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The dark arts of crypto laundering and the nigerian financial ecosystem: Examining regulatory perspectives of virtual assets and virtual asset providers in mitigating money laundering risks in Nigeria

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ABSTRACT

The last five years have seen immense growth in the Nigerian financial services sphere, particularly with the introduction of innovative ways to make, trade and exchange money in a largely unregulated sphere. One of such developments is virtual assets which has opened up a lot of doors in the world of FinTech and attracted the attention of financial industry regulators. The Central Bank of Nigeria (CBN) and other financial regulatory agencies seem to however waiver in their governance systems of virtual assets, oscillating between an implied soft ban through various circulars in 2021 on one hand and a desire to critically understand the operations of virtual assets within the ambit of the Securities and Exchange Commission rules in 2022. However, within this timeframe, various cryptocurrency trading platforms quickly found ways to illegally circumvent and allow users to continue trading, regardless of the implied ban, taking advantage of financial agencies' lackadaisical approach to regulating their activities. Current research therefore suggests that there is a continued operation of such exchange platforms outside regulatory boundaries where in May 2023, Patricia, a popular Nigerian cryptocurrency exchange platform, launched its own digital tokens. In response, the CBN released a guideline in December 2023 on the operations of bank accounts for virtual assets and virtual asset service providers (VASPs), a first step towards regulating virtual assets in Nigeria. This paper therefore aims to critically assess the anatomy and footprint of cryptolaundering, particularly in Nigeria's banking and finance sector, as well as current and future attempts at regulating the potential money laundering risks of virtual assets. Particularly, this paper aims to examine the potency of current regulatory perspectives and Nigeria's emerging governance system for virtual assets and VASPs side by side with its current economic and social realities and the overall regulatory nature of Nigeria's financial ecosystem.

Introduction

Raheja et al. explain that while the global financial system has experienced an exponential boom and growth of new technological innovations specifically virtual assets, the concept as a whole, its inner workings and relevance to the banking and finance sector is still "widely misunderstood"[1]; by consumers, investors and even regulators. While some assert that virtual assets seem to fulfil only one of the functions of money,[2] others seem to conclude that virtual assets are divergent and can operate in any function that their users require. Ultimately, virtual assets appear to be "consistent with any method of value transfer"[3]; and so have the potential to be used as part of everyday activities from payment methods, investments and property purchases (real or personal). Due to the global popularity of these new financial instruments, cryptocurrencies have become a threat to market stability and the financial infrastructure in Africa, particularly in Nigeria. Sub-Saharan Africa and a greater portion of other developing countries within the African region appear to be at the forefront of crypto usage and volumes (with Nigeria ranked in the top three global users) which is ironically juxtaposed with weaker regulatory regimes and frameworks in these jurisdictions. As of 2024, Nigeria is reported to have received approximately "$59 billion in cryptocurrency value." With further reports of growing stablecoins and Decentralised Finance (DeFi) adoption across the country side by side with continued

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[1] R Raheja, S Awasthi And A Kumar, "Impact Of Blockchain In Social Networks." (2024) 3 Tejas Journal Of Technologies And Humanitarian Science 2. 25–30.

[2] A Schmidt, "Virtual Assets: Compelling A New Anti-Money Laundering And Counter-Terrorism Financing Regulatory Model." (2022) 29 International Journal Of Law And Information Technology 4. 332–363.

[3] ibid

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cryptocurrency activities, it is important to consider its regulatory strategies and frameworks in response to developing cryptocurrency activities in Nigeria. Especially with developments in the Financial Action Task Force's recommendations for new technologies and innovation and the Central Bank of Nigeria (CBN's) recent guidelines for virtual assets, it is therefore important to assess Nigeria's regulatory landscape for cryptocurrencies and similar technologies.

This paper is therefore aimed at providing an indepth understanding on how criminals may carry out laundering activities through the use of cryptocurrencies and evaluate the role of cryptocurrency in Nigeria's financial ecosystem by assessing various theoretical frameworks on regulation and the need to regulate crypto activities in Nigeria. More specifically, it investigates the global nature of cryptolaundering and the cryptocurrency ecosystem and assesses the need for a shift in regulatory perspectives for effective regulation of cryptocurrencies in Nigeria by considering various regulatory theories and frameworks. This paper thus provides significant contributions to an under-researched area of cryptocurrency research in the African and Nigerian financial sectors by analysing regulatory perspectives, landscapes and enforcement with regard to cryptocurrencies. The first section will clearly set out the various theoretical frameworks such as the utility theory on criminal behaviour as well as various regulatory theories and its importance to the research. The next section will assess the operations and workings of cryptocurrencies in everyday life, by discussing the use of cryptocurrencies and NFTs in everyday transactions. The next section will examine the crypto laundering ecosystem by seting out the global landscape of cryptocurrencies, its inner workings and the key players involved in a simple transaction, such as mixers, miners and the peer-to-peer marketplace. As this research project is primarily focused on Nigeria as a case study, the final section will assess the potentials it presents as a medium of exchange including opportunities for economic growth and financial inclusion particularly in Sub-Saharan Africa as well as the interrelationship between the regulatory theories and Nigeria's oscillating regulatory perspectives on cryptocurrencies in the last five years and a broad overview of the challenges for Nigeria within the growing cryptocurrency ecosystem.

Theoretical frameworks for cryptocurrency-based money laundering regulations

It is clear that there are serious potentials for crypto assets to reshape and disrupt international finance and the international political landscape due to the immense international impact if developments in this ecosystem go awry. As such, theories on the illicit global and political economy, the utility of criminal behaviour in relation to cryptocurrencies and various regulatory theories are highly important to this project's research questions as they assess questions on what informs and motivates high-level criminal activities within the cryptocurrencies ecosystem alongside states' power to "control and create money"[4]; and the adequacy of existing individual state regulatory responses to these developments. These include socio-political and socio-economic responses on developments in cryptocurrency and its interrelation with their "monetary policy, currency values and capital account."[5]; It is important to consider these theories as part of the overall research question on the establishment of a special cryptocurrency enforcement agency in West Africa, as these theories inform the various governance approaches that may be adopted by these enforcement bodies both at the national and regional levels. Kochergin maintains that "the main task facing international organisations are the unification of regulatory approaches related to the issue and turnover of crypto assets at the international level."[6]

The utility model of criminal behaviour

In assessing rationales for regulatory and governance tactics when it comes to cryptocurrency, one question that jumps at the forefront is that of why cryptocurrencies are as popular and as sought out in today's economy. Beyond the numerous economic (and somewhat political) advantages and opportunities it presents, one often overlooked–yet crucial–area to consider is the psychology around cryptocurrency usage and acceptance by consumers, especially when it comes to crypto criminals choosing these mechanisms to commit criminal activities. While research into the psychology of cryptocurrencies is still relatively new and still emerging, Chochan explains that when it comes to cryptocurrencies, "the phenomenon of herd behaviour is also garnering attention."[7]; It is no news that cryptocurrencies have amassed a wide followership, particularly amongst the younger generation of consumers in the economy, a fact often attributed to its 'revolutionary' and unconventional nature. For instance in the US, the Securities and Exchange Commission (SEC) "note that many of the investors of cryptocurrency are young people who lack the sophistication to assess financial risks or have financial resources to manage the risks."[8]; As such, it can also be argued that the psychology behind this is this herd mentality–groupthink as described by Chochan and "its influence on the demographic of cryptocurrency participants which is inherently young."[9]

The utility model of criminal behaviour is therefore an important theoretical framework for this research for the very fact that it attempts to understand and dissect the psychology of criminal behaviour–why criminals act the way they do–when it comes to cryptocurrency usage and activities. This is particularly imperative as a good understanding of this rationale will serve as a springboard into understanding the more appropriate regulatory techniques and governance systems to be utilised in regulating cryptocurrency-based money laundering. The utility model of criminal behaviour as expounded by Becker explains criminality as being profitable, "if the utility of doing so is greater than zero."[10]; This therefore means that the individual or entity before acting in a criminal capacity, considers a cost-benefit analysis of the situation before deciding whether the gain from acting on such criminal behaviour is far greater than the "cost of any sanction that may be imposed."[11]; One of the greatest benefits accruable from the use of cryptocurrencies is the pseudonymity and quick transaction speed it presents, which are great opportunities for criminals to take advantage of in carrying out illicit activities. Marian argues that under the utility model of criminality, there is a higher likelihood for more crypto laundering criminals to emerge when thinking of the added benefits from operating with cryptocurrencies, since "individuals who had previously calculated negative behaviour from engaging in related

[4] Peter Andreas, "Illicit Globalization: Myths, Misconceptions, And Historical Lessons." (2011) 106 Political Science Quarterly 403–425

[5] Ibid

[6] D Kochergin, "Crypto-Assets: Economic Nature, Classification And Regulation Of Turnover. (2022) 17 International Organisations Research Journal 3. Available At: < Https://Doi.Org/10.17323/1996–7845–2022–03–04 > Accessed: 3rd August 2024.

[7] U W Chochan, "Cryptocurrencies: A Brief Thematic Review." (2022) Critical Blockchain Research Initiative: Discussion Paper Series (Online). Available At: < https://papers.ssrn.com/sol3/papers.cfm?abstract_id = 3024330 > Accessed 16th March 2024.

[8] S Kethineni And Y Cao, "The Rise In Popularity Of Cryptocurrency And Associated Criminal Activity. (2020) 30 International Criminal Justice Review 3. 325–344. Available At: < Https://Doi.Org/10.1177/1057567719827051 > Accessed: 15th August 2024.

[9] Ibid

[10] O Marian, "A Conceptual Framework For The Regulation Of Cryptocurrencies' (2017) 82 The University Of Chicago Law Review 1. 53–68. Available At: < Https://Core.Ac.Uk/Download/Pdf/234137592.Pdf > Accessed 21st May 2024.

[11] Ibid

criminal behaviour might now calculate positive utility solely because the illicit activity is executed through the use of cryptocurrencies."[12]; This is also alluded to by Kethineni and Ying Cao, who argue that "more freelance criminals look for opportunities in the virtual world instead of traditional criminal enterprises."[13]; Marian argues using the utility of criminal behaviour that "regulation should prevent cryptocurrencies from becoming a vehicle for criminal activity."[14]; This model heavily informs many arguments that will be put forward in this research, particularly when assessing the regulatory landscape of virtual assets in the new millennium. The basis of this theory is that when it comes to regulation, most state actors are caught between the tussle of either regulating to the extent that it stifles innovation, preventing cryptocurrencies from "achieving their positive potential"[15]; or regulating solely to prevent criminality.

Regulatory theories

Another important theoretical framework that underpins perhaps a large aspect of this research work is the various regulatory theories and approaches for regulation, particularly as they relate to the regulation of the new digital economy in response to financial activities. In Baldwin et al. on Understanding Regulation, they cite Selznick's definition of regulation as perhaps a broader and more generalised one, where Selznick views regulation as "sustained and focused control exercised by a public agency over activities that are valued by a community."[16]; While there may be some identifiable merits to this definition, Baldwin et al. argue that it may present a limited point of view as regulation may be defined under various themes according to its purpose as well as the various actors involved. As such, these include regulation being viewed as as set of specific rules with deliberate state influence and interference in business or social behaviour, or influence affecting all types of behaviour such that it is not only carried out by state institutions.[17] Evidently, it is clear that it would be limiting to view regulation and regulatory standpoints through a rather rigid lens as it encapsulates a wide variety of ideas. It is also important to consider the fact that over the new millennium, the idea of regulatory theories falling solely between either the "compliance or deterrence approaches"[18]; would also be problematic, with the introduction of newer theories such as "responsive regulation, smart regulation, problem-centred, risk-based and principle-based"[19]; approaches, including ideas of self-regulation and meta-regulation. Overall. Black concludes, on the point of what regulation is and isn't, that "regulation is a complex and multidimensional activity."[20]

Before assessing the importance of these various regulatory theories to this research project, it is important to understand the rationale for regulation and the standards that are usually assessed to determine the need for it. The collective view many commentators have on the importance of regulation is that it is "necessary for the functioning of a market economy and essential in the running of public services."[21]; Other rationales for regulation include distributional justice and rights protection, with commentators explaining that regulation should not only serve the purpose of the market economy or political interests alone. As such, it can therefore be surmised that regulation serves to ensure social, environmental and economic functions.

Due to the perceived shortcomings of the typical command and control regulatory tactics, Black suggests that "regulators and others need to build alternative cognitive frameworks, new ways of seeing and knowing financial markets which are different to the ways in which financial economists see and know if they are to fully understand their dynamics."[22]; This would ultimately view regulatory tactics through an interdisciplinary lens, incorporating social theories and conceptions, psychological ideas of consumers social and economic behaviour and other socio-economic theories as opposed to strictly looking at regulation from a pure disciplinarian perspective. Particularly in the contest of cryptocurrencies and idea for regulation, approaches as previously established, appear to favour disciplinarian ideas and this normative command and control style of regulation, without a thorough understanding of the need or rationale for a certain type or style of regulation in the first place. As Black asserts, questions on the effectiveness of regulatory tactics and the failures of existing regulatory strategies began to emerge globally, shortly after the global financial crisis in 2008, when the command and control as well as principles-based regulatory approach failed to avoid such catastrophe.[23] Furthermore, Black argues that although existing regulations at the time of the 2008 crisis seemed to move away from command and control into a more responsive regulation strategy such as the principles-based one employed by the UK, this was still not sufficient enough to prevent a global crisis.[24] This perhaps suggests why in recent times, especially around financial regulation, there has been a call for what is known as 'really responsive' and reflexive governance structures. Scott explains in this regard, that "reflexive governance is involved with fostering learning that goes beyond simply learning about variety in governance instruments and extends to learning about the preferences and commitments of the actors themselves."[25]

Motsi highlights the fact that "the enforcement and compliance challenges presented by cryptocurrencies call for a reconsideration of the role of the law vis-a-vis cryptocurrencies and the consideration of an alternative regulatory strategy."[26]; This is perhaps why the "command and control"[27];approaches governments are more keen on in approaching cryptocurrency regulation seem to prove more difficult for practical implementation.

Cryptocurrencies and the cryptolaundering ecosystem

The business of cryptocurrencies

It is imperative to first understand the diverse nature of the global cryptocurrency ecosystem to better approach the various transactional uses of cryptocurrencies in today's economy. Cryptocurrencies may often appear for use as "straightforward currencies (pseudo) or actual tokenised equity, scarce representations of some commodity, access for

[12] Ibid

[13] S Kethineni And Y Cao, "The Rise In Popularity Of Cryptocurrency And Associated Criminal Activity. (2020) 30 International Criminal Justice Review 3. 325–344. Available At: < Https://Doi.Org/10.1177/1057567719827051 > Accessed: 15th August 2024.

[14] Ibid

[15] Ibid

[16] R Baldwin, M Cave And M Lodge, *Understanding Regulation: Theory. Strategy And Practice.* (2nd Edn, Oxford: Oxford University Press, 2011).

[17] Ibid

[18] R Baldwin, M Cave And M Lodge, *Understanding Regulation: Theory. Strategy And Practice.* (2nd Edn, Oxford: Oxford University Press, 2011).

[19] Ibid

[20] J Black, "Paradoes And Failures: 'New Governance' Techniques And The Financial Crisis." (2012) 75 The Modern Law Review 6 1037–1063.

[21] Ibid

[22] J Black, "Paradoes And Failures: 'New Governance' Techniques And The Financial Crisis." (2012) 75 The Modern Law Review 6 1037–1063.

[23] Ibid

[24] Ibid

[25] C Scott, "Reflexive Governance, Regulation And Meta-Regulation: Control Or Learning?" In Schutter O And Lenoble J (Eds). *Reflexive Governance: Redefining The Public Interest In A Pluralistic World.* (Oxford: Hart Publishing, 2010).

[26] Immaculate Motsi, "Regulation Of Cryptocurrencies: A Reflexive Law Approach." (2020) PhD Thesis, University Of Warwick (Online). Available At: < Https://Wrap.Warwick.Ac.Uk/Id/Eprint/152404/ > Accessed: 20th March 2024

[27] C Scott, "Reflexive Governance, Regulation And Meta-Regulation: Control Or Learning?" In Schutter O And Lenoble J (Eds). *Reflexive Governance: Redefining The Public Interest In A Pluralistic World.* (Oxford: Hart Publishing, 2010).

a given application or service or representations of some external asset like gold."[28]; It is worth noting that these serve distinguished functions but can be broadly put into three categories as stipulated by Stylanious and Carter in their article. The first are the currency or exchange tokens, the everyday cryptocurrencies like bitcoin and Ethereum which have similar features to money as explained previously, which are gaining momentum as a transaction or payment method. The next are crypto commodities or investments, which "represent a debt or equity claim that often provide ownership rights,"[29]; popularly used during ICOs to raise capital. Finally, utility tokens, which cannot be used as payment methods but "enable access to a specific product or service."[30]

Additionally, within the art and entertainment industry, not only are cryptocurrencies prevalent as payment methods, but Okonkwo also explains that "artists like BJ 3LAV had generated more than $11 million within 24 hours through NFTs when he auctioned 33 NFTs to mark the third anniversary of his album."[31]; Where in the past, little to no attention was given to the money laundering risks in the art market, the emergence of NFTs seemed to intensify its risks at the time due to its widespread popularity. It is worth noting that throughout the post-covid period up until a year or two ago, NFTs had gained immense popularity as an avenue for money laundering activities, however, newer evidence now suggests that the vast majority of NFTs have in recent months become worthless.[32] It is however still important to present some discussions on NFTs as a future potential vehicle for money laundering due to the mechanism underpinning it, alongside current developments on the metaverse[33] that could potentially see a resurgence of NFTs or similar technologies in the near future.

Jordanoska explains that "as NFTs can represent different types of digital assets and can also be created and traded in a variety of manners, whether a particular NFT-activity or business model falls under the AML regime may require assessment on a case-by-case basis."[34]; Bajac and Bjelajac provide a succinct analysis of the way NFTs may be used for money laundering activities in their article, with the starting point being the layering stage, whereby "Bitcoins obtained through illegal actions of any kind or purpose are converted on the virtual currency exchange which is then deposited into the virtual wallet."[35]; After this, the user visits an NFT trading platform to open an anonymous account for the purchase of the NFT using the wallet. Subsequently, they may then convert the NFT into fiat currency or other traditional currency tokens. There are also instances where illicit organisations "may either create an NFT in an anonymous way or buy them through shell companies with suspect beneficial ownership."[36]; Hufnagel and King explain that in traditional money laundering patterns, money laundering does in fact occur commonly in the money market, a prime example of this being the diversion of money from "the '1Malaysia Development Berhad Fund'[37]; to purchase items of art."[38]; The common rationale as to the ease of money laundering in traditional art markets and particularly the previously popular NFTs is the fact that "unlike other markets regulated by AML, in the art market one can buy something for half a million, not show a passport and ship it."[39]; As previously established, while NFTs no longer carry the immense popularity it once used to due to the tremendous decline in its value, it can undoubtedly be argued that there are numerous AML/CFT concerns on the operation and business of NFTs in the financial ecosystem should they regain popularity.

The cryptolaundering ecosystem in plain sight: mixers, miners, and P2P marketplaces as tools and techniques used by cryptolaunderers

The money laundering process usually occurs in three stages: placement, layering and integration, and it is through these three stages that the concept of 'crypto laundering' takes place, albeit in more complex ways. Within the crypto laundering process, at the placement stage, users or criminals may purchase cryptocurrencies "from unregulated cryptocurrency exchanges, ATMS[40] or other online platforms where peers exchange cryptocurrencies."[41]; These may be purchased with the illicit funds themselves or other direct methods through mixing or tumbling services or cryptojacking and other proxy methods to inject the funds into the financial ecosystem at the initial placement stage. As asserted by Bajac and Bjelajac also, money laundering may occur with cryptocurrencies in four major ways. The first is the direct transfer of fiat currency to cryptocurrency, through "frequent withdrawals of larger amounts of fiat currency in cash from bank accounts,"[42]; making it possibly more difficult for traceability due to the cash withdrawals. The second is through directly buying virtual currencies through an exchange trading platform. The third is via the use of Bitcoin mixer services as explained previously, either "before or after selling Bitcoins."[43]; The last method (largely uncommon due to the growing decline of the transfer medium in years) is whereby "owners of illegally obtained Bitcoins invest into NFTs and through many cycles of purchasing and selling NFTs, hide the trail of dirty money."[44]

The darknet and P2P marketplaces

Perhaps one of the most popular obfuscation techniques employed by crypto criminals is the darknet marketplace. Butler defines the darknet as "areas of the internet that require special software or mechanisms to access them."[45]; Darknets are known to operate using complex anonymisation technologies, the most popular being "Tor" and

[28] K Stylaniou And N Carter, "The Size Of The Crypto Economy: Calculating Market Shares Of Crypto Assets, Echanges And Mining Pools." (2020) 16 Journal Of Competition Law And Economics 4. 511–551.

[29] L Cancelli, "The Growing Crypto-Assets Threat To Anti-Money Laundering: How Institutions Are Coping With This Phenomenon." (2020) Digitalisation In EU Financial Studies (EUDIFIN) Research Working Paper No. 12.

[30] Ibid

[31] I E Okonkwo, "NFT, Copyright And Intellectual Property Commercialisation." (2021) 29 International Journal Of Law Information Technology 4. 296–304.

[32] Maya Yang, "The Vast Majority of NFTs are Now Worthless, News Report shows." (2023) The Guardian (Online) Available at: < https://www.theguardian.com/technology/2023/sep/22/nfts-worthless-price > Accessed: 21st May 2024.

[33] The Metaverse is a virtual world where uers interact using virtual reality technology.

[34] A Jordanoska, "The Exciting World Of Nfts: A Consideration Of Regulatory And Financial Crime Risks. (2021) Butterworths Journal Of International Banking And Financial Law. 10 716

[35] Z Bjelajac And M B Bajac, "Blockchain Technology And Money Laundering." (2022) 39 Law Theory And Practice 21–38.

[36] A Jordanoska, "The Exciting World Of Nfts: A Consideration Of Regulatory And Financial Crime Risks. (2021) Butterworths Journal Of International Banking And Financial Law. 10 716

[37] The 1 Malaysia Development Berhad (1MDB) Fund is a state-fund set up in 2009 to promote development through foreign investment and partnership.

[38] S Hufnagel And C King, "Non-Fungible Tokens: Art And Crime In A Virtual World." [2023] 5 Criminal Law Review. 338–358.

[39] Ibid.

[40] Wade J, "What Is A Crypto ATM?" (2024) Investopedia. Available At: < https://www.investopedia.com/crypto-atm-6456118 > Accessed: July 20th 2024: Crypto ATMs are stand alone electronic Kiosks that allow users buy and sell cryptocurrency in exchange for cash with a debit card or using a digital wallet. There are tens of thousands worldwide, with a large concentration of them in the United states.

[41] E Ilbiz And C Haunert, "Sharing Economy For Tackling Money Laundering: The Europol Associated 'global Conference On Criminal Finances And Cryptocurrencies." (2022). Sustainability, 2022. 14 6618. 1–15.

[42] Z Bjelajac And M B Bajac, "Blockchain Technology And Money Laundering." (2022) 39 Law Theory And Practice 21–38.

[43] Ibid

[44] Ibid

[45] S Butler, "Criminal Use Of Cryptocurrencies: A Great New Threat Or Is Cash Still King?" (2019) 4 Journal Of Cyber Policy 3. 1–20.

I2P,"[46]; with the primary aim of hiding the identities of users. Through these softwares, traffic is routed through "multiple servers, encrypted each step of the way."[47]; Ultimately, while darknet markets are hosted on regular servers, access requires "a special software."[48]; As such, this allows for easy and seamless transactions to take place without fear of apprehension by regulatory authorities due to the difficulty of tracing and the enhanced privacy of these markets. According to Janze, "Darknet markets were pioneered in February 2011 by the now defunct platform Silk Road."[49]; Silk Road at the time of its existence, was perhaps the biggest menace to money laundering regulators within drugs and organised crimes due to how intricately complex the platform and subsequent criminal activities it allowed for, were. From its initial inception, Silk Road was predominantly used to buy and sell mostly narcotics, projecting "over $100 million per year and a lifetime income of $214 million."[50]; After its takedown in October of the same year, numerous copycats began emerging, such as Silk Road 2.0 and a reported availability of over "seventeen other marketplaces on the darknet and a total serviceable darknet market of 3.4 million users."[51]; These operations of the darknet market, its usage volume and size are perhaps the earliest indicators of the growing popularity of the criminal use of cryptocurrencies. In his paper, Dupuis cites Kane's theory on the regulatory dialectic, explaining that when thinking of the relationship between cryptocurrencies and criminal activities such as money laundering, "the regulatory dialectic implies that as governments seek to undermine criminal activity and inhibit tax avoidance, new technologies and methods will emerge."[52]; This is in line with arguments previously established, whereby criminals will perpetually be on the lookout for more innovative and complex technologies, particularly those that offer increased privacy when carrying out criminal activities in the financial ecosystem. This is alluded to by Janze who explains that "based on the rational choice theory and the nature of the dark markets, criminals prefer less over more identifiable ways to buy or sell illicit goods and services, due to the decreased costs and increased benefits for both buyers and sellers when compared to more traditional ways of conducting illegal business."[53]; This is also closely aligned to the utility of criminal behaviour theory as earlier established which posits this cost-benefit that criminals often rationalise when determining how to commit illicit activities with cryptocurrencies, assessing the potential high-profit margins and ability to obfuscate regulators thereby avoiding regulatory attention if more complex technologies are used compared to traditional methods.

Wang and Hseih draw upon the criminological theory framework and the money laundering triangle depicted in Fig. 1 below, in assessing crypto laundering activities at each stage.

Their paper explains that the placement stage is often best explained through the rationale of *'motivated offenders.'* This draws on the routine activity theory, explaining that 'motivated perpetrators are always present and looking for opportunities to commit all types of offences,"[54]; in the least traceable way possible. This motivated offenders' rationale is closely aligned with Gottschalk's convenience theory cited by Braaten and Vaughn, particularly on the economic dimension of crime and the idea that it is "assumed a rational choice wherein offenders weigh their economic interests against the probability of detection and desist from committing crimes where punishment is more certain or severe."[55];This is closely linked to the utility of criminal behaviour theory discussed earlier, which argues that cryptocurrency offers perhaps the best economic interests for criminals intending to avoid regulatory scrutiny when committing crimes, further explaining that cryptocurrency-based money laundering offers the most cost and time-effective opportunity for criminals seeking newer and advanced methods to commit financial crimes. As such, as opposed to going in the traditional route of placement–i.e. Placing illicit funds directly and thereby creating a somewhat paper trail–these criminals are more inclined to convert fiat into cryptocurrency through the mediums and channels previously mentioned, or better still, ensure that the "illegal acquisition is already in the form of a cryptocurrency"[56]; and accessible in the crypto wallets for transfer or exchange.

Rysin and Rysin highlight that during the placement stages, crypto criminals are more likely to have the ability to "open a lot of anonymous or pseudonymous wallets"[57]; primarily due to the lower costs and resources associated with opening wallets, compared to traditional bank accounts and even neo-banking methods and subsequently the lower "risks of placing proceeds of illicit activity."[58]; Tracing becomes increasingly more complex and difficult at the layering stage, where even more technical instruments are used to further hide these illicit funds such that they become virtually undetectable and such instruments are mixing and tumbler services. Wang and Hseih highlight the fact that during the layering stage, crypto criminals are likely to specifically choose suitable and more complex instruments to "smurf or facilitate types of layering schemes, as it increases the likelihood of gain."[59]; In line with this, in Chainalysis' (2024) Money Laundering and Cryptocurrency Report, one identified popular method of layering in crypto-laundering is known as *hops,* a system which "involves sending funds through numerous intermediary personal wallets."[60]; Particularly notable here is how crypto criminals may combine the use of crypto-mixers and crypto bridges as additional layers of complexity, especially for the purpose of "obscuring the connection between the illicit funds in the initial placement stage and their eventual integration."[61]

Chainalysis defines a mixer as "a service that blends the cryptocurrencies of many users together to obfuscate the origins and owners of the funds."[62]; As such, the ultimate aim of mixing services would be

[46] C Janze, "Are Cryptocurrencies Criminals Best Friends? Examining The Co-Evolution Of Bitcoin And Darknet Market (2017) 23rd Americas Conference On Infomation Systems.

[47] S Butler, "Criminal Use Of Cryptocurrencies: A Great New Threat Or Is Cash Still King?" (2019) 4 Journal Of Cyber Policy 3. 1–20.

[48] C Janze, "Are Cryptocurrencies Criminals Best Friends? Examining The Co-Evolution Of Bitcoin And Darknet Market (2017) 23rd Americas Conference On Infomation Systems.

[49] Ibid.

[50] S Butler, "Criminal Use Of Cryptocurrencies: A Great New Threat Or Is Cash Still King?" (2019) 4 Journal Of Cyber Policy 3. 1–20.

[51] Ibid

[52] D Dupuis And Gleanson, "Money Laundering With Cryptocurrency: Open Doors And The Regulatory Dialectic. (2020) 28 Journal Of Financial Crime 1. 60–74.

[53] C Janze, "Are Cryptocurrencies Criminals Best Friends? Examining The Co-Evolution Of Bitcoin And Darknet Market (2017) 23rd Americas Conference On Infomation Systems.

[54] Wang And Hseih, "Cryptocurrency Is The New Vogue: A Reflection On Money Laundering Prevention." (2024) 37 Security Journal 37 25–46.

[55] N C Braaten And M Vaughn, "Convenience Theory Of Cryptocurrency Crime: A Content Analysis Of Us Federal Court Decisions." (2021) 42 Deviant Behaviour, American Psychology Association 8. 958–978.

[56] Wang And Hseih, "Cryptocurrency Is The New Vogue: A Reflection On Money Laundering Prevention." (2024) 37 Security Journal 37 25–46.

[57] V Rysin And M Rysin, "Chapter 15: The Money Laundering Risk And Regulatory Challenges For Cryptocurrency Markets In Dziura M, Jaki A And Rojek T (Eds). Restructuring Management: Models, Changes, Development. (Gracow University Of Economics, 2019).

[58] Ibid

[59] Wang And Hseih, "Cryptocurrency Is The New Vogue: A Reflection On Money Laundering Prevention." (2024) 37 Security Journal 37 25–46.

[60] Chainalysis, "Money Laundering And Cryptocurrency Trends And New Techniques For Detection And Investigation." (2024) Chainalysis. Available At: < https://www.chainalysis.com/blog/money-laundering-cryptocurrency/#:~:text=In%202024%2C%20money%20laundering%20in,enforcement%20agencies%20of%20all%20kinds. > Accessed: July 27th 2024.

[61] Ibid

[62] Chainalysis, "Crypto Mixers And AML Compliance." (2020) Chainalysis: Crypto Basics. Available At: < https://www.chainalysis.com/blog/crypto-mixers/ > Accessed: July 20th 2024.

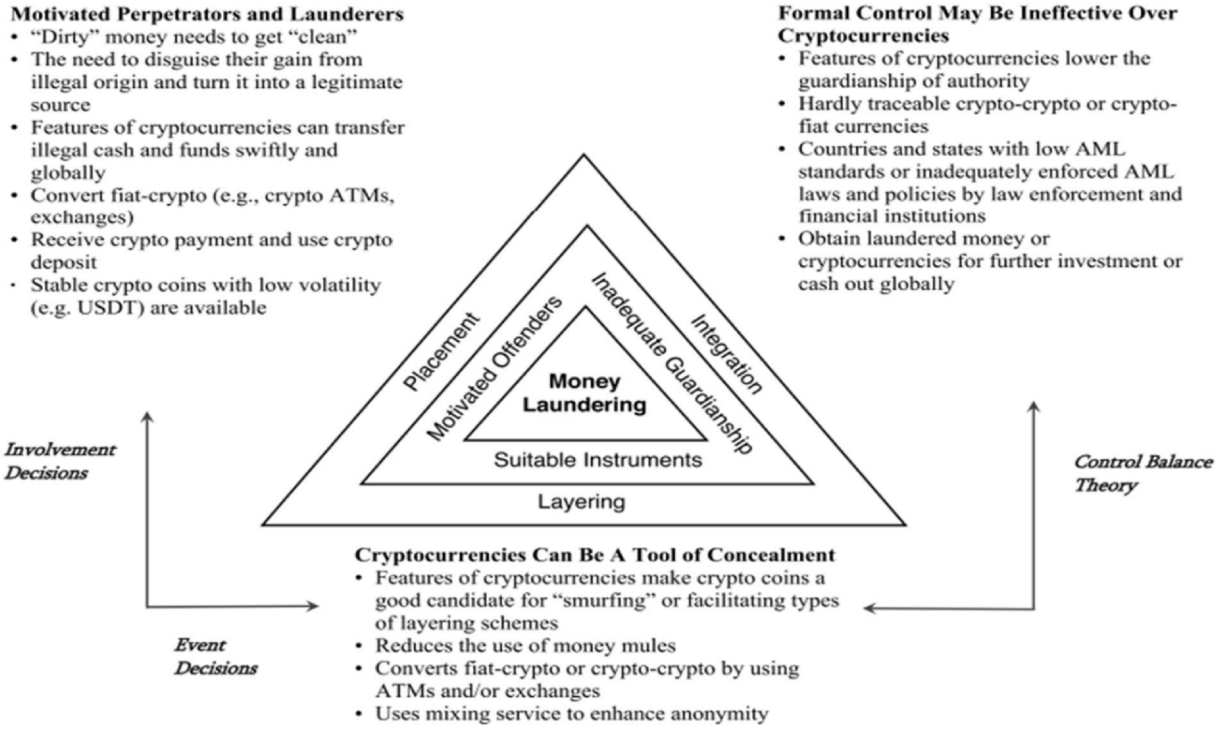

Fig. 1. The money laundering triangle interwoven with criminological frameworks (Wang and Hseih, 2024).

to ramp up users' privacy, making it even more difficult to monitor and trace activities and transactions. Although there are arguments about crypto mixers not being popular options for crypto-criminals,[63] it is worth delivering into discussions on the future potential of mixers being an increasingly popular option for cryptocurrency-enabled illicit activities, with the continued complexity of technology. According to its 2022 report, Chainalysis emphasises that as of July of the same year, "almost 10 % of all cryptocurrencies held by illicit entities have been laundered through a mixer."[64]; {see Fig. 2}

From the figure above, it is evident why discussions around mixing and tumbling services are even more important in a recent analysis of crypto laundering due to a resurgence in mixing activities in 2024, with the most recent monthly value received by mixers in April 2024 set at nearly $1 billion.

Wang and Hseih explain that the mixing service was initially introduced within cryptocurrency transactions as a way to "ensure the integrity and security of each transaction within exchanges, by breaking the flow of funds and in turn generating smaller transactions within the mix."[65]; They would therefore usually carry this out by essentially pooling and shuffling the cryptocurrencies deposited by users[66] to be later withdrawn, all in an attempt to increase complexity and ensure high-security levels within each transaction block and consequently make it a ripe tool for laundering. Ilbiz and Kaunert further highlight the fact that "tracing back illegitimate resource of cryptocurrency becomes more challenging if criminals use 'mixing' and 'tumbling' services,"[67]; particularly due to the shuffling of coins from multiple users and the use of time delays and randomised fees. It must be noted that whilst both services are similar, tumblers "distribute the same kind of cryptocurrency to the client's wallet, while mixers send a different cryptocurrency, making blockchain analysis more complicated"[68]; for investors and regulators. Crawford and Guan explain that there are generally two broad categories of mixing services–centralised and decentralised mixing services.

Similarly, another most intriguing way cryptocurrency-based money laundering may take place is through cryptocurrency mining since much of the network and transaction methods rely heavily on miners. Cryptocurrency miners essentially exist to verify the authenticity and accuracy of transactions carried out and in return receive a 'reward', usually in the form of "newly minted cryptocurrency."[69]; The problem, however, exists where there is usually little information available to "national authorities on who has mined cryptocurrencies"[70]; due to the fact that this process can easily be overlooked in assessments of criminal activities involving cryptocurrencies. Regulators are often quick to, as asserted under the utility of criminal behaviour, place more focus on the illicit money being used to either purchase or invest in cryptocurrencies for placement into the financial economy, and as a result, overlook the entire mining operation and mining facilities used by criminal organisations and communities looking to evade regulatory supervision. Owen and Arnold further explain that "newly minted cryptocurrency is not easily linked to an individual"[71]; and cryptocurrency miners exist in various pockets of the world while working for a diverse range of cryptocurrency exchanges and service platforms such that it is incredibly difficult to streamline or target miners. One of the biggest examples of this was the North Korea situation in 2019 as cited by the UN Security Council Report, where it was discovered that "the

[63] Ibid
[64] Ibid
[65] Wang And Hseih, "Cryptocurrency Is The New Vogue: A Reflection On Money Laundering Prevention." (2024) 37 Security Journal 37 25–46.
[66] Chainalysis, "Crypto Mixers And AML Compliance." (2020) Chainalysis: Crypto Basics. Available At: < https://www.chainalysis.com/blog/crypto-mixers/ > Accessed: July 20th 2024.
[67] E Ilbiz And C Haunert, "Sharing Economy For Tackling Money Laundering: The Europol Associated 'global Conference On Criminal Finances And Cryptocurrencies." (2022). Sustainability, 2022. 14 6618. 1–15.
[68] Ibid
[69] A Owen And A Arnold, "Virtual Asset Mining: Typologies, Risks And Responses." (2023) Royal United Services Institute: Emerging Insights. Available At: < Https://Static.Rusi.Org/Virtual-Assets-Mining-Typologies-Risks-And-Responses-Final.Pdf > Accessed On: 23rd March 2024.
[70] Ibid
[71] Ibid

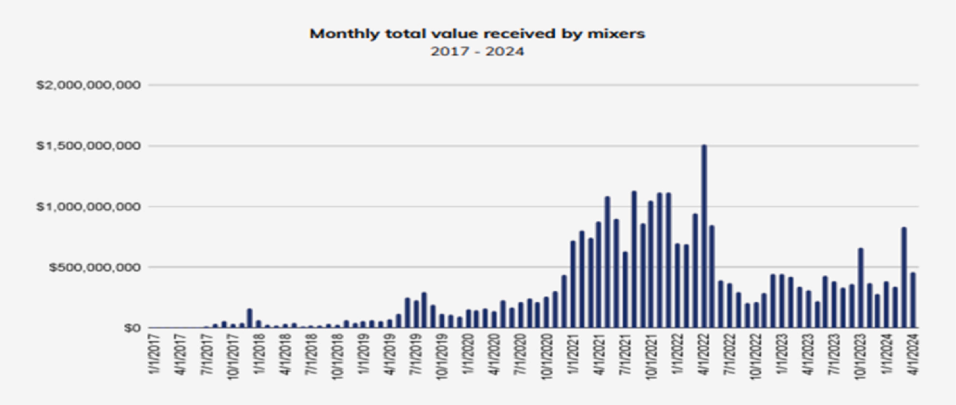

Fig. 2. The monthly total value received by mixers as of 2024 (Chainalysis, 2024).

country engaged in mining cryptocurrencies to generate revenue for its military programmes."[72]; Other similar typologies exist, as further cited by Owen and Arnold, through which cryptocurrency miners carry out illicit transactions for personal gain or on behalf of third-party organisations, in ways that are increasingly challenging and complex for regulatory authorities to follow. These include cryptojacking–a system where criminal miners may "hijack another user's computer processing power to mine cryptocurrency without their knowledge"[73]; – as well as remote mining, a process which essentially allows miners to act for crypto-exchanges located in jurisdictions different from where they reside or work.

In the final money laundering stage, i.e. integration, Wang and Hseih cite what is known as the 'control imbalance theory' as an explanation for the ease and swiftness with which crypto criminals complete the final stage of inserting these illegally obtained funds into the money market. This theory is hinged on the lacklustre regulation and penalties for crypto laundering-based money laundering across borders, particularly on how "efforts to police the internet and digital laws and legislation have failed to keep up with the rapid development and evolvement of technologies"[74]; like crypto assets. They describe this as a form of '*inadequate guardianship*' such that the form of formal regulation and control regulators try to impose on cryptocurrency transactions and usage may be wholly inadequate and ineffective, This is in line with the argument made in the previous section on the problems with the way regulations attempt to regulate cryptocurrencies i.e. in a way that stifles developments in innovation and the underpinning technology, instead of from a simple "crime control perspective."[75]; As such, the integration stage therefore allows crypto criminals to integrate crypto assets back into the financial system in a range of ways. Chainalysis note that "over 50 % of illicit funds wind up at centralised exchanges, either directly or indirectly after the use of obfuscation techniques."[76]; As analysed further by Zhou et al., because five operations are usually allowed on crypto exchanges,[77] it is relatively straightforward for the laundered funds to be "transferred out from the exchange to be reputable sources by selling or withdrawing operations in the integration stage."[78]

The rise of privacy coins: a new era of cryptolaundering

Ilbiz and Haunert assert that "privacy coins are another way to obfuscate cryptocurrency transactions"[79]; primarily due to it being an even more complex step up from the already complex bitcoin and similar cryptocurrencies, with them described as being "more resistant to tracking than other cryptocurrencies."[80]; Furthermore, Goldfeder et al. explains that a key attraction to privacy coins specifically is the hesitation by organisations and individuals to use "non-privacy cryptocurrencies as a medium of exchange."[81]; As such, this means that crypto criminals are more likely to rely on privacy coins more than the regular cryptocurrency and take advantage of the continued lack of regulatory awareness of these type of coins.

Chainalysis explains that "privacy coins are cryptocurrencies with privacy-enhancing features designed to boost anonymity and reduce traceability."[82]; Privacy coins operate in similar ways as cryptocurrencies, using strategies such as stealth addresses, ring signatures and the more specific "Zero-Knowledge Succinct Non-Interactive Argument of Knowledge (zk-SNARKs) used by Zcash–a popular privacy coin)–on a large scale."[83]; There is evidence to suggest that privacy coins implement "sophisticated cryptographic protocols"[84];

[72] United Nations Security Council, "Report Of The Security Council For 2019." (2020) General Assembly Official Records 74th Session, Supplement No 2.

[73] A Owen And A Arnold, "Virtual Asset Mining: Typologies, Risks And Responses." (2023) Royal United Services Institute: Emerging Insights. Available At: < Https://Static.Rusi.Org/Virtual-Assets-Mining-Typologies-Risks-And-Responses-Final.Pdf > Accessed On: 23rd March 2024.

[74] Wang And Hseih, "Cryptocurrency Is The New Vogue: A Reflection On Money Laundering Prevention." (2024) 37 Security Journal 37 25–46.

[75] Ibid

[76] Chainalysis, "Money Laundering And Cryptocurrency Trends And New Techniques For Detection And Investigation." (2024) Chainalysis. Available At: < https://www.chainalysis.com/blog/money-laundering-cryptocurrency/#:~:text=In%202024%2C%20money%20laundering%20in,enforcement%20agencies%20of%20all%20kinds. > Accessed: July 27th 2024.

[77] Zhou et al.: five operations described here (buying and selling crypto-fiat, depositing and withdrawing-transfers with single crypto, crypto to crypto-crossing multiple cryptos)

[78] Ibid

[79] E Ilbiz And C Haunert, "Sharing Economy For Tackling Money Laundering: The Europol Associated 'global Conference On Criminal Finances And Cryptocurrencies." (2022). Sustainability, 2022. 14 6618. 1–15.

[80] Chainalysis, "Privacy Coins 101: Anonymity Enhanced Cryptocurrencies." (2023) Chainalysis: Cryptobasics. Available At: < https://www.chainalysis.com/blog/privacy-coins-anonymity-enhanced-cryptocurrencies/ > Accessed: 18th May 2024.

[81] Goldfeder, H Kalodner, D Reisman, A Narayanan, "When The Cookie Meets The Blockchain: Privacy Risks Of Web Payments Via Cryptocurrencies." (2018) Proc. Privacy Enhancing Technology. 4 179–199.

[82] Chainalysis, "Privacy Coins 101: Anonymity Enhanced Cryptocurrencies." (2023) Chainalysis: Cryptobasics. Available At: < https://www.chainalysis.com/blog/privacy-coins-anonymity-enhanced-cryptocurrencies/ > Accessed: 18th May 2024.

[83] Ibid

[84] N Sapkota And K Grobys, "Asset Market Equilibria In Cryptocurrency Markets: Evidence From A Study Of Privacy And Non-Privacy Coins." (2021) 74 Journal Of International Financial Markets, Institutions And Money.

to carry out obfuscation activities and in some cases. One of the foremost–and by virtue of this the most popular–type of privacy coin is Monero, released in 2014 and has so far become "the largest privacy coin by market capitalisation"[85]; of over $2.9 billion as of April 2023. Human further expands on the tax evasion challenges Monero has brought about since its popularity, citing the decision of the U.S' IRS to create a "bounty for anyone that can trace Monero."[86]; Very importantly, academics in this field of study suggest that "privacy coins form a distinct submarket in the cryptocurrency market"[87]; and resultantly, appeals to a very specific subset of users including drug dealers and extortionists[88] for money laundering purposes. This is confirmed by Kethineni and Ying Cao who explain that "hackers have been found taking control of government websites and visitors' computers to mine Monero."[89]; Additionally, because of the underlying technology that powers privacy coins, such as "masternode technology, ring signature and a stealth wallet address,"[90]; privacy coins will now and in the future, continue to offer attractive benefits to crypto criminals. Ultimately, given that these type of cryptocurrencies are still relatively new in the market,

Cryptolaundering in practice

Wardani et al. cite two key examples of crypto laundering in practical settings, drawing upon key case studies from Brazil and Indonesia.[91] The Asabri[92] corruption and money laundering case can be described as a typical textbook example of crypto laundering where one of the directors of Asabri committed the predicate offence of insider trading by selling shares at a manipulated price after misrepresenting the value of the company's portfolio.[93] He later used the funds from this fraudulent transaction to purchase a number of Bitcoin from PT Indodax Nasional Indonesia, by using a third-party nominee to create a Bitcoin account, thereby completing the placement and layering stages of the money laundering process. The Brazillian gold mining case[94] further cited, which took place between 2019 and 2021, appears as a much more complex type of crypto laundering involving a very organised group of individuals and organised behaviour. Another example has been cited by Sesha Kethineni and Ying Cao, about Ponzi schemes and their use of cryptocurrencies in a cross-border manner. In a notable 2014 US case, *Pirateat40*[95], the founder of BTC savings and Trust was charged with fraud involving over $ 7 million BTCs. Kethineni and Cao explain that the founder "solicited investors using online chatrooms and BTC Forum with a promise of a 7 % return on investments per week and used the BTCs he received from new investors to pay for the old investors and converted some of the BTCs into U.S. dollars for personal use."[96]; With relation to mixer-led cryptocurrency based money laundering, in 2020, Faccia and Mosteanu note that the Dutch authorities and Fiscal Intelligence and Investigation Services "arrested two men for allegedly laundering millions of euros in cryptocurrency,"[97]; through the use of an already banned mixing service in Germany, *Bestmixer.io.* This further buttresses the point previously made on the money laundering potentials mixing services offer to crypto criminals as a mechanism through which they carry out illicit activities.

Cryptocurrencies & cryptoexchanges In Nigeria

The role of cryptocurrency in Nigeria's financial ecosystem: the growth of cryptolaundering, crypto exchanges and crypto regulation

Research shows that many African countries are currently ranked highly with regard to cryptocurrency trading, with Nigeria ranked as the top African country globally and the third largest in the world in terms of cryptocurrency holders and volume (see Fig. 3), and Ghana, a close fourth. Countries like South Africa, Kenya and Rwanda have significant innovations in establishing cryptocurrency exchange platforms within the FinTech ecosystem, such as LEAF (a Rwandan start-up aimed at converting national currency to cryptocurrency for the African unbanked) and Bankymoon (a South African consulting firm developing bespoke solutions for clients who require cryptocurrency integrations).[98] In July 2023, Namibia became the first African country to pass and adopt legislation on virtual assets in the form of the *Virtual Assets Act 2023,* as an attempt to regulate emerging technologies and virtual asset service providers. In the same year, the Central African Republic was noted to have attempted to legislate to officially designate Bitcoin as legal tender side by side its own national currency, although this legislation was later repealed by its parliament. Particularly important also is the fact that there is a growing interest by many African FinTechs "on the transmission of encrypted payments without internet connectivity"[99]; to facilitate cross-border payment, especially for the unbanked, whilst also avoiding the watchful eyes of regulators. This, alongside forecasts by experts of the diminishing relevance of traditional banking methods in the next ten years, has sparked numerous conversations globally, particularly within West African countries on effectively enforcing policies surrounding cryptocurrency-based financial crimes, particularly money laundering.

As of October 2023, Nigeria appears to have the highest level of money laundering risks in West Africa as well as one of the countries with the highest risks globally, as reported in the 2023 Basel AML index.[100] On average, the score out of 10 (with 10 being the highest risk) of West African countries is 6.5, where the global overall average is 5.3. In 2023, the Nigerian government allegedly made over "100 arrests, pursuing 452 prosecutions and obtaining 10 convictions"[101]; in money laundering cases,

[85] K B Human, "A Systematic Review Of Cryptocurrencies In Cybercrimes." (2023) UCF Graduate Thesis And Dissertation 2023–2024. 20 49–55.
[86] Ibid
[87] E Ilbiz And C Haunert, "Sharing Economy For Tackling Money Laundering: The Europol Associated 'global Conference On Criminal Finances And Cryptocurrencies." (2022). Sustainability, 2022. 14 6618. 1–15.
[88] ibid
[89] S Kethineni And Y Cao, "The Rise In Popularity Of Cryptocurrency And Associated Criminal Activity. (2020) 30 International Criminal Justice Review 3. 325–344. Available At: < Https://Doi.Org/10.1177/1057567719827051 > Accessed: 15th August 2024.
[90] ilbiz
[91] A A Wardani, M Ali And J Barkhuizen, "Money Laundering Through Cryptocurrency And Its Arrangements In Money Laundering Act." (2022) 9 Lex Publica 2. 49–66.
[92] Asabri is a social insurance and pension payment company for soldiers and similar staff working at the Indonesian Ministry of Defence and Polri.
[93] A A Wardani, M Ali And J Barkhuizen, "Money Laundering Through Cryptocurrency And Its Arrangements In Money Laundering Act." (2022) 9 Lex Publica 2. 49–66.
[94] Ibid
[95] *Securities and Exchange Commission v. Trendon T. Shavers et al.*
[96] S Kethineni And Y Cao, "The Rise In Popularity Of Cryptocurrency And Associated Criminal Activity. (2020) 30 International Criminal Justice Review 3. 325–344. Available At: < https://doi.org/10.1177/1057567719827051 > Accessed: 15th August 2024.
[97] A Faccia And R Mosteanu, "Electronic Money Laundering, The Dark Side Of Fintech. An Overview Of The Most Recent Cases." (2020) Icime 29–33.
[98] Digital Observer for Africa, 'Cryptocurrency Adoption in Africa.' Available at: < https://www.do4africa.org/en/cryptocurrency-adoption-in-africa/. Accessed on: 15 December 2023.
[99] Digital Observer for Africa, 'Cryptocurrency Adoption in Africa.' Available at: < https://www.do4africa.org/en/cryptocurrency-adoption-in-africa/. Accessed on: 15 December 2023.
[100] According to the Basel Institute on Governance, the Basel AML Index is a leading independent ranking of money laundering and terrorist financing (ML/TF) risks around the world.It provides risk scores based on data from 18 publicly available sources such as the Financial Action Task Force (FATF), Transparency International, the World Bank and the World Economic Forum.
[101] Intergovernmental Action Group Against Money Laundering in West Africa (GIABA), *An Assessment of the Challenges of Investigating, Prosecuting and Adjudicating Money Laundering and Terrorist Financing Cases in West Africa Report.* (2022).

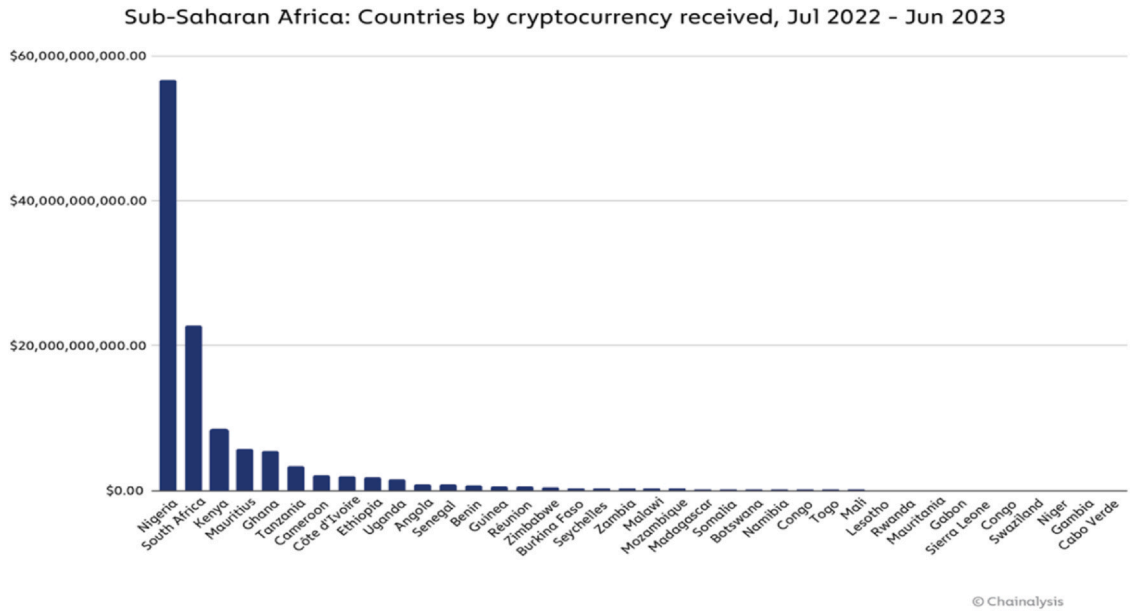

Fig. 3. The total volume of cryptocurrency received in Sub-Saharan Africa (Chainalysis, 2023).

with over ₦60 billion being recovered as illicit funds that have been laundered. Interestingly, Nigeria has been placed on FATF's grey list, which indicates jurisdictions with weak measures for money laundering prevention and are currently under strict monitoring by FATF. This comes not too long after risks of Nigeria being blacklisted by global financial bodies and blacklisted from the Egmont Group in 2022. As such, the biggest concern is the continued growth of the cryptocurrency ecosystem in a high-risk jurisdiction with little to no regulatory control or oversight over these developments. It is moreso evident that various cryptocurrency trading platforms have quickly found ways to illegally circumvent and allow users to continue trading, regardless of the implied ban, taking advantage of financial agencies' lackadaisical approach to regulating their activities. For instance, popular trading platform, *Patricia*, developed its digital token (*Patricia Token* or *PTK)* raising serious concerns as to the potential crypto scam this would result in, given that the launch of this token did not comply with SEC Rules and its existence was outside the scope of regulatory boundaries.

Perhaps the most accurate rationale for the growing development of cryptocurrencies in Nigeria is the rapidly evolving curiosity of Nigerian youths to break into the global tech space and seek and resort to other means to improve their economic status. Against this need, numerous FinTech startups which simultaneously operate as cryptocurrency exchange platforms such as Patricia, Bitmama and BuyCoins, have emerged and grown rapidly over the past eight years in Nigeria. In 2022, the revenue accrued from Nigerian FinTech companies was forecast at $543.3 million, an almost 400 % increase from its 2017 forecast. Due to the nature of Nigeria's rather booming economy, the World Bank's diagnostic framework places Nigeria among the top four countries across the African continent to dominate with regard to funding raised by start-ups, particularly fintech start-ups. Onyekwere, on FinTech cryptocurrency exchange platforms, concludes that "the number of exchanges in operation and the volume of transactions in Nigeria show that the younger generations are fascinated and enthralled by this digital financial innovation."[102]

With FATF having extended its recommendations to include *"Recommendation 15 on New Technologies"* in 2018 specifically to include regulatory guidance on virtual assets and VASPs, data as to the compliance of member jurisdiction still remains significantly low. The 2023 Basel AML Index shows that as of 2023, only 12.5 % of the total number of Jurisdictions are fully compliant with Recommendation 15, with low levels of compliance "especially in places with the most to gain from innovative financial technologies."[103]; One of such area is Sub-saharan Africa, where many West African countries are currently ranked high in terms of their overall cryptocurrency holding and trading rates.

The role of cryptocurrencies in promoting financial inclusion and economic growth in africa: opportunities for the unbanked and underbanked

Financial inclusion is also an integral aspect of the socio-economic benefits of the cryptocurrency ecosystem, particularly in Africa due to the consistently large percentage of the unbanked population. Nwosu further explains that financial inclusion is key to any economy due to its "relationship to improve the welfare of citizens and overall growth of the economy."[104]; Babarinde also presents arguments, citing Ozili's public service and public good theory on financial inclusion, arguing that the government is instrumental in ensuring that financial services should be treated as a necessity, as a "public good and should be provided for the benefit of all."[105]; This is due to the fact that since the government has significant dominance over the financial and economic ecosystem as well as the country's social structures, this control can be

[102] E Onyekwere, F.N Ogwueleka and M.E Irhebhude, 'Adoption and Sustainability of Bitcoin and the Blockchain Technology in Nigeria.' (2023) 15 International Journal of Information Technology 5. 2793–2804.

[103] Basel Institute Of Governance, "Basel Aml Index 2023: 12th Public Edition: Ranking Money Laundering And Terrorist Financing Risks Around The World." (2023) Basel Institute Of Governance. Available At: < https://baselgovernance.org/publications/basel-aml-index-2023 > Accessed: 18th June 2024.

[104] O U Nwosu, "Understanding the Interactions among Cryptocurrencies Adoption, Financial Inclusion and Income Growth Opportunities Among Nigerian Youths." (2022) Research Gate (Online). Available at: < https://www.researchgate.net/publication/358725833_Understanding_the_Interactions_among_Cryptocurrencies_adoption_Financial_Inclusion_and_Income_Growth_Opportunities_Among_Nigerian_Youths > Accessed 15th May 2024.

[105] K Babarinde, "The Contribution of Cryptocurrencies to Financial Inclusion and Entrepreneurship Development in Africa." in Borishade, Taiye T, Falola and Hezekiah. (eds) Entrepreneurship and Sustainable Development in the 21st Century. (6th Covenant University International Conference on Entrepreneurship: CU-ICE, 2023) Available at: < https://www.researchgate.net/profile/Benjamin-Anabaraonye-2/publication/371350577_CUICE_2023_CONFERENCE_PROCEEDINGS_edited_2/links/6480584079a722376516141a/CUICE-2023-CONFERENCE--PROCEEDINGS-edited-2.pdf#page= 237 > Accessed: 17th April 2024.

utilised to "achieve its financial inclusion objectives."[106]; IMF data currently shows that many populations within the sub-Saharan African region are still unbanked or underbanked, with a significant proportion of women without bank accounts "12 % higher than men without a bank account."[107]; The reality is that for many Nigerians, "the growing cryptocurrency industry or ecosystem presents numerous opportunities to earn or preserve their income."[108]; Further research reveals that a key element for the wide acceptance of these technological advancements globally is general public distrust of traditional financial and banking systems and particularly in the African continent, is the search for alternative and faster financial systems for the largely underbanked.

One major argument put forward over the years with regard to the accruable benefits of the use and adoption of cryptocurrencies in jurisdictions is the promotion of financial inclusion and the economic growth opportunities it presents for any country or region where its use is actively and beneficially regulated. Added to this, Babarinde explains that "the usage of cryptocurrencies could support the contribution to the achievement of sustainable development goals (SDGs) such as SDG 1 (no poverty), 5 (gender equality), 8 (decent work and economic growth, 10 (reduced inequalities) and 11 (sustainable cities and communities."[109]; A recent UNDP report on the development of cryptocurrencies particularly in Africa suggests that cryptocurrencies–when properly regulated and supervised–therefore hold numerous potentials and opportunities, particularly for the advancement of the UN's sustainable development goals (SDGs) globally, and for the purpose of this research, in Africa. This is due to numerous arguments put forward by scholars and academics as to the economic growth potentials of cryptocurrency operations when utilised properly.

Balarabe et al. define financial inclusion as "the provision of affordable and accessible financial services to individuals and businesses, irrespective of their income level or location, such that it encompasses a range of services."[110]; Onyekwere et al. when assessing the situation in the African economy assert that "the rise of cryptocurrencies, especially Bitcoin has opened up a lot of doors in the world of FinTech, by attracting investors, media and financial industry regulators."[111]; Such benefits include cross-border trade, increased revenue options with cryptocurrency taxation and financing biodiversity through "innovative models."[112]; The rationale for these benefits and opportunities stems from how cryptocurrencies have been used over the last five years across various industries and sectors. In Africa, research shows that cryptocurrencies have been used to facilitate peer-to-peer online lending, "access to financing and remittance transfers from the global diaspora"[113]; into African jurisdictions with regards to its penetration into the African financial ecosystem. The UNDP data shows that sub-Saharan Africa holds the largest amount of "cryptocurrency-based remittance transfer instruments"[114]; globally, as of 2023 and these range from *BitPesa* in Kenya, and *Sure Remit* in Nigeria, with the addition of multiple Nigerian cryptocurrency trading platforms trading stablecoins. BuyCoins, an exchange platform allows Nigerians to "buy and sell cryptocurrencies with their local bank account or debit card" in an easy way that circumvented the NDIC and CBN's circulars at the time they were issued, by introducing "P2P deposits and withdrawals by matching user deposits to user withdrawal requests,"[115]; allowing users directly interact with each other using any relevant payment method outside local bank accounts or cards. The implication of such entities is that there has been a steady surge in the use of these services to finance projects that span across industries and sectors beyond the financial sector in Africa, such as humanitarian financing, biodiversity, energy and energy consumption and real estate.

Two of the most predominant uses of cryptocurrency, particularly in emerging markets like Nigeria, are for remittances as well as an alternative store of value. The past five years have seen a significant decline and frequent hyperinflation in Nigeria's economy due to the consistently rising dollar rate against the naira and its trickle-down effect, including lower savings and exorbitant costs of living. This has thus served as a motivating factor for many Nigerians–particularly the younger generation–to acquire cryptocurrencies to protect themselves from existing currency instability. The UNDP 2022 report shows that in 2021, "overall consumer price inflation in Sub-Saharan Africa rose by three percentage points,"[116]; with a further 3 % increase in Nigeria between 2021 and 2022. Resultantly, this period experienced a surge in overall cryptocurrency trading usage and volume, especially with the options certain cryptocurrency tradition platforms like Binance offer, such as USDT as well as "stablecoin savings for African users who are trying to wedge against value loss of their local currency savings."[117]

While there have been considerable attempts at closing this financial services gap amongst the Nigerian masses, it is clear that there is a wide gap in the level of understanding and education provided as to these benefits of innovation in the financial services industry in many African Jurisdictions. For instance, on one hand, Balarabe et al. strongly advocate for the adoption of the underlying blockchain technology which powers cryptocurrencies, to close the financial services gap between the rural and urban areas as well as the male and female Nigerian population. However, they concede to the fact that one of the biggest challenges hindering positive development within the areas of financial inclusion is that "many

[106] Ibid

[107] Ibid

[108] O U Nwosu, "Understanding the Interactions among Cryptocurrencies Adoption, Financial Inclusion and Income Growth Opportunities Among Nigerian Youths." (2022) Research Gate (Online). Available at: < https://www.researchgate.net/publication/358725833_Understanding_the_Interactions_among_Cryptocurrencies_adoption_Financial_Inclusion_and_Income_Growth_Opportunities_Among_Nigerian_Youths > Accessed 15th May 2024.

[109] K Babarinde, "The Contribution of Cryptocurrencies to Financial Inclusion and Entrepreneurship Development in Africa." in Borishade, Taiye T, Falola and Hezekiah. (eds) Entrepreneurship and Sustainable Development in the 21st Century. (6th Covenant University International Conference on Entrepreneurship: CU-ICE, 2023) Available at: < https://www.researchgate.net/profile/Benjamin-Anabaraonye-2/publication/371350577_CUICE_2023_CONFERENCE_PROCEEDINGS_edited_2/links/6480584079a722376516141a/CUICE-2023-CONFERENCE-PROCEEDINGS-edited-2.pdf#page= 237 > Accessed: 17th April 2024.

[110] A L Balarabe, F Ahmed and J Abdulkadir, "Blockchain Technology and Financial Inclusion in Nigeria: An Analysis of the Missing Link." (2023) 2 Gusau Journal of Business Administration 1. 97–106.

[111] E Onyekwere, F.N Ogwueleka and M.E Irhebhude, 'Adoption and Sustainability of Bitcoin and the Blockchain Technology in Nigeria.' (2023) 15 International Journal of Information Technology 5. 2793–2804.

[112] A Liu, O Goni And A Mitha, "Cryptocurrency In Africa, Alternative Opportunities For Advancing The Sustainable Development Goals." (2022) UNDP Global Policy Network. Available At: < https://www.undp.org/sites/g/files/zskgke326/files/2023–01/UNDP-DFS-Cryptocurrency-in-Africa_0.pdf > Accessed: 20th May 2024.

[113] Ibid

[114] Ibid

[115] Digital Observer for Africa, 'Cryptocurrency Adoption in Africa.' Available at: < https://www.do4africa.org/en/cryptocurrency-adoption-in-africa/. Accessed on: 15 December 2023.

[116] A Liu, O Goni And A Mitha, "Cryptocurrency In Africa, Alternative Opportunities For Advancing The Sustainable Development Goals." (2022) UNDP Global Policy Network. Available At: < https://www.undp.org/sites/g/files/zskgke326/files/2023–01/UNDP-DFS-Cryptocurrency-in-Africa_0.pdf > Accessed: 20th May 2024.

[117] A Liu, O Goni And A Mitha, "Cryptocurrency In Africa, Alternative Opportunities For Advancing The Sustainable Development Goals." (2022) UNDP Global Policy Network. Available At: < https://www.undp.org/sites/g/files/zskgke326/files/2023–01/UNDP-DFS-Cryptocurrency-in-Africa_0.pdf > Accessed: 20th May 2024.

Nigerians particularly those in rural areas, have limited knowledge about blockchain and its potential benefits."[118]

The evolution of nigeria's regulatory stance for virtual assets and virtual asset service providers (VASPs) and its impact on the Nigerian economy

In a 2022 regulatory update report, Olaniwun Ajayi described the attitude of Nigerian regulators towards cryptocurrencies and other virtual assets as "cautious."[119]; This is due to the various regulatory developments and approaches to cryptocurrency adoption and regulation in Nigeria over the last five years. In 2020, the Nigerian Securities and Exchange Commission in its Statement on Digital Assets officially recognised cryptocurrencies as legitimate assets, expressing a desire to understand and regulate them. However, as previously established, in 2021, the CBN released a circular prohibiting banks and other financial institutions from engaging with entities involved in cryptocurrency transactions and closing suspected accounts, with the SEC further deciding to "suspend its plans to regulate virtual assets."[120]; The SEC in April 2022 resumed its intent to understand and regulate virtual assets when it released its proposed rules for registering VASPs, setting out clear and general guidelines on the requirements crypto exchanges and trading platforms must satisfy to be effectively registered and recognised in Nigeria. It is imperative to highlight that the SEC specified these proposed rules due to their 2020 classification of virtual assets as being fully within the ambit of SEC control, thus defining virtual assets as securities. Most importantly, through these proposed rules, the SEC places a responsibility on VASPs to put in place adequate policies and controls to "mitigate against money laundering and terrorism financing and counter-proliferation financing requirements,"[121]; as well as comply with the existing and relevant AML regulations.

December 2023 saw what many commentators described as a "significant policy shift,"[122]; where the CBN reversed its two-year restriction and previous discouragement on cryptocurrency in Nigeria when it announced the "*Guidelines on the Operation of Bank Accounts for Virtual Asset Service Providers (VASPs).*" Ojenike et al. explain that "CBN's new policy shift aligns with the progressing global experiment to address some of the regulatory and policy supervision issues relating to virtual asset transactions."[123]; Evidently, this move presents a significant regulatory development in comparison to the previous regulatory positions taken by both the SEC and CBN between 2017 and 2022 and its trickle-down effect on the approach taken by national enforcement agencies. It can perhaps be argued that this significant shift may be due to the continued growth of Nigeria's virtual asset economy and the CBN's insight into the attractiveness of the Nigerian market for foreign investment due to its impressive trajectory regarding cryptocurrency usage and trading volume. Added on to this, in its recent FinTech update, Udo Udoma and Belo-Osagie assert that the move by the CBN to embrace regulation for the cryptocurrency ecosystem is in response to the "increased activities of VASPs and the need to regulate such activities and the Nigerian government's decision to impose capital gains tax on gains realised from the disposal of digital assets."[124]; Mba and Osimhen further explain that with the recent amendment of Nigeria's Finance Act in 2023, the Capital Gains Act now "classifies digital assets as chargeable assets,"[125]; therefore clarifying the tax status of cryptocurrencies in Nigeria's financial market. A report from Duale, Ovia and Alex-Adedipe highlights that by virtue of these 2023 guidelines, the "SEC Regulatory Frameworks (that is the proposed rules for VASPs) issued last year has now become effective and accordingly binding on all stakeholders transacting in digital/virtual assets in Nigeria."[126]

It is important to note that the CBN guidelines strictly applies to banks and other financial institutions as well as "all entities registered by the SEC to conduct the business of digital asset services including VASPs, digital asset custodians, digital asset offering platforms, digital asset exchanges (DAX) and their operators."[127]; As such, the overarching aim of these guidelines is to "provide the minimum standards and requirements for account opening, effective monitoring of the activities of banks and financial institutions and risk management of the operation of VASPs in Nigeria,"[128]; in line with the FATF's targeted update and implementation strategy regarding Recommendation 15 on New Technologies. It is however important to note that whilst the guidelines provide the type and range of activities the named institutions may participate in, such as opening designated accounts for the purpose of virtual assets, they are however prohibited from "holding, trading and/or transacting in virtual currencies on their own account."[129]; As such, they are allowed to act as "channels for forex inflows and trade,"[130]; for the VASPs who are licensed to operate under the relevant guideline, These guidelines additionally prescribe similar compliance requirements given to traditional financial institutions to VASPs, such as Enhanced Due Diligence (EDD) requirements when opening designated accounts as well as filing Suspicious Transaction

[118] A L Balarabe, F Ahmed and J Abdulkadir, "Blockchain Technology and Financial Inclusion in Nigeria: An Analysis of the Missing Link." (2023) 2 Gusau Journal of Business Administration 1. 97–106.

[119] D Salawu, K Toriola And T Fabusiwa, "Proposed Rules For Registration Of Virtual Asset Service Providers." (2022) Olaniwun Ajayi LP (Online). Available At: < https://www.olaniwunajayi.net/blog/wp-content/uploads/2022/05/Newsletter-on-Proposed-Rules-for-Registration-of-Virtual-Asset-Service-Providers.pdf > Accessed: 16th May 2024.

[120] Ibid.

[121] ibid

[122] Slingstone LP, "Impact Analysis Of CBNs New Regulatory Guidelines On Banking Virtual Assets Service Providers." (2024) Slingstone Law LP. Available At: < https://slingstonelaw.com/insight/2024/01/12/impact-analysis-of-cbns-new-regulatory-guidelines-on-banking-virtual-assets-service-providers/ > Accessed: 16th May 2024.

[123] Ibid

[124] Udo-Udoma And Belo Osagie, "The Regime For The Operation Of Bank Accounts By Virtual Assets Service Providers/Exchanges In Nigeria. Uubo Fintech Update. (2024) Available At: < https://www.mondaq.com/nigeria/fintech/1414818/the-regime-for-the-operation-of-bank-accounts-by-virtual-asset-service-providersexchanges-in-nigeria > Accessed: 16th May 2024.

[125] S Mba And P Osimhen, "A New Era For The Operation Of Bank Accounts For Virtual Assets Service Providers In Nigeria." (2024) Dentons ACAS-Law. Available At: < https://www.dentonsacaslaw.com/en/insights/newsletters/2024/january/31/dentons-acas-law-financial-services-newsletter/dentons-acas-law-financial-services-newsletter-january-2024/a-new-era-for-the-operation-of-bank-accounts-for-virtual-assets-service-providers-in-nigeria > Accessed: 16th May 2024.

[126] Duale, Ovia And Ale-Adedipe, "Understanding The CBNs Guidelines On The Operation Of Bank Accounts For Virtual Assets Service Providers In Nigeria." (2023) DOA Law (Online). Available At: < https://www.doa-law.com/wp-content/uploads/2024/01/CBNs-Guidelines-on-the-Operation-of-Bank-Accounts-for-VASPs.pdf > Accessed: 16th May 2024.

[127] Ibid

[128] S Mba And P Osimhen, "A New Era For The Operation Of Bank Accounts For Virtual Assets Service Providers In Nigeria." (2024) Dentons ACAS-Law. Available At: < https://www.dentonsacaslaw.com/en/insights/newsletters/2024/january/31/dentons-acas-law-financial-services-newsletter/dentons-acas-law-financial-services-newsletter-january-2024/a-new-era-for-the-operation-of-bank-accounts-for-virtual-assets-service-providers-in-nigeria > Accessed: 16th May 2024.

[129] Duale, Ovia And Ale-Adedipe, "Understanding The CBNs Guidelines On The Operation Of Bank Accounts For Virtual Assets Service Providers In Nigeria." (2023) DOA Law (Online). Available At: < https://www.doa-law.com/wp-content/uploads/2024/01/CBNs-Guidelines-on-the-Operation-of-Bank-Accounts-for-VASPs.pdf > Accessed: 16th May 2024.

[130] PWC Nigeria, "The Central Bank Of Nigeria's (CBN) Guidelines Of Bank Accounts For Virtual Assets Service Providers 2023." (2024) PWC Regulatory Alert. Available At: < https://www.pwc.com/ng/en/assets/pdf/cbn-guidelines-on-operations-of-bank-accounts-for-virtual-assets-service-providers.pdf > Accessed: 16th May 2024.

Reports (STRs) during its monitoring and investigation responsibility, with the NFIU.

Erikume et al. in a PWC Regulatory Alert further note that while the guideline aims to regulate VASP activities, it does not "contemplate P2P transactions, implying that there is still a ban on bank accounts being used for direct P2P virtual asset trades."[131]; It can therefore be argued that it still seems to fall short of the FATF requirements in Recommendation 15, where it has "requested countries to understand how P2P transactions are being used in jurisdictions to avoid detection and regulation."[132]; Commentators also note that despite the CBN's timely issuance of these guidelines, there appears to still be some form of regulatory resistance to the overall cryptocurrency ecosystem in Nigeria. Orinjimo and Olurounbi cite the Federal Government's recent crackdown on the activities of the prominent crypto exchange, Binance, as evidence of the government's "frosty relationship with cryptocurrency operators."[133]; It must be recalled that the goverment had previously withdrawn and suspended the licenses of prominent FinTech and crypto exchange and trading platforms in 2021 during its implicit soft ban on cryptocurrency transactions. Additionally, Erikume et al. explain that the restriction on "transfers from the foreign exchange positions of a user may be a disincentive to obtaining SEC licenses and operating the designated account, primarily because cryptocurrencies and other virtual assets have been adopted by many users, as a means of hedging against the devaluation of naira."[134]

An assessment of regulatory perspectives towards cryptocurrency regulation in Nigeria

Whilford and Anderson, quoting Mandel, explain that "for the first time in history, there is the opportunity for governance systems to develop simultaneously with emerging technologies, permitting proactive rather than reactive management structures."[135]; Africa presents a fertile ground for the development of regulatory regimes and special governance systems for cryptocurrencies, particularly when assessing its unprecedented growth alongside the financial crime implications and money laundering risks, as explained previously. In West Africa for intsance, the Intergovernmental Action Group for Money Laundering in West Africa (GIABA) recognises that at the operational level, the development of AML strategies and regimes seems to proceed in a varied way, as it is highly dependent on each country's specific peculiarities and conditions. This means that each country is at different stages in understanding virtual assets and classifying cryptocurrencies for ease of regulation, such that developing a uniform approach or regime may prove nearly impossible. The current reality of criminals in virtual asset-related activities is that there is a larger tendency to "launder illicitly acquired funds in VASPs located in jurisdictions with weak anti-financial crime (AFC) frameworks while avoiding countries with more robust AFC systems, processes and controls."[136]; Based on this, it becomes clearer that the longer national or regional agencies such as GIABA fail to establish concise rules and regimes for regulating cryptocurrency-based financial crimes, the more creative and complex these criminals become in exploiting these porous governance systems in individual countries.

As previously established when it comes to cryptocurrency regulation in Nigeria, the government has previously taken a very cautious and wavering stance, arguably due to a lack of understanding of the operation of cryptocurrencies for the purpose of regulation. What seems to be more common is a command and control tactic, where majority of cryptocurrency regulation purely seeks to criminalise activities and impose punishment and sanctions for 'defaulters.' While it is important that "regulators still rely on detailed rule blacked by criminal sanctions,"[137]; as well as rely on traditional regulatory regimes for the sake of clarity and coherence, particularly when it comes to such a volatile development like cryptocurrency and its use for money laundering purposes, on the flip side, this same unconventional nature of cryptocurrency begs the question of: is it realistic or feasible to use older or traditional methods to regulate a technological innovation that is disruptive and constantly evolving in its very nature? Motsi further argues in line with this that "cryptocurrencies in particular do not easily fit into existing substantive legal definition asnd regulations,"[138] and that when it come to thinking about how to regulate, it will require a "process internal self-reflexion within the legal system."[139]

With regard to reflexive regulation as earlier established, the aim when thinking about cryptocurrency regulation would be to create a system whereby institutions–in this case financial institutions–are able to self-regulate themselves in a way they best see fit, guided by the existing principles of law and legal systems. As such, this means developing a "better capacity for learning"[140]; between a cocktail of both state and non-state actors and a more nuanced focus on procedures to produce better results. Taking this into account, an unexplored avenue regarding cryptocurrency-based money laundering regulation is perhaps attempting to establish governance regimes by working with non-governmental entities as 'co-governance' actors, as there is evidence to suggest that "non-governmental stakeholders can contribute critical technical expertise or industry insight that government actors would not otherwise have had."[141]; Not only does this mitigate the challenge of lack of expertise and knowledge about virtual assets and other emerging technologies to better understand the money laundering risks they pose, but this co-governance system, as suggested by Whitford and Anderson, provides an avenue to increase the quality and effectiveness of investigative tactics as well as the overall governance system. In line with this, there is a call for more collaborative efforts from GIABA with other FRSBs and jurisdictions for information sharing. Owen and Chase argue that "countries must acknowledge the cross-border nature of this sector and work with one another to understand the risks they are exposed to."[142]; To do this, jurisdictions are encouraged to develop

[131] Ibid

[132] Ibid

[133] Orjinmo N, "Nigeria Slaps Strict Rules On Banks After Lifting Crypto Ban." (2024) Bloomberg (Online). Available At: < https://www.bloomberg.com/news/articles/2024–01–03/nigeria-slaps-strict-rules-on-banks-after-lifting-cryptocurrency-ban > Accessed: 16th May 2024.

[134] PWC Nigeria, "The Central Bank Of Nigeria's (CBN) Guidelines Of Bank Accounts For Virtual Assets Service Providers 2023." (2024) PWC Regulatory Alert. Available At: < https://www.pwc.com/ng/en/assets/pdf/cbn-guidelines-on-operations-of-bank-accounts-for-virtual-assets-service-providers.pdf > Accessed: 16th May 2024.

[135] A Whitford and D Anderson, 'Governance Landscapes for Emerging Technologies: The Case of Cryptocurrencies." (2021) 15 Regulation and Governance 1053–1070.

[136] N Tambe and A Owen. *Institutional Virtual Asset Service Providers and Virtual Assets Risk Assessment Guide.* (Royal United Services Institute for Defence and Security Studies (RUSI), 2023).

[137] Immaculate Motsi, "Regulation Of Cryptocurrencies: A Reflexive Law Approach." (2020) PhD Thesis, University Of Warwick (Online). Available At: < Https://Wrap.Warwick.Ac.Uk/Id/Eprint/152404/ > Accessed: 20th March 2024

[138] Ibid 128

[139] Ibid 128

[140] C Scott, "Reflexive Governance, Regulation And Meta-Regulation: Control Or Learning?" In Schutter O And Lenoble J (Eds). *Reflexive Governance: Redefining The Public Interest In A Pluralistic World.* (Oxford: Hart Publishing, 2010).

[141] Ibid.

[142] A Owen and I Chase, 'Can the Implementation of FATF Standards on Cryptoassets be Strengthened?' (2023). Royal United Services Institute (RUSI). Available at: < https://www.rusi.org/explore-our-research/publications/commentary/can-implementation-fatf-standards-cryptoassets-be-strengthened > Accessed: 31st December 2023.

"working groups and cryptoasset-focused questionnaires"[143]; to send to reporting entities and enforcement agencies alongside the development of online databases identifying licensed VASPs in the jurisdiction, which may be accessible to other FRSBs or non-FATF international enforcement teams, recognising the fact that cryptocurrency-based money laundering activities are cross-border and should be fought with cross-border tactics. This therefore fits nicely into the second recommendation[144] proposed by GIABA in its assessment of its challenges, such that working side-by-side with expertise international, regional or private non-government actress ensure effective capacity building and strengthening in member states regimes.

In its 2023 AML Index, the Basel Institute of Governance assesses that what makes for good performance regarding regulating cryptocurrency-based money laundering is the fact that "supervisory authorities apply a risk-based approach to supervising new technologies and proactively seek to identify and assess ML/TF risks in relation to new business practices and products."[145]; In the same vein, empirical data, therefore, suggests that many Nigerians believe that "the government should seek understanding and way to make cryptocurrency sustainable, by enacting friendly policies."[146]

Conclusion

It is now more than evident that with the growing popularity of both cryptocurrencies (non-privacy coins or tokens) and other privacy coins, immense opportunities have been created for new investment and payment methods, but also for criminals to obfuscate illegal activities. This is clear in the multiple instances of crypto laundering cited throughout this paper, as well as the development of more and more complex techniques and mechanisms in the P2P marketplaces such as crypto hacking, mining, mixing services and the newer type of cryptocurrencies, *privacy coins.* As such, these technological disruptions in the global financial system by virtue of virtual assets and their related innovations have created an even more potent means for criminals to evade regulatory oversight. This becomes even more plausible in developing countries with weak and less potent regulatory systems and enforcement tactics, such as the situation in Nigeria. Theorists have argued for the move into a more responsive type of regulation particularly when it comes to these traditional financial markets and ecosystems, such as responsive regulation and reflexive regulation and governance systems. With regard to cryptocurrencies, although there are no set regulations for these developments globally, amidst various countries attempting to regulate, questions have emanated as to what strategies should be employed. On one hand, a flexible approach where cryptocurrencies fit into existing regulation depending on their classification and use or a more hybrid approach which combines the flexible methods and also creates new laws and frameworks to regulate. Ultimately, there is a need for States to frame a rationale for regulation to produce the best regulatory tactic concerning cryptocurrencies.

Nigeria, one of the world's largest cryptocurrency holders and users, appears to yet have a salient regulatory regime for cryptocurrencies, after multiple waves of oscillating between implied bans, a wait-and-see approach and attempted guidance.

However, over the last five years, its AML framework seems to remain in the pre-virtual assets era, without adequate consideration of the money laundering risks of these new developments due to a general lack of proper understanding of the operations of virtual assets and challenges in its governance systems. As this is a growing development, with news of further regulation in the works, it is yet to be seen the extent of growth Nigeria will employ in its regulatory approach for cryptocurrencies.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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[143] Ibid.

[144] GIABA Recommendation 2 in *An Assessment of the Challenges of Investigating, Prosecuting and Adjudicating Money Laundering and Terrorist Financing Cases in West Africa Report:*

[145] Basel Institute on Governance. 'Basel AML Index: Ranking Money Laundering and Terrorist Financing Risks Around the World' (12th Public Edition, 2023).

[146] E Onyekwere, F.N Ogwueleka and M.E Irhebhude, 'Adoption and Sustainability of Bitcoin and the Blockchain Technology in Nigeria.' (2023) 15 International Journal of Information Technology 5. 2793–2804.