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Blockchain and Cryptocurrency in Africa

A comparative summary of the reception and regulation of Blockchain and Cryptocurrency in Africa

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Information contained herein is as at November 2018.

CONTENTS

PREFACE

African countries are no strangers to the use of digital solutions for money transfers, nor to the rapid implementation of such technologies. It is often said that the pervasiveness of mobile telecommunication usage in Africa, enabled the continent to leapfrog many first-world countries. Mobile phone usage grew from less than 3% to 80% in under a decade.

There is already an abundance of local mobile and e-payment platforms that have seized this as an opportunity to develop innovative ways to reduce the friction associated with transferring money across the continent. An example is Kenya's M-Pesa, which has been around since 2007. The platform, which allows customers to send and receive money via mobile phone, already handles transfers of more than 25% of Kenya's GNP, leading to greater consumer confidence in financial technologies.

Sub-Saharan Africa is also reported to have the second highest population of unbanked adults in the world, at about 350 million people, or 17% of the global total. Reportedly, two thirds of Sub-Saharan Africans do not have a bank account. Despite this, a high percentage of migrant work, both within and between African countries, results in a disproportionate need for remittance mechanisms outside of traditional banks. Foreign remittance remains a primary source of income for many African communities and households, with countries like Lesotho purportedly attributing almost a third of their GDP to remittances from abroad.

These, amongst many other factors, create the ideal environment for new ways of moving value, and present many of the challenges that distributed ledger solutions aim to solve. This also presents the potential for greater socio-economic inclusiveness, such as through enhanced financial security.

So to what extent has blockchain and cryptocurrency been embraced in Africa? The results are mixed. Whilst the private sector is blazing ahead in many countries, governments have been apprehensive and reserved, and in some instances unreceptive. Countries such as Zimbabwe and Namibia have reportedly begun with a hard stance, whilst Mauritius is a regional frontrunner. The regulatory sandbox created in Mauritius, for instance, demonstrates a progressive take on the general economic benefits that could follow a friendly, and even incentivised, approach to cryptocurrencies, This creates another dimension for the potential for African countries to develop regulations around blockchain and cryptocurrency, with an intention to incentivise foreign direct investment.

This guide summarizes the latest and key developments taking place in selected African jurisdictions in respect of blockchain and cryptocurrency, focusing on current regulatory approaches. This guide also provides a comparative assessment of the stance adopted by such regulators, with a view to providing a better understanding of the opportunities and challenges associated with the use of this technology in Africa.

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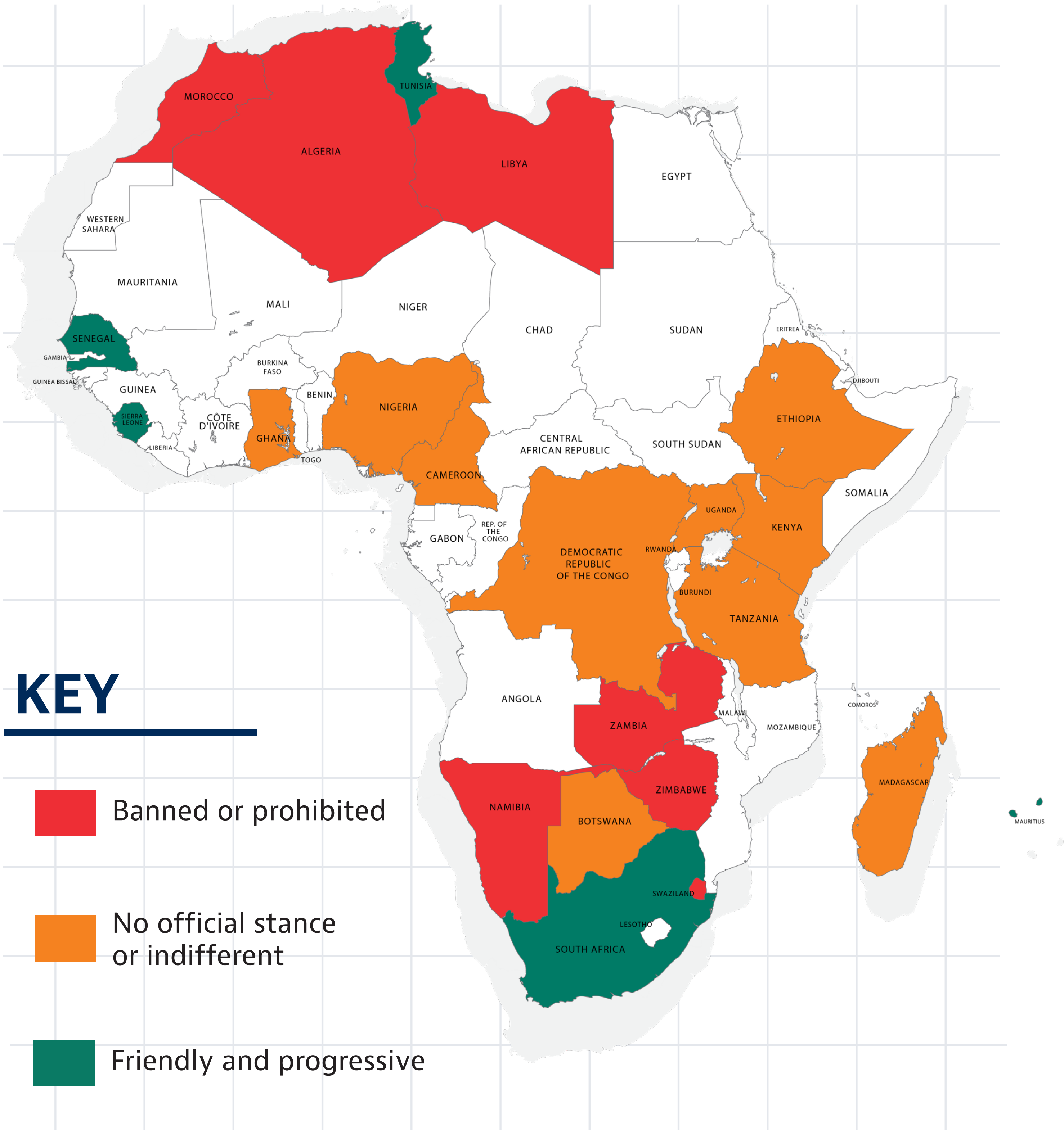
GEOGRAPHICAL OVERVIEW



KEY

Banned or prohibited

No official stance or indifferent

Friendly and progressive

COUNTRY PROFILES

1. Botswana

Regulatory environment

- The Bank of Botswana has not released any regulation on cryptocurrencies or the use of blockchain technology and has reportedly stated that it currently has no intention of regulating cryptocurrencies.
- The XinFin Organisation, a non-profit organization which liaises with different international governments to reduce the existing gap in global infrastructure, met with Botswana government officials in 2017 to discuss the potential use of blockchain technology in the infrastructure industry. Despite this, Botswanan government officials were quoted as being unsure about the use and benefit of cryptocurrency and blockchain technology in their country.
- Currently, there seems to be no cryptocurrency exchanges in Botswana and as such, bitcoin trading is limited to private Whatsapp and Facebook groups. Bitcoin exchange, Belfrics, has announced plans to launch in Botswana, after its successful launch in Kenya in 2017.
- Despite the lack of regulation, there have been at least three blockchain based start-ups in Botswana:
  - the Satoshi Centre, founded in 2014, acts as a blockchain hub and aims to educate business and government in Botswana about the disruptive technology
  - Plaas, launched by the Satoshi Centre, aims to develop a mobile application that enables farmers and farming cooperatives to manage daily farming production and stock, on the blockchain
  - Kgoboko, a financial ecosystem, aims to address the needs of the unbanked in emerging markets
- In addition, a private medical clinic in Gaborone, the Sharada Clinic, has apparently started accepting bitcoin, along with traditional payment methods, as compensation for treatment. The Sharada Clinic's aim is to "achieve sustainability through accessible services."
- Anglo American's diamond unit, De Beers, which has a number of mines in Botswana, has launched the first industry-wide blockchain network to monitor the quality and origin of its diamonds. This blockchain based supply chain will monitor the diamonds from the moment they are mined to the point at which they reach the consumer. Bruce Cleaver, CEO of De Beers, stated that the purpose of using blockchain technology is because "a consumer should be able to know there is an accurate register of a diamond's journey that assures its provenance and authenticity."

Formal legal action

There has been no litigation or court action reported in Botswana yet.

Risks highlighted and key observations

- Private sector is driving the use of cryptocurrency and blockchain technology in Botswana.
- The Bank of Botswana's negative response to cryptocurrencies seems to indicate that Botswana will be slow to regulate blockchain technology

2. Ghana

Regulatory environment

- The Bank of Ghana has announced that the trading and use of cryptocurrency in Ghana is not yet legal because it is not recognized as a legitimate form of currency. This is because all media of exchange in the country must be supported by the Bank of Ghana, which has not yet approved the use of cryptocurrencies.
- The Governor of the Bank of Ghana stated that the necessary regulations to support the use of cryptocurrencies do not currently exist in Ghana. However, the Bank of Ghana has drafted a Payment Systems and Services Bill (Ghanaian Bill), which it believes will enable the regulation of cryptocurrency in Ghana in the future. After a preliminary review of the Ghanaian Bill, there seems to be no reference to cryptocurrency, blockchain or digital currency, however cryptocurrencies will apparently be regulated through companies registered with the government as "Electronic Money Issuers." The Bank of Ghana has discouraged the use of cryptocurrency until the promulgation of the Ghanaian Bill.
- In Ghana, more than 80% of landowners lack official title deeds with the Land Commission of Ghana and most land is held customarily through oral agreements. To resolve this, Ghanaian start-up Bitland is using blockchain technology to mirror official title deeds, thereby boosting the integrity of the land records held with the Land Commission of Ghana. Bitland believes that after their land is clearly registered on the blockchain, landowners may finally be able to apply for loans and mortgages with their banks.
- Land Layby Group, a Nairobi based real estate company, allows individuals to securely purchase property in Ghana, by accurately mirroring the Government Land Registry systems on the blockchain network. Potential purchasers can now review the accurate ownership records of the Government Land Registry systems on a tamper proof digital form. Land Layby Group believes that by using blockchain to publish the land records online, the risk of multiple titles for the same piece of land will be eliminated. A similar business model has been launched by Ghanaian based start-up, BenBen.

Formal legal action

There has been no litigation or court action reported in Ghana yet

Risks highlighted and key observations

The disapproval of the use of cryptocurrency by the Bank of Ghana and the lack of clear regulation by the Ghanaian Bill may create uncertainty and possible sanctions by the regulatory authorities in future.

3. Kenya

Regulatory environment

- Kenya does not yet have a blockchain regulatory framework in place. However, Kenya's National Land Commission has welcomed the use of the blockchain network in creating transparency of land ownership, as it will alleviate potential fraudulent sales of land, and confusion over title to land.
- Land Layby Group allows individuals to securely purchase property in Kenya, by accurately mirroring the Government Land Registry systems on a blockchain network. Potential purchasers can now review the accurate ownership records of the Government Land Registry systems on a tamper proof digital form. Land Layby Group believes that by using blockchain to publish the land records online, the risk of multiple titles for the same piece of land will be eliminated. The Law Society of Kenya has reportedly filed a lawsuit in an attempt to stall the implementation of digitising title deeds using blockchain technology on the basis that (1) the Kenyan legislature has not yet passed any laws which would support such an initiative, thus opening up the possibility that any progress could be reversed by a successive executive, and (2) thousands of land ownership cases currently before the courts could be hindered by a digital record purportedly proving ownership prior to the dispute being properly resolved by the judiciary.
- Another initiative in the private sector is the launch of TMT Global Coin, a blockchain-powered logistics company that hopes to improve cargo logistics globally by using blockchain technology through smart contracts to improve the transparency and authenticity of records in imports and exports.
- The National Transport and Safety Authority has announced its intention to roll out an electronic motor vehicle identification service in Kenya where all motor vehicles will have an electronic sticker placed on the windshields, detectable only via the use of specialised technology, thereby assisting in the recovery of stolen vehicles. The network will be run on a shared blockchain platform which will alert various government agencies of the theft, including *inter alia*, the Kenyan Revenue Authority and the Kenyan Police.
- Kenya's public health sector is also attempting to install a smart platform in all public hospitals creating a shared blockchain hub where patients' information and medical history may be shared. This will also enable nurses in rural areas to treat patients based on a doctor's advice obtained elsewhere.
- In addition, the Kenyan government is seeking to link the National Registration of Persons Bureau database to the closed circuit television cameras manned by the Kenyan Police, thereby enabling face recognition via blockchain technology.

- In contrast, the Central Bank of Kenya's governor has purportedly rejected the use of virtual currencies in Kenya due to their unregulated nature. In addition, the Central Bank of Kenya has repeatedly stated that it does not support the use of cryptocurrency within Kenya.
- On 28 February 2018, the Kenyan government (through its ICT Cabinet Secretary) announced that it would appoint an 11-member task force to explore the use of distributed ledger technology and artificial intelligence. This comes after the President of Kenya announced his intentions for Kenya to explore the opportunities in the new technology found in the fourth industrial revolution.
- This is a decidedly more positive response from the Government of Kenya who had previously referred to bitcoin as "a pyramid scheme".

Formal legal action

- In *Lipisha Consortium Ltd and Bitpesa Ltd v Safaricom Petition* [2015] eKLR (the **Lipisha Judgment**), the court ruled that Bitcoin represented monetary value and that Safaricom was justified in suspending the services of Lipisha Consortium Ltd and Bitpesa Ltd, after Bitpesa Ltd dealt in money remittance services using bitcoin without first receiving the approval of the Central Bank of Kenya.
- The Lipisha Judgment therefore sets a precedent for potential future sanctions by the Central Bank of Kenya against companies dealing in cryptocurrency in Kenya without first seeking its approval.
- In November 2017, three traders were charged with conspiracy to commit a felony in Nairobi in connection with the theft of 10.2 million Kenyan Shillings. Apparently, the traders had helped an unknown and untraceable individual purchase cryptocurrency using the alleged stolen money. This case brought the importance of strict AML and KYC procedures to the fore.

Risks highlighted and key observations

- The Central Bank of Kenya has expressed negative sentiments regarding the use of virtual currencies and this may hamper regulatory developments.
- The use of the blockchain network to clarify land title ownership may in fact result in an increasing number of disputes regarding the ownership of land.
- Due to the precedent set by the Lipisha Judgment, there may be future litigation regarding the use of cryptocurrencies without the Central Bank of Kenya's approval.

4. Mauritius

Regulatory environment

- In May 2017, Mauritius issued an open call to innovators to take advantage of its new Regulatory Sandbox Licence. Applicants must demonstrate that their project is innovative, beneficial to the Mauritian economy and cannot be accommodated in the innovator's home jurisdiction due to legal or regulatory gaps. In particular, the Government of Mauritius is seeking to attract fintech start-ups and strives to be considered to become known as the, "Ethereum Island."
- The President of the Republic of Mauritius announced in November 2017 Mauritius' intention to create the Mauritius Blockchain Center of Excellence (the **MBCE**) by January 2018. The President described the MBCE's mission as threefold:
    - provide education on blockchain
    - build the Mauritian community
    - develop use cases that solve real world problems
- In February 2018, the Fintech and Innovation-driven Financial Services Regulatory Committee met for the first time to make recommendations to the Government of Mauritius on the need to introduce new sets of regulations for fintech and innovation.
- In June 2018, it was announced that a Mauritian state owned entity, State Informatics Limited, concluded a strategic cooperation agreement with a South Korean-owned company called the Locus Chain Foundation to introduce blockchain technology to the public and private sector IT systems of Mauritius and several African countries, by introducing a 'fourth generation' blockchain platform which is capable of conducting "end-to-end transactions in less than two seconds". CEO, founder and chairman of the Locus Chain Foundation, Mr Sangyoon Lee, stated that he believes that introducing the blockchain platform as an infrastructure system and settlement currency in African countries will make a significant change to the way in which transactions are concluded and possibly "contribute to economic development by enhancing national (economies)."

Formal legal action

There has been no litigation or court action reported in Mauritius yet.

Risks highlighted and key observations

- The regulatory sandbox has provided Mauritius with an advantage of learning about the risks and benefits associated with cryptocurrencies, whilst simultaneously learning how best to draft and implement the relevant legal frameworks.
- The MBCE and the Fintech and Innovation-driven Financial Services Regulatory Committee will

soon release its recommendations on the regulation of cryptocurrencies in Mauritius.

5. Namibia

Regulatory environment

- The Government of Namibia has reportedly not yet released any statement on the use or regulation of cryptocurrencies in Namibia.
- The Bank of Namibia has strongly voiced its objections to the use of cryptocurrency in Namibia in its position paper released in September 2014.
- In this position paper, the Bank of Namibia founded its objections on five bases:
    - it likened cryptocurrency to virtual currency, being a "type of digital currency that is unregulated with no legal tender status or relations to any central bank or public authority of a particular jurisdiction"
    - the Bank of Namibia Act, No. 15 of 1997 provides the Bank of Namibia with the sole mandate to serve as Namibia's instrument to control the money supply and to create and issue currency. The Bank of Namibia does not consider the creation of virtual currencies to fall within its mandate
    - it distinguished between virtual currency and e-money, the latter being a digital representation of legal tender currency, also referred to as fiat currency
    - the Currency and Exchanges Act, No. 9 of 1993 and the Exchange Control Regulations, 1961 do not allow the establishment of virtual currency exchanges or bureaus in Namibia. As such, the Bank of Namibia does not consider virtual currencies to be a legal tender in Namibia or a foreign currency. Further, no goods or services may be bought with virtual currencies within Namibia
    - it considers virtual currencies to pose a high risk of money laundering and terrorist financing
- Although the Bank of Namibia supports the technology behind cryptocurrency, it does not recognize, nor support the use of cryptocurrencies within Namibia.

Formal legal action

There has been no litigation or court action reported in Namibia concerning cryptocurrency yet.

Risks highlighted and key observations

- Although the Bank of Namibia made no reference to any legal penalties for the use of cryptocurrencies in its 2014 position paper, it did state that "virtual currencies cannot be used to pay for goods and services in Namibia."

- As such, there may be a declaratory order sought by residents of Namibia to determine the legality of the use of cryptocurrencies within Namibia, or the Bank of Namibia may institute proceedings to interdict any users of cryptocurrencies within its jurisdiction.

6. Nigeria

Regulatory environment

- In early 2017, the Central Bank of Nigeria warned financial institutions not to use, hold or trade virtual currencies pending "substantive regulation or decision by the (Central Bank of Nigeria) as they are not legal tender in Nigeria." Further, the Central Bank of Nigeria stated that banks who trade in cryptocurrencies do so at their own risk. The Central Bank of Nigeria cited its scepticism of cryptocurrencies on the possible exploitation of Nigerian citizen by criminals and terrorists.
- Despite these warnings, a bitcoin-related Ponzi scheme reportedly resulted in almost 2 million Nigerian residents losing a combined USD 50 million in early 2017.
- Following this, the Nigerian Deposit Insurance Corporation (the **NDIC**) warned Nigerians that they would not be afforded consumer protection or insurance from the NDIC when trading in cryptocurrencies as virtual currencies have not been issued by the Central Bank of Nigeria. The NDIC stated further that "[n]o central bank will accept digital currency as a substitute for its national currency or part of its monetary system, when it is not able to control it."
- In late 2017, the Deputy Director of the Central Bank of Nigeria commented that the "Central bank cannot control or regulate bitcoin. [The] Central bank cannot control or regulate blockchain. Just the same way no one is going to control or regulate the internet. We don't own it." Despite this, the Deputy Director announced that the Central Bank of Nigeria has "taken measures to create four departments in the institution that are looking forward to harmonis[ing] the white paper on Crypto currency."
- In January 2018, the Governor of the Central Bank of Nigeria stated that "Cryptocurrency or bitcoin is like a gamble…We cannot, as a central bank, give support to situations where people risk their savings to 'gamble'." The Governor stated further that the Central Bank of Nigeria may, in future, "make some very concrete pronouncements as to the direction [of the regulation of cryptocurrency]."
- Despite the above response by the Central Bank of Nigeria and the NDIC, Nigeria reportedly has the world's third largest bitcoin holdings as a percentage of gross domestic product. In contrast, the Nigerian Senate has launched an investigation into "the viability of bitcoin as a form of investment."

Formal legal action

There has been no litigation or court action reported in Nigeria yet.

Risks highlighted and key observations

- A circular has been released by the Central Bank of Nigeria prohibiting the trading of cryptocurrencies by financial institutions in Nigeria. It would seem that a violation by the financial institutions of this circular would result in sanctions by the Central Bank of Nigeria.
- The slow acceptance of cryptocurrencies by the regulators is notable considering that Nigeria is reportedly the third largest holder of bitcoin in the world.

7. South Africa

Regulatory environment

- In December 2014, the South African Reserve Bank (**SARB**) issued its position paper on virtual currencies whereby it confirmed that the SARB has the sole right to issue legal tender and that decentralised convertible virtual currencies do not constitute legal tender in South Africa. The SARB stated "any merchant or beneficiary may refuse [virtual currencies] as a means of payment." This was confirmed again by the SARB in its statement in 2017 where it confirmed that it does not recognize cryptocurrency as "currency" or "legal tender" in South Africa. Notwithstanding this, SARB has advised that any payments used to purchase virtual currencies would contribute to an individual's utilisation of the "single discretionary allowance (R1 million) and/or individual foreign capital allowance (R10 million with a Tax Clearance Certificate), per calendar year."
- Subsequently, the Minister of Finance noted in mid-2017 in Parliament that "the National Treasury together with the SARB, [Financial Intelligence Centre], and [Financial Services Board] have also established an Intergovernmental Fintech Working Group in December 2016, to develop an approach and revised policy stance towards fintech, including crypto-currencies, and to deal with fast-emerging fintech matters in the financial sector, like crowdfunding, robo-advice, machine learning and alternative payment platforms." The Fintech Working Group has recently launched Project Khokha, which experiments with distributed ledger technologies (**DLT**) in collaboration with ConsenSys (a New York based blockchain technology company) and the South African banking industry. Project Khokha aims to develop a proof of concept to "replicate the interbank clearing and settlement on a DLT which will allow the SARB and industry to jointly assess the potential benefits and risks of DLTs."
- The South African tax authority, the South African Revenue Service (**SARS**), has been more vocal, and in a statement this year, it stated that cryptocurrencies are "neither official South African tender nor widely used and accepted in South Africa as a medium of exchange." However, although cryptocurrencies are not regarded by SARS as a currency for income tax purposes or capital gains tax, cryptocurrencies are regarded by SARS as an asset of an intangible nature. It currently appears that any taxpayer who intentionally omits to declare their gains or profits will be penalized by up to 200 percent of the amount owed plus interest, in accordance with section 223 of the Tax Administration Act, 28 of 2011.
- SARS argues that cryptocurrencies should be taxed depending on the intention with which it is held. Thus, gains or losses in relation to cryptocurrencies can be broadly categorized as having three potential consequences:

  - a cryptocurrency can be acquired through mining but until the newly acquired cryptocurrency is sold or exchanged for cash, it will be held by the miner as “trading stock”
  - investors buying and selling cryptocurrencies on exchanges will be liable for the capital gains earned by the investor
  - where goods or services are exchanged for cryptocurrencies, the normal barter transaction rules will apply
- Interestingly, two mainstream brands (Takealot.com and Pick ‘n Pay) have previously accepted bitcoin as a method of payment, although it is undetermined whether these two retailers still this method of payment. Earlier this year, a cryptocurrency ATM was opened in Randburg, Johannesburg. It is claimed that this is one of only four cryptocurrency ATMs in the whole of Africa.
- South Africa recently passed new legislation which will regulate the financial sector in what is called a “Twin Peaks Model.” This model provides for two new financial regulators in South Africa. Thus, it is likely that the requirements to register with financial regulators will become more stringent. The Deputy Governor of SARB stated that the “Twin Peaks model of financial sector regulation, which is currently being implemented, aims to put in place a regulatory framework that better responds to the dynamic nature of the financial sector, including fintech.”
- This year, two initial coin offerings (**ICO’s**) were launched exclusively in South Africa both of which aim to contribute to the financial wellbeing of the country.
  - The first is ‘Rhino Coin’ which is a cryptocurrency aimed at regulating the legal sale of rhino horn within South Africa. Currently the cryptocurrency is valued at 1 coin: 1 gram of Rhino horn. Thus, holders of the Rhino Coin can either trade the cryptocurrency until it increases in value or subject to compliance with the legal requirements of doing so, purchase the Rhino horn. Any money raised from the ICO will be spent on Rhino conservation efforts.
  - The second is ‘Safcoin’ which was opened exclusively to South Africans for just ZAR 70 a token, before being made available to the rest of Africa. The purpose of Safcoin is to “become a widely accepted form of payment across the entire African online trading community. We want to boost African trade and simplify the cross-border payment processes between countries by eliminating red tape and bulky transaction processes.”
- In recent months, the National Treasury’s Taxation Laws Amendment Bill, 2018 which will shortly be presented to Parliament has proposed the following amendments to tax legislation which amongst other things, will change the way cryptocurrencies are classified in South Africa:
  - ‘financial services’ as defined in section 2 of the Value Added Tax Act, 89 of 1991 (**VAT Act**) will include “the issue, acquisition, collection, buying or selling or transfer of ownership of a cryptocurrency”
  - the inclusion of cryptocurrencies as a ‘financial service’ in the VAT Act will mean that the sale or supply of cryptocurrencies will be exempt from VAT, suppliers of cryptocurrencies will not be entitled to register for VAT purposes, and VAT may not be deducted from expenses incurred in relation to such activities
  - the definition of ‘financial instrument’ in the Income Tax Act, 58 of 1962 (ITA) will include “any cryptocurrency” and section 20A of the ITA will also be amended to include “the acquisition or disposal of any cryptocurrency” thereby ring-fencing the assessed losses of any natural person acquiring or disposing of cryptocurrencies and setting off such losses

against any income accrued from such trade

Formal legal action

- There has been no litigation or court action reported in South Africa yet.
- Notwithstanding this, pressure from the general public as well as regulators means that cryptocurrency exchanges are strongly advised to comply with the Financial Intelligence Centre Act, 38 of 2001 as well as related KYC and AML procedures. Most exchanges operating in South Africa voluntarily comply in any event, as it is likely this will become more stringent in future.

Risks highlighted and key observations

Not withstanding general warnings by the SARB and SARS of the possibility of fraud in cryptocurrency transactions, numerous South Africans allegedly fell victim to a fraudulent scheme involving BTC Global, Steve Twain. According to statements released by the Hawks, more than 27,500 people are believe to have invested between ZAR 16,000 and ZAR 1.4 million with BTC Global with the promise of up to 50% interest each month.

In December 2018, the SARB published its review of the National Payment Systems Act, 78 of 1998 for public comment. This legislation regulates systems used by South Africans for payment settlement, and the SARB reportedly intends to undertake a complete overhaul the current regulation by 2020. Interestingly, the SARB appears to recognise that there may soon be little difference between domestic and international payments and sees the possibility of similar digital currencies being at the heart of the national payment system in the future. This may pave the way for a reduction in the exclusivity of commercial banks in processing payments and, further down the line, the possibility of a digital South African fiat currency."

8. Tanzania

Regulatory environment

- In 2017, the Director of National Payment Systems of the Bank of Tanzania confirmed that cryptocurrencies are "not recognized in the country and whoever uses it will not get any assistance from (the Bank of Tanzania) should anything happen."
- In January 2018, the Bank of Tanzania further claimed that cryptocurrencies were a threat to East Africa's plan to launch a single, common currency which would be used across borders between the East African countries. The director stated that the plan to launch a common East African currency was still underway despite the popularity of cryptocurrencies.
- In addition, the Assistant Manager of the Safe Custody Centre at the Bank of Tanzania commented that "[i]nvestors in cryptocurrencies should be aware that they run the risk of losing all their capital."
- Despite the Bank of Tanzania's concerns, Tanzania reportedly has a large cryptocurrency mining

sector and is rated 120 out of the 219 countries that are actively involved in bitcoin mining. Tanzania's electricity consumption in cryptocurrency mining is predicted to amount to more than the entire country's non-cryptocurrency related electricity consumption per year, and this is expected to increase by about 30%.

- The Director confirmed that there is no legal framework in Tanzania to regulate cryptocurrencies through the Bank of Tanzania. As such, the Director stated that the Bank of Tanzania "is currently studying internet currencies with a view to finding a permanent regulatory solution."
- Further, the Director commented that the Bank of Tanzania is worried as "cryptocurrencies are not issued by traditional institutions such as central banks. This amplifies the risks of financial instability."

Formal legal action

There has been no litigation or court action reported in Tanzania yet.

Risks highlighted and key observations

- The Bank of Tanzania is currently attempting to study cryptocurrencies but has not, as yet, released any regulatory guidelines.
- Further, the insistence that cryptocurrency will threaten the launch of the common East African currency may lead regulators to issue stricter legislation in an effort to quash the potential use of virtual currencies.

9. Uganda

Regulatory environment

- The United Nations African Institute for the Prevention of Crime and the Treatment of Offenders (**UNAFRI**) together with the University of Birmingham Law School, hosted a round table discussion in 2016 with Ugandan members of Parliament, regulators and academia to discuss the regulation of cryptocurrencies in Uganda (the **UNAFRI Meeting**).
- It was reportedly agreed at the UNAFRI Meeting that Uganda's legislation, in its current state, does not govern the use of cryptocurrencies. Further, it was determined that cryptocurrency does not fall under the definition of fiat currency in terms of the Bank of Uganda Act, 2000 or the Foreign Exchange Act, 2004.
- In addition, it was argued that the Bank of Uganda Act, 2000 and the Ugandan Constitution (Article 162) do not empower the Bank of Uganda to regulate virtual currencies. As such, reports are that it was concluded that the policy makers of the Government of Uganda and other regulatory authorities need to determine whether to amend the existing law or promulgate new legislation.

- Despite the lack of regulation, government bodies such as the National Information Technology Authority (**NITA**), established under the Ministry of Information Communication Technology, are reportedly actively monitoring cryptocurrencies in Uganda in an effort to learn more and to consider how it can potentially regulate cryptocurrencies in the future. The NITA stated that due to the multi-faceted nature of virtual currencies, there would need to be more than one regulator in order to adequately legislate on this matter.
- In February 2017, the Bank of Uganda issued a warning to the general public about One Coin Digital Money, a Bulgarian company operating in Uganda, who had been advising the public to buy cryptocurrencies. The Bank of Uganda warned the general public to be careful about investing "their hard earned savings in Cryptocurrency" and that One Coin Digital Money was not licenced in terms of the Financial Institutions Act, 2004.
- In February 2018, the Governor of the Bank of Uganda warned the general public that "whoever wishes to invest their hard-earned savings in cryptocurrency forms…is taking a risk in the financial space where there is neither investor protection nor regulatory purview."
- As such, despite the positive response following the UNAFRI Meeting, there has been little progress in the regulation of cryptocurrencies in Uganda.

Formal legal action

There has been no litigation or court action reported in Uganda yet.

Risks highlighted and key observations

The lack of regulation, except where the Bank of Uganda releases public warnings, may create the risk of the general public being the victims of fraudulent schemes.

10. Zimbabwe

Regulatory environment

- The Reserve Bank of Zimbabwe has issued circulars and press statements banning the use and trade of virtual currencies in Zimbabwe. In recent months, after the Reserve Bank of Zimbabwe instructed the private banks of Zimbabwe's largest virtual currency exchange, Bitfinance (Private) Limited (**Golix**), to close its accounts, as well as Golix itself to refund its customers, Golix approached the High Court of Harare, Zimbabwe to seek an urgent interdict overturning the Reserve Bank of Zimbabwe's instruction.
- Golix offered an online market place for willing buyers and willing sellers to trade virtual currencies. They further provided for instant money remittance services whereby individuals could send virtual currencies into the Golix wallets of relatives in another country and the relatives could then convert the virtual currencies into fiat currency. This process was said to remove the middle man which is often located in Europe. Further, Golix recently opened up an ATM whereby its customers could deposit or withdraw fiat currency from their wallets.
- Golix argued that the actions of the Reserve Bank of Zimbabwe were (1) *ultra vires* to the

parameters of the applicable empowering legislation; (2) contrary to administrative law and unconstitutional; and (3) unsubstantiated and arbitrary.

- Due to the Reserve Bank of Zimbabwe not appearing before the High Court to make any representation, the urgent interdict was provisionally granted. However, the Reserve Bank of Zimbabwe filed a notice of objection to the High Court's provisional order in June 2018. The Reserve Bank of Zimbabwe's notice of objection is based on the following:
  - Golix conducts activities which fall within the ambit of the Reserve Bank of Zimbabwe's purview, namely financial services like money remittance and ATMs, however Golix has not applied for nor been granted proper licencing for such services
  - as the guardian of the financial stability and well being of Zimbabwe's economy, the Reserve Bank of Zimbabwe felt obligated to intervene and ban the activities of Golix due to the risk that the virtual currencies and foreign currencies being traded on the exchange were contributing to money laundering and the funding of terrorism
  - the Reserve Bank of Zimbabwe commented that should Golix strengthen its KYC policies to limit the risk of unlawful activities, and apply for the requisite licences to conduct such financial services, the Reserve Bank of Zimbabwe would be willing to explore the regulation of virtual currencies
- The effect of Golix being banned, even though quickly overturned by the High Court, has resulted in Golix not being able to refund its customers for their investments, either by transferring the virtual currencies to alternative wallets or by depositing the fiat currency equivalents into their customers' Zimbabwean bank accounts.
- Zimbabwe's appointed Minister of Finance is ostensibly optimistic about the potential uses of cryptocurrencies however, suggesting that cryptocurrencies may assist in eliminating the country's cash shortages. In contrast to the Reserve Bank of Zimbabwe, the Minister of Finance stated that Zimbabwe has "innovative youngsters so the idea shouldn't be to stop (virtual currencies) and say don't do this, but rather the regulators should invest in catching up with them and find ways to understand it, then regulate it."

Formal legal action

- The High Court of Harare, Zimbabwe has not yet reported any further proceedings between Golix and the Reserve Bank of Zimbabwe.

Risks highlighted and key observations

- The comments made by Minister of Finance may push the Reserve Bank of Zimbabwe to hasten their plans to properly regulate virtual currencies in Zimbabwe, however it is not clear whether there will be further litigation against organizations such as Golix.

OTHER COUNTRIES OF SIGNIFICANCE

Tunisia

- In 2015, Tunisia launched its national currency, the eDinar, on the blockchain. As a large proportion of Tunisian adults are unbanked, eDinar is operated through the Tunisian Post Office.
- Jointly owned by Tunisia and Saudi Arabia, the Tunisia Economic City (**TEC**), which is currently the largest Mediterranean city project, will be reportedly partnering with the Locus Chain Foundation to apply blockchain technology as its settlement currency and service platform.
- It is understood that the TEC, which covers a total area of 90 square kilometres on the eastern peninsula of Tunisia at a cost of US$ 50 billion, will be implementing the blockchain platform as the base technology and settlement currency for the entire city's construction projects, including various industries such as finance, communication, medical, shopping, automatic vehicles and artificial intelligence. Once completed, the TEC is set to act as Africa's gateway to Europe, the Middle East and Asia.
- In early 2018, the Tunisian government apparently concluded an agreement with Devery.io, a blockchain-based start-up focused on supply chain management, to implement a blockchain-based supply chain to track the delivery of lunches to school children in Tunisia. The scheme aims to feed 400,000 underprivileged Tunisian school children in 6,000 schools. Maria Lukyanova, the United Nations World Food Programme Representative for Tunisia, who has been assisting the Tunisian government with its feeding programme commented that "(t)his project is allowing us to explore how supporting innovation, through the introduction of solutions based on blockchain technology, can contribute to strengthening the effectiveness and efficiency of the Tunisian national school meals programme."

Senegal

- In 2016, Senegal launched a national digital currency, the eCFA, which will have the same value of the CFA franc and can be stored on mobile money and e-money wallets. Although built on the blockchain, the eCFA is actually regulated by the central bank, Banque Regionale de Marches (BRM) and eCurrency Mint.
- In a joint statement, the BRM and eCurrency Mint stated that the "eCFA is a high-security digital instrument that can be held in all mobile money and e-money wallets. It will secure universal liquidity, enable interoperability, and provide transparency to the entire digital ecosystem in WAEMU (West African Economy and Money Union)."

Sierra Leone

- In October 2017, the President of Sierra Leone announced his intentions to establish Sierra Leone as the world's first 'Smart Country'. The first step in this programme was to establish a nationwide economic identification service which will provide all Sierra Leonean citizens with digital credentials, thereby increasing their access to services offered by the Sierra Leone Government as well as promoting financial inclusion.
- Following this announcement, Sierra Leone reportedly became the first country to utilize blockchain technology in its national election, whereby the Agora platform (a blockchain based digital voting solution) was used to record and verify the votes cast during the election.

Although voting didn't take place using the Agora platform itself, the COO of Agora, Jaron Lukasiewicz commented that a "country like Sierra Leone can ultimately minimise a lot of the fall-out of a highly contentious election by using software like this."

- In September 2018, the President of Sierra Leone announced that his Government will be partnering with the U.N. Capital Development Fund and the U.N. Development Programme to launch the new Kiva Protocol in 2019, which will create and establish a national identification system using digital ledge technologies. Once implemented, the new Kiva Protocol will ensure that every citizen of Sierra Leone has a secure and complete record of their personal data and in doing so, will create "one of the most advanced, secure credit bureaus" so as to allow for access to financial services for the unbanked.

The Democratic Republic of the Congo (DRC)

Dorae Inc. has piloted a blockchain based supply chain tracking system for the cobalt and coltan mined from three mines in the DRC. According to Dorae Inc., the founders met with the President of the DRC who apparently approved of the pilot. If properly managed, the tracking system will mean that end users will have reliable information regarding the source of the raw materials and in doing so, reduce the use of child labour and environmentally damaging mining methods.

Madagascar

The Ixo Foundation, in partnership with the Seneca Park Zoo in New York, will be using blockchain technology in an attempt to raise funding for conservation projects in Madagascar. The Seneca Park Zoo is currently funding a tree-planting scheme in Ranomafana National Park in eastern Madagascar and the Ixo Foundation will monitor and record the tree-planting efforts. Each time a seed or sampling is planted, the Ixo Foundation will record its GPS co-ordinates and satellite imagery. The Seneca Park Zoo believes that this will reassure potential donors of the progress that the tree-planting scheme is making. The founder and president of Ixo Foundation stated that by "utilising the ixo Blockchain for Impact, they will be able to record evidence of change as verified impact data, which demonstrates what counts for sustainable social, environmental and economic development."

Ethiopia

The Ministry of Science and Technology hosted a meeting, and subsequently signed a memorandum of understanding, with the cryptocurrency start-up Cardano to establish a blockchain based supply chain application for coffee shipments. This supply chain will purportedly authenticate and trace the Ethiopian coffee from farmer to end user.

Zambia

- In October 2018, the Bank of Zambia released a press statement on the use of cryptocurrencies in Zambia. The Bank of Zambia confirmed that cryptocurrencies "are not legal tender in Zambia" and confirmed that in terms of section 30 of the Bank of Zambia Act (Chapter 360 of the Laws of Zambia), the Bank of Zambia is the only body with the right to issue notes and coins and as it "has not issued any form of cryptocurrency…(c)ryptocurrencies are not legal tender in the Republic of Zambia."

- The Bank of Zambia warned its citizens against the buying, trading or usage of cryptocurrencies as it was not responsible for overseeing, supervising nor the regulation of the cryptocurrency landscape. Finally, the Bank of Zambia advised that any use of cryptocurrencies would be at the user's own risk as "in most cases, no legal recourse would be available to customers due to the unregulated nature of cryptocurrency-related transactions."

Eswatini (formerly known as Swaziland)

In August 2017, the Central Bank of Eswatini advised that "there are no restrictions, disclosures or regulatory compliance applicable to transactions executed using Bitcoin." The Central Bank however noted that a risk is presented to users of cryptocurrencies as "there is no protection or legal recourse available from any institution including the Central Bank in the event that the user suffers financial loss from the use of Bitcoin or any other cryptocurrency."

Morocco

- In November 2017, the Office des Changes (Foreign Exchange Authority) of Morocco issued a statement banning the use of cryptocurrencies in transactions within Morocco as such conduct would reportedly directly violate Morocco's current legislation. This was supported by the Bank Al-Maghrib, the country's central bank in a statement released shortly thereafter, by describing cryptocurrencies as "a hidden payment system that is not backed by an organization, the use of virtual currencies entails significant risks for their users."
- Notwithstanding this, Brookstone Partners, a New York based private equity firm, has apparently purchased a 37,000 acres wind farm in Dakhla, Morocco to power a data centre and to mine bitcoin. The wind farm will apparently be developed by Soluna, a 'green' blockchain company, after its ICO where it hopes to raise US$ 100 million to finance the project.

Algeria

Algeria's Parliament has passed the Finance Act, 2018 (**FL2018**) which has prohibited the purchase, sale, use and possession of virtual currency. FL2018 provides that any violation of this provision will be punished in accordance with the laws and regulations currently in force in Algeria, including criminal sanctions. The ban follows concerns raised by parliamentarians that cryptocurrencies are used primarily to conduct illegal activities such as terrorist financing, drug trafficking, money laundering and tax evasion.

Cameroon

- The Government of Cameroon has not legislated on cryptocurrencies yet and as such, no regulation or framework exists for the use or trade in cryptocurrencies.
- However, in 2015, the Government of Cameroon reportedly trialled a bitcoin-like digital currency called Trest. Although the results of the tests were "excellent", the high cost associated with electricity usage when processing cryptocurrency transactions acted as a hindrance to further testing of the use of cryptocurrencies within Cameroon.

Libya

- In early 2018, the Central Bank of Libya announced that virtual currencies such as Bitcoin are illegal and that no legal protection will be afforded to anyone using or trading them. The Central Bank of Libya explained that virtual currencies were banned as “these currencies may be used to carry out criminal activities and violations of laws such as money laundering and financing of terrorism.”
- The Central Bank of Libya advised that anyone planning on using virtual currencies must “obtain a license and a prior authorization to carry out activities, provide banking and/or financial services.”

GLOSSARY

AML - anti money laundering

Blockchain - a distributed ledger technology which bundles transactions into groups called ‘blocks’ and cryptographically chains those blocks together and then broadcasts them to the nodes of a peer-to-peer network, in order to create a immutable, distributed database of those transactions

Bitcoin - a form of digital currency created using blockchain technology which was based on the ideas set out in a white paper by Satoshi Nakamoto, a person whose identity is yet to be verified, and which pioneered the blockchain movement

Cryptocurrency - a digital asset designed to work as a medium of exchange that uses cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets

Distributed ledger technology - a technology developed in order to create a database that is consensually shared and synchronized across network spread across multiple sites, institutions or geographies

E-money - digital currency available in digital form (in contrast to physical currency, such as banknotes and coins)

Ethereum - an open-source, public, blockchain-based distributed computing platform and operating system known for its smart contract functionality and as a platform for facilitation decentralised applications with a token called ether

Fiat money - a currency that government has declared to be legal tender

Fintech - financial technologies

KYC - know-your-customer guidelines designed to prevent banks and similar organisations from being used, intentionally or unintentionally, by criminal elements for money laundering activities

Regulatory Sandbox Licence - a licence or permit issued by government or a governmental regulator, typically to a private organisation, to undertake certain pilots or tests of innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory and financial consequences of engaging in the activity in question

Virtual currency - unregulated, digital currency, typically issued and usually controlled by its developers and used and accepted among the members of a specific virtual community

	Jurisdiction	Central bank regulatory position	Regulations issued by central bank	Regulations issued by other authorities	Overall country position on fintech
1.	Botswana	The Bank of Botswana has stated that it currently has no intention of regulating or studying cryptocurrencies.	The Bank of Botswana has not released any regulation on cryptocurrencies or the use of blockchain technology.	No such regulations have been released.	The private sector is seeking to implement blockchain technology, but the relevant authorities seem to have no interest in regulating it.
2.	Ghana	The Bank of Ghana does not recognize cryptocurrency as a legitimate form of currency.	The Bank of Ghana has drafted the Ghanaian Bill to regulate cryptocurrency through “Electronic Money Issuers.”	No such regulations have been released.	Companies like Bitland, the Land Layby Group and BenBen have cooperated with government entities to replicate the Government Land Registry systems on the blockchain network, thereby resolving common ownership issues.
3.	Kenya	Rejected the use of digital currencies due to their unregulated nature.	No regulations have been issued by the central bank yet.	No regulation has been passed yet, but a task force has been established by the Government of Kenya to explore the use of digital currencies and artificial intelligence.	Positive reaction from the Government of Kenya. It is unclear whether the Central Bank of Kenya will adjust its view following the steps taken by the government. The Judiciary in Kenya has supported the Central Bank of Kenya’s authority to regulate cryptocurrency.

	Jurisdiction	Central bank regulatory position	Regulations issued by central bank	Regulations issued by other authorities	Overall country position on fintech
4.	Mauritius	Supportive of cryptocurrencies and seeking to create an “Ethereum Island.”	No regulations have been issued thus far, however the MBCE and the fintech and Innovation-driven Financial Services Regulatory Committee have been created to determine how best to regulate crypto currencies in Mauritius.	A Regulatory Sandbox has been created to provide innovators in financial institutions with licenses to practice despite there being little or no legislative framework.	Positive perception of fintech and actively trying to create a fintech hub in Mauritius.
5.	Namibia	Against the use and distribution of cryptocurrencies.	The Bank of Namibia’s position paper argues that the use of cryptocurrency in Namibia is contrary to existing legislation.	No such regulations have been released.	Overall, the regulators are against the use of cryptocurrencies within Namibia.
6.	Nigeria	Against the use of cryptocurrency due to the risk that Nigerians will be victims of fraudulent schemes.	No regulation has been issued by the Central Bank of Nigeria. However, the Central Bank of Nigeria has announced plans to release its white paper on the use and regulation of cryptocurrency in Nigeria.	Nothing has been released but the Nigerian Senate has launched an investigation into cryptocurrency.	Nigeria is the world’s third largest bitcoin holdings as a percentage of gross domestic product.
7.	South Africa	Positive towards the concept of cryptocurrencies and attempting to research effect of distributed virtual currencies to streamline the South African Multiple Option Settlement system through Project Khokha.	No regulation has been issued yet by the South African Reserve Bank.	The National Treasury has proposed amendments to the taxation legislation in South Africa and has classified cryptocurrencies as ‘financial services’ in terms of the VAT Act and ‘financial instruments’ in terms of the ITA.	Positive response from regulators who are trying to work with the fintech industry as well as the banking industry to find the most effective and appropriate way to regulate cryptocurrencies in South Africa.

	Jurisdiction	Central bank regulatory position	Regulations issued by central bank	Regulations issued by other authorities	Overall country position on fintech
8.	Tanzania	Wary of cryptocurrencies as it may threaten the launch of the common East African currency.	The Bank of Tanzania has confirmed that there is no regulatory framework currently in place in respect of cryptocurrencies.	No such regulations have been released.	High numbers of Tanzanians are involved in cryptocurrency mining, but this is not being regulated by the relevant authorities.
9.	Uganda	The Bank of Uganda has warned the general public about trading in cryptocurrency considering its volatility and risk.	No regulation has been released by the Bank of Uganda.	No such regulations have been released.	Governmental agencies such as UNAFRI and NITA are attempting to scrutinize the regulatory frameworks of cryptocurrencies in order to advise the Bank of Uganda and the Ugandan government on potential legislative changes.
10.	Zimbabwe	The Reserve Bank of Zimbabwe has banned the trading of all virtual currencies within Zimbabwe and have instructed private banks to close the bank accounts of anyone using or trading in virtual currencies.	No regulation has been released by the Reserve Bank of Zimbabwe.	No such regulations have been released.	Virtual currencies are used and traded by individuals and entities in the private sector, however the Reserve Bank of Zimbabwe is discouraging the use of such virtual currencies. In contrast, the Minister of Finance of Zimbabwe has encouraged the legislature to start considering regulating the use of virtual currencies with Zimbabwe.

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