods of time, if the landlord has valid interest or title to the property. It is usually coded in a conditional mood.

For instance, for a tenant who has an obligation to pay rent every 31st December, a special algorithm will be coded in the SC that ‘if’ on 31st December the tenant is still in possession of the property, then SC should automatically debit the wallet of the tenant. Using SC in renting of property will reduce the incidence of tax evasion, and imposition of payment of more than one year rent in advance (where such rule exists)³² and make renting easier. Above all,

29. Frank Okeke, ‘Unlocking Real Estate Value in Nigeria: Legal and Regulatory Issues’, *LeLaw Thought Leadership*, June 2018, 3: <https://lelawlegal.com/index.php/page/blog/42> (last accessed 15.12.2020).

30. Frank Okeke (*supra*), 3.

31. Jeremy M. Sklaroff, ‘Smart Contracts and the Cost of Inflexibility’ (2018). *Prize Winning Papers*. 9., 263: https://scholarship.law.upenn.edu/prize_papers/9 (last accessed 23.12.2020).



it reduces the risk of litigation to the barest minimum³³ and make transactions faster, seamless and more secure.

For instance, in Munich, Germany, a BC application is being built to enable seamless letting of properties.³⁴ SC will ensure that the tenant has enough token (rent fee) on his wallet before executing the contract. Once the contract is executed, it will become automatically binding on the parties and could be enforced without recourse to court. This could also apply in the assignment or conveyance of interest in land. Where parties reach an agreement, a SC will be executed and the requisite consideration will be automatically debited from the purchaser's Bitcoin wallet or bank and a token will be sent to registrar who will prepare and issue BC GC and certificate of title to land all other things being equal.

The need to engage third parties such as solicitors to conduct due diligence on the land will be obviated because BC has the

potential to identify the ID of the parties where included in the BC and verify the right of the owners to sell the property. It can also trace the chain of previous transactions concerning the land.

Mortgages

Mortgages are an important element in RE transactions. Purchasers utilise mortgage to fund the sale consideration; whilst businesses also mortgage their real assets to secure loans. However, mortgage transactions sometimes have numerous third party intermediaries, issue of title ownership and built-in delays. BT may radically alter the process through which consumers buy a home, as well as the way financial institutions handle mortgages.

Specifically, the technology could remove cost and friction from the process, create transaction records that are infallible and incorruptible, and facilitate near instantaneous settlement. It could also drastically change the way mortgages are serviced and sold

on the secondary market. The BT's special feature of SC and Distributed Ledger (DL) helps to achieve this. The SC habit of process automation and self-execution enables direct interactions amongst the parties and shielding away intermediaries which takes as much as 1% to 2% of the property's value.³⁶

BC, it is reported, will “*establish accurate record at mortgage origination, provide immutable proof of when a loan estimate was sent and speed up settlement flows. At the servicing stage, BT will track the movement of payments and provide transparency about the ownership of a mortgage asset at the secondary stage.*”³⁷

Regulatory and Legal Implications of Blockchain in Nigeria

Currently, there is no legal regime s covering BT and its application to RE in Nigeria. Most times, reliance is placed on the opinions of scholars and traditional principles of law perceived to be applicable

32. Section 4(3) and (4) Tenancy Law of Lagos State 2011, makes it an offence for a landlord or his agent to demand more than one year rent from a tenant. It is also an offence for a tenant to pay for such more than one year rent. The law provides that in circumstance of breach, such landlord or tenant will be liable to pay N100, 000 or three months' imprisonment. However, it has been observed that this provision is obeyed more in breach than in compliance due to the fact there is no mechanism to track the breach except when a party sends out a complaint, but with smart contract embedded in BC, it will become easier to identify breaches since government agents can be connected to the BC.

33. This is because the SC automatically enforces the rent on the tenant by debit the wallet of the tenant who must be verified to have such rental value in his wallet before executing the SC. This will even make it possible for tenant to pay with Bitcoin.

34. Tjark Freibe, 'How Blockchain can Improve the Process of Renting Apartments in Munich - Interview with Farhan Shahid Part 1', Vorwaerts, 30.10.2018: <https://medium.com/vorwaerts/how-blockchain-can-improve-the-process-of-renting-apartments-in-munich-4fbb0ae43c8e> (accessed 18.12.2020).

35. PwC, 'Q&A: What Might Blockchain Mean for the Mortgage Industry?', June 2016, p.2: <https://www.pwc.com/us/en/financial-services/publications/assets/pwc-financial-services-qa-blockchain-in-mortgage.pdf> (last accessed 24.12.2020).

36. PwC (supra), p. 3.

37. PwC (supra), p.2.

38. This is a Statute of General Application (SOGA), being a statute in effect in England as at January 1, 1900 and specifically received into Nigeria law and therefore binding on Nigerian citizens. See for example, *Attorney-General v John Holt & Co Ltd (1910)*¹ NLR 130. Subsequently, many of these received statutes were domesticated by way of enactment of local equivalents especially by Regional and State governments in Nigeria.



within the circumstances and existing statutes in Nigeria such as the **Evidence Act 2011, Cybercrimes (Prohibition and Prevention) Act 2015, Statute of Frauds 1677³⁸ and Tenancy laws** of each State, etc. However, a recent move by the National Information Technology Development Agency (NITDA) setting up *Technical Working Group to Review National Blockchain Adoption Strategy Framework for Nigeria*³⁹ is a bold step in the right direction, as adopting a legal framework will help to open up the space in Nigeria.

The dearth of statute and case law on BT raises certain salient legal issues on the application of the technology in real estate ecosystem. For instance, *what could be the legal implication of SC used to execute deed of assignment or Lease/tenancy agreement? Is it legally enforceable? Can a private key signature qualify as a signature or electronic signature within the meaning? Can it be used to execute a deed and notaries?*

While it has been acknowledged that no statute or case law is at present governing BT, it could be argued that certain existing legal principles could be relied upon to determine the legality of

transactions executed through the technology. For instance, it has been argued by scholars that the traditional contract principles that apply to natural language should apply to SC under code, if the requisite elements are present,⁴⁰ being: offer, acceptance, consideration and intention to enter into a contract.⁴¹ Thus, where it is established that these elements are present, the SC will be legally binding.

An offer is arguably made if SC code is deployed on a distributed ledger and other participants on the ledger are entitled to interact and execute on it; and an acceptance is made if the SC is signed with a private key.⁴² Also, the parties must furnish consideration which has a value in the eyes of the law either by exchange of value or performance of an act. In terms of intention, SC may raise a question about the parties' consensus *ad idem* especially when one side of the contracting process is executed without human participation. However, scholars have argued that the principle of agency relationship will serve enough to remedy the situation and thus arrive at a conclusion that parties have a 'meeting of the mind'.⁴³

Furthermore, a question has been raised about *the legality of private key as a signature*. It is submitted that SC executed with a private key is sufficient to satisfy the requirement of signature in a document. This is even so as **section 93(2) and (3) Evidence Act** and **section 17 Cybercrimes Act** recognize the use of electronic signature to execute documents in Nigeria. A person using the electronic signature only needs to show that a procedure exists to verify that an electronic record is that of the person. Thus, any symbol or a security procedure will suffice, provided it creates an intention to enter legal relationship and be bound by it whilst evidencing signatory identity.⁴⁴

It is therefore arguable that where the intention so indicates that a private key be used as an electronic signature, being a security procedure will comply with the above sections in the absence of any other special requirement.⁴⁵ This argument is further reinforced by the **Report of UK Jurisdiction Taskforce**⁴⁶ that in principle a 'statutory signature' requirement can be met by using a private key which is intended to authenticate a document.

39. Senator Ihenyen, '**The Review of the National Blockchain Adoption Strategy Framework**': <https://www.linkedin.com/feed/update/urn:li:activity:6732362426169331712/?commentUrn=urn%3A%3Acomment%3A%3A6731272535016538112%2C6732362359500890112> (accessed 11.11.2020).

40. Smart Contract Alliance, '**Smart contracts: Is the Law Ready?**' Chamber of Digital Commerce, 27.09.2018: <https://digitalchamber.org/smart-contracts-paper-pres/> (last accessed 16.12.2020).

41. Geoffrey U. Oputa, '**Achike on Contract**', (1st ed., 2014), pp. 18-114.

42. Smart Contract Alliance (*supra*), 15-17.

43. Smart Contract Alliance (*supra*), 15-17.

44. Joseph, '**Legality on the Use of Electronic Signatures**' *Tonbofa Law Practice*, 29.04.2020: (accessed 16.11.2020).

45. Where the contract is a deed, it must be executed in accordance with the requirement for such execution for it be valid: See Y.Y. Dadem, '**Property Law Practice in Nigeria**', (Jos Univ Press, 4th ed., 2018), p. 72.

46. UK Jurisdiction Taskforce, '**Legal Statement on Crypto Asset and Smart Contracts**', November 2019, p.8 (Para 21), available at: <https://technation.io/about-us/lawtech-panel> (accessed 16.11.2020)



Similar questions have been raised and seems concluded by some persons that SC may not be sufficient to transfer ownership in a contract with special formalities like deed.⁴⁷ However in Nigeria, I contend and so agree that SC can satisfy the requirement of a deed to necessitate its use as means of conveyance of title the reason being that SC can sufficiently comply with all the requirements of a deed in Nigeria. **Black's Law Dictionary**⁴⁸ defined deed as “common law, any written instrument that is signed, sealed and delivered and that conveys some interest in property.”

In modern times, a deed is usually in writing on a good paper which is signed, sealed and delivered.⁴⁹ The three most important requirements of a deed are: signatures of the parties, seal of the parties and delivery of the deed⁵⁰ and of course it has to be in writing and probably attested. With respect to the signature of the parties, it has been contended above, that the private keys of the parties suffice the requirement of signature or electronic signature. On the requirement of seal, it is important to note

that absence of seal on a deed cannot vitiate such deed as the provision of **section 159 Evidence Act 2011** has dispensed with its requirement, though still used as a matter of practice.

I agree that even though SC can be built to provide algorithmic seal, where such is absent, it cannot invalidate its status as a deed.⁵¹ In terms of delivery, what matters most is the intention of the parties to be bound by the deed. Therefore, it suffices to say that the execution of SC by the parties with their private keys is an act sufficient to evince intention to be bound.

Going forward, BC can play the role of attestation in a deed since it has a way of ensuring proof of a piece of act performed by a person. This is so when it is factored in mind that the essence of attestation is to dispense with the incidence of trust. Still, attestation is not a requirement of a valid deed, except for companies⁵² and where a party is an illiterate or blind person⁵³ Another issue raised with SC is whether a source code used writing a SC satisfies the statutory requirement of **sections 4 Statute of Frauds** and **5 Law Reform Contract (Contracts) Act**,⁵⁴ which provides that every contract of

sale of land or transfer of interest in land must be in writing.

It is contended and so agreed that a source code meets the requirement of a formal contract in writing in as much as the code is interpretable. According to (what seems to be a non-binding authority) the **UK Jurisdiction Taskforce on ‘Legal Statement on Crypto Asset and Smart Contract’**: “there is a contract in English law when two or more parties have reached an agreement, intend to create legal relationship by doing so and have each given something of benefit. A smart contract is capable of satisfying those requirements just as well as a more traditional or natural language contract, and a smart contract is therefore capable of having a contractual force.”⁵⁵

The Taskforce’s report went further to submit that in principle a ‘statutory signature’ requirement can be met by using a private key which is intended to authenticate a document and a statutory ‘in writing’ requirement can be met in the case of a SC whose code element is recorded in source code.

47. Smart Contract Alliance (*supra*), 23.

48. Bryan A. Garner, ‘Blacks’ Law Dictionary’, (9th ed., 2009), 475.

49. Y.Y. Dadem, ‘Property Law Practice in Nigeria’, (*supra*), 72.

50. Dadem (*supra*), 76.

51. In *Awojugbagbe Light Industries v. Chinuke* (*supra*), the Supreme Court held that no special form or observance is necessary for the delivery of a deed and it may be made by word or by conduct, provided the act evinces intention to be bound by it.

52. See **section 163 Evidence Act**.

53. The attestation must be before a Justice of Peace, Magistrate or Notary Public.

54. **Cap. 517, Vol.3, Laws of the FCT 2006**.

55. UK Jurisdiction Taskforce (*supra*), p.8 (Para 18).

Challenges Associated with Blockchain Technology



Data Immutability

Data recorded on smart contract cannot be amended or altered. Notwithstanding its foreseeable advantages, a disadvantage is that any error committed during coding becomes permanent. This may have a consequential effect of robbing a person off his title and other similar incidents. This is more striking when considering the human input in BC, which also makes it susceptible to fraud. Thus, the need to ensure utmost good faith with the programmer and to painstakingly proof the language before automating is highly recommended.

Data Privacy

By the provisions of **European**

Union General Data Protection Regulation (EuGDPR) 2018 and the **Nigerian Data Protection Regulations 2019 (NDPR)**, a data subject can have his personal data removed⁵⁶ if such data, which has been processed and stored, is no longer needed. However, one great feature of BC is that any data recorded on the ledger, cannot be erased or removed. Thus, blockchain breaches the concept of data control, rectification and “the right to be forgotten”.

Nevertheless, *instead of weeping on this perceived flaw, we can make it our cheese.* The nature of BC makes it extremely impossible for data of participants to be tampered with by a third party hacker. In other words, only individuals involved with their private keys can gain access to the

technology. An in-depth look at the technology shows it tends to protect privacy more than it puts it at risk, most especially with a permissioned BC. Also, it will be apt if a participant if informed *ab initio* that his right of rectification and to be forgotten will be restricted and a contract is entered in such regard.

Identity Verification

BC does not require any personal information for wallet creation. Aside the fear of being used for illegal activities, it poses a problem in property transaction in that financial institutions are most unlikely to grant finance or mortgage to a person that cannot be verified as the owner of a property.

An authoritative commentator has opined that: “As RE is a key tool for securing finance, a lack of proper verification system would hinder the quick securitisation of such assets. It is thus essential to complement the BC with an official identification to implement a RE conveyance system, and one which might contribute not only to providing more security, but also to ensure that true digital owners can prove their rights over a certain property.”⁵⁷ In furtherance, the BC can be designed in a way to have real persons’ identity instead of the false identity (pseudo anonymity).

56. Tara Waters and Alison Murrin, ‘Impact of Blockchain on the Future of Real Estate Sector’, Built Environment Insights, UK (Ashurst), 15.10.2019, p.4: <https://www.ashurst.com/en/news-and-insights/insights/the-impact-of-blockchain-on-the-future-of-the-real-estate-sector/> (accessed 17.11.2020).

57. Rosa M. Garcia-Teruel (*Supra*), pp.136-137.

CONCLUSION

While it is acknowledged that BT is not without any downside as pointed out above, it is also necessary to emphasise that its benefits will definitely outweigh its demerits. The best way to cure whatever disadvantage it has is not to run away from it, but rather to confront it and in the process develop solutions to the problem: “if we never do anything which has not been done before, we shall never get anywhere.”⁵⁸

Nigerian RE sector cannot afford to stand still whilst the rest of the world continues to make progress. Thus, the Government and stakeholders should take steps to transform our REC using BT and also create a befitting law to open up the space. Nigeria has so far been unsuccessful with its anti-corruption fight. If truly we want to wage an impactful cum effective war against corruption and inefficient, bureaucratic redtapism, then we have to look in the direction of BC to help actualise that objective.



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58. Per Lord Denning in *Parker v Parker (1954) All ER 22*.