COVID -19 Crisis in Africa: Leveraging FinTech and RegTech for Economic Recovery

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ABSTRACT

The precise impact of the Covid-19 pandemic on African economies is still unknown, however if the crisis persists, it is likely to have huge economic ramifications on the continent. Financial Technology (FinTech), which has made a positive contribution in Africa can significantly support the recovery process after the crisis but the extent of its contribution will depend on a number of factors.

I. Introduction

The fallouts from the Covid-19 pandemic across the world is still unknown as different countries across the world appear to be experiencing it in different ways which, in certain instances, has been the result of the speed with which they responded to it. One thing is certain though, the human and economic toll of this crisis is bound to affect different economies in different ways.

Although the impact of the pandemic has had a huge human toll, with over a quarter of a million deaths from it, it is also having significant economic implications. The lockdown measures that were instituted by most economies to contain the spread of the virus (and which is still in place

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in one form or another in many countries) would have huge economic implications on many countries for many years to come. The economic implications of these measures have resulted in significant reduction in global consumption of goods and services with sectors such as travel and hospitality bearing the brunt of it all.[1]

The struggling economies in Africa, coupled with the poor state of health care infrastructure in most African states, would make the impact of the crisis on the continent worse if the pandemic persists. If prolonged, it is likely to have a devastating effect on African economies; affecting industries including, aviation, services, exports, mining, agriculture and the informal sector – all with dire consequences on jobs in these industries. Nonetheless, African countries can harness the potential that FinTech has to stem the spread of the disease and facilitate economic recovery. With its huge potential to enable the effective channelling of resources to the sectors and individuals most needful of it during and after the crisis, it promises to be useful to the economic recovery process instituted both during and after the crisis.

This article considers the role that FinTech products and services can play in mitigating the effects of the crisis and to support the recovery process in Africa. Section II highlights some of the economic impact of the Covid-19 crisis on African economies. Section III examines the development of FinTech in Africa, focusing on mobile payments, crowd funding, cryptocurrencies / crypto assets and decentralised finance. It considers their potential in facilitating the recovery process both during and after the crisis. Section VI assesses the role of regulatory technology (RegTech) and the extent of its adoption in Africa in enabling FinTech to be put to good use in the recovery process. Section V considers the extent to which regional

[1] 'COVID-19: Impact Could Cause Equivalent of 195 Million Job Losses, Says ILO Chief', UN News (8 April 2020) at https://news.un.org/en/story/2020/04/1061322 [Accessed May 5, 2020].

economic integration can enable the facilitation of a recovery through FinTech particularly taking on board the progress made with the African Continental Free Trade Agreement (ACFTA). Section VI concludes.

II. Implications of the Covid-19 Crisis in Africa

While advanced markets are still grappling with the pandemic and still working out ways to limit its impact on their economies, poorer economies in Africa, are likely to be hit the hardest. Some of the reasons for this include: (1) weak healthcare systems and infrastructure,[2] to deal with a pandemic of this scale which is likely to make the impact of the pandemic generally worst and recovery from it very slow; (2) slow growth in some of the largest economies on the continent in months preceding the pandemic such as oil-exporting country, Nigeria, whose economy has been significantly impacted by drop in oil prices;[3] (3) many African economies are heavily indebted and grappling with implementing their budget; (4) African labour markets are largely driven by imports and exports and with the lockdown still in place in most parts of the world, their economies are stagnated with huge implications on jobs; (5) a drop in international remittance to Africa from the West as the resulting unemployment from the West would significantly reduce such flows, according to the world bank there would be a drop by 23.1% to $37 billion in remittance figure in 2020.[4]

[2] Natalie Whiting and Erin Handley, 'The World's Most Vulnerable Countries Could Become the Next Coronavirus Hotspots', ABC News (April 1, 2020) at https://www.abc.net.au/news/2020-03-31/coronavirus-countries-infection-rates-most-vulnerable/12085816 [Accessed May 5, 2020].
[3] Elliot Smith 'Africa's largest economy braces for big hit as oil prices plummet' CNBC News (13 March 2020) at < https://www.cnbc.com/2020/03/13/africas-largest-economy-braces-for-big-hit-as-oil-prices-plummet.html [accessed May 6, 2020].
[4] 'World Bank Predict Sharpest Decline of Remittances in Recent History', World Bank Press release (22 April 2020) at https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-of-remittances-in-recent-history [Accessed May 16, 2020].

The spread of the virus in early March 2020 was initially slow and in single digits but then spiked within 2 weeks causing the World Health Organisation (WHO) Africa regional director, Dr Matshidiso Moeti to state at the end of March that, "About 10 days ago we had 5 countries affected, now we've got 30…so it's been an extremely rapid evolution."[5] As at 21 May, the World Health Organisation reports that all 54 countries in Africa had recorded cases of the virus. As at 1 July, there are 143,236 cumulative reported cases and 6,155 confirmed deaths in Africa. Of the WHO Africa region, South Africa has almost 50% of the confirmed cases reported.[6] While these numbers are still nowhere near the rate with which the virus has spread in some economies in the West, however, if the pandemic follows the trajectory taken in advanced markets such as the UK and the US and spreads as quickly, the situation is likely to have a devastating effect in Africa.

As the number of infections increase in Africa, immediate actions that would need to be put in place to deal with the crisis include: (1) establishing a robustly-funded coordination mechanism to support health care systems which would require increase in health care capacity and resource availability such as ventilators and personal protective equipment (PPE) which are hugely lacking in the African context; (2) leveraging digital finance and payments to reduce the use of cash which has been linked to the spread of the virus; (3) providing support to the vulnerable such as the elderly and other people in remotes parts of Africa who are unable to access formal financial services; (4) channelling financial resources to digital infrastructure and internet connectivity to support all other aspects of society and the economy, including,

[5] Dr Matshidiso Moeti speech in March 2020 at https://twitter.com/MoetiTshidi/status/1240752063488897032?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1240752063488897032&ref_url=https%3A%2F%2Fwww.who.int%2Femergencies%2Fdiseases%2Fnovel-coronavirus-2019%2Fevents-as-they-happen [Accessed May 16, 2020].
[6] 'Coronavirus (Covid-19)' WHO Africa at https://www.afro.who.int/health-topics/coronavirus-covid-19 [Accessed May 22, 2020).

for example, the facilitation of virtual education and work-from-home policies, all which would be necessary in case there is a second peak of the virus before a vaccine is approved.

The successes achieved thus far by FinTech products and services in facilitating financial inclusion can play a critical role here. With around 60% of adults in Africa still unbanked, access to finance to the common man - whether to cater for personal financial needs or to start a small business - is still a challenge in many parts of Africa. As such, there is still a huge potential for FinTech to facilitate further financial inclusion and the mobilisation of resources during a crisis.

III. FinTech Developments in Africa and its potential at a time of crisis

Mobile money

The growth of mobile financial services has enabled huge percentages of the unbanked in many parts of Africa access financial services and there are still huge opportunities to reach the many unbanked people on the continent even during the crisis.

Previously, the most basic form of financial inclusion was having a bank account and this excluded poorer people given the relatively high cost of a bank account which required minimum balance, service charges, fulfilment of Know-Your-Customer (KYC) requirements, and travel time to a branch. However, since the advances in FinTech particularly enabled through the inventions of mobile phones, this has led to the creation of mobile financial services such as mobile money accounts. Mobile money was launched for the first time in Africa through the launch of M-Pesa by Safaricom in Kenya in 2007 and has since grown in popularity

across East Africa. This development has seen a drastic transitioning from bank account ownership to digital platform where mobile phones and devices can be used to effect payments. This is helping to transform sub-Saharan Africa from cash payment-based societies to digital payment societies. This development has also been characterised by the replacement of payments of wages, fees, utilities, services, digitally rather than by cash with the benefit of making payments cheaper, quicker, safer, more transparent and well-documented. In the context of the Covid-19 pandemic, this mechanism for effecting payments is also safer than using cash which has been linked with the increased risk of transmitting the disease. This form of payment is also known to provide access to other financial services including savings, loans and even insurance.

The main models of mobile payment services in the African continent are through customer "stored-value funds" maintained by mobile network operators (the MNO model) and a combination of a bank, MNO or other third party that offers communications and financial transaction services that combine characteristics of both the pure bank and pure MNO model (the hybrid model).

MNO (Mobile Network Operator) model

A pure mobile network operator (MNO) service extends the wireless network messaging functionality to provide payment services that enable customers to send funds to each other that can be settled through the MNO's established agent network. Individual payment transactions occur entirely within the MNO and do not require the service user to have a bank account. The funds in transit - paid in by the sender but not yet withdrawn by the recipient, are in principle on deposit in a segregated account with one or more banks, so are within the formal financial system. Since the service provider is only executing client payment instructions and

is not performing the credit evaluation and risk management function of a bank, these services arguably do not constitute "banking" and do not require the level of regulatory oversight needed for deposits that are used to fund lending. The depository bank has no involvement in, or responsibility for payments through the MNO system. Due to the high cost of a bank account and the easy, low cost and increasingly universal access to mobile phone services, the MNO model arguably is highly effective in brining informal cash transactions into a form of formal financial system, expanding access to financial services. This is the reason why it has been popular for promoting financial inclusion in the African context and as such can be put to good use during the pandemic.

Hybrid model

The hybrid model is a combination of a bank, MNO or other third party that offers communications and financial transaction services. This combination hybrid model is referred to as MNO/Bank Model. Under this model, a mobile phone company-based payment services that handle payments internally with cash in/out through the MNO's agent network, is linked to formal banking services such as savings, loans and insurance through partnership with a regulated financial institution. The MNO enables communications with the bank and transfers between the user's mobile phone payment account and accounts at the bank. Most mobile financial services are hybrid, drawing on the relative strengths of the partners involved. This thus enables those without formal bank accounts to be able to transact with those with formal bank accounts and through this, includes them in the formal financial system.

Progress of mobile money in Africa and its benefit during the crisis

With over 60% of adult Africans still unbanked[7], there is still a great deal that the mobile money industry can do to advance financial inclusion which would be hugely beneficial during the crisis. Mobile money is still nascent in many parts of Africa notwithstanding the consistent growth of services such as M-Pesa in Kenya and South Africa; Orange Money in Côte d'Ivoire; MTN-Money, Airtel Money and Zamtel Money in Zambia – to mention a few. There is also evidence of good progress in countries where the adoption of mobile money has been slower, such as Nigeria (the largest economy in Africa) due to the Central Bank's (CBN) delay in issuing MNOs Payment Services Bank (PSB) status. In 2019, however, the CBN issued a super-agent licence to MTN which enabled it to launch its mobile money service in August 2019. The CBN is, however, yet to issue PSB licences to MNOs. After the grant of this super-agent licence, a GSMA report states that Nigerians opened more mobile money accounts in 2019 than any other year.[8] This is despite the absence of the PSB license to MNOs.

Without a PSB licence the participation of telecoms firms in the mobile money space would be significantly limited and services such as remittance services, which facilitate money transfers from the West to Africa would be lost. Also, absence of the PBS license prevents the interoperability of these service across all MNO providers which enables customers to transact with more users across other mobile networks and payment platforms. A grant of the PSB license, for example, in the largest economy of the region during the pandemic is likely to make a huge difference to the mobilisation of resources during the pandemic. If not for anything, as it is likely to make international remittance a possibility and easier, at a time when these

[7] Neo Sesinye, '66 percent of sub-Saharan Africans are listed as unbanked' IT News Africa at (7 December 2018)<https://www.itnewsafrica.com/2018/12/66-percent-of-sub-saharan-africans-are-listed-as-unbanked-world-bank/> [Accessed: May 16, 2020].
[8] GSMA 'State of the Industry Report on Mobile Money 2019' p.15 at <https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf> [Accessed May 15, 2020].

remittances from abroad are likely to be cut short, Nigerian regulators should really be looking to issue these without delay.

Suffice to mention, though, that on other fronts, since the WHO linked the spread of the corona virus to the use of cash,[9] some FinTech firms and African governments have begun to take actions and measures to shift volumes of payment transactions away from cash to mobile money[10] and are including mobile finance as part of a broader response to the pandemic.

In Nigeria, for example, despite the absence of the PSB licence, the increase in Covid-19 cases has moved the country toward electronic payments and has driven one of the country's largest digital payments start-ups to action. Paga, a Lagos based venture, made fee adjustments, allowing merchants to accept payments from Paga customers for free in order to help slow the spread of the virus by the use of cash. Also, according to Paga's CEO, Tayo Oviosu, some parts of Lagos — which is connected to Nigeria's largest commercial hub of Lagos State — have begun to require digital payments in response to Covid-19.[11]

In Kenya, digital finance (and significantly mobile payments) is being utilised as a key strategy to beat this public health crisis and Safaricom, its largest telecommunications company, has also implemented a fee-waiver on M-Pesa,[12] to reduce the physical exchange of cash in response to Covid-19. This came after a meeting with the Kenya central bank and Safaricom organised in furtherance of a directive from the Kenyan President Uhuru Kenyatta to explore mechanisms to

[9] Bill Gardner, 'Dirty money may be spreading the virus, WHO suggests' The Telegraph (2 March 2020) at <https://www.telegraph.co.uk/news/2020/03/02/exclusive-dirty-banknotes-may-spreading-coronavirus-world-health/> [Accessed May 16, 2020].
[10] Jake Bright, 'Africa turns to mobile payments as a tool to curb Covid-19', TechCrunch, (25 March 2020) at <https://techcrunch.com/2020/03/25/african-turns-to-mobile-payments-as-a-tool-to-curb-covid-19/> [Accessed May 22, 2020).
[11] Ibid.
[12] Ibid. The company announced that all person-to-person (P2P) transactions under 1,000 Kenyan Schillings (≈ $10) would be free for three months.

increase the use of mobile-money to reduce the risk of spreading the virus through physical handling of cash.

In Ghana, to curb the spread of the use of cash, the Central Bank in March 2020, instructed mobile money providers to waive fees on transactions of GH₵100 ($18), with restrictions on transactions to withdraw cash from mobile-wallets. The Central Bank also relaxed the Know-Your-Customer (KYC) requirements on mobile-money accounts, allowing citizens to use existing mobile phone registrations to open accounts with the major digital payment providers.[13]

South Africa, the second largest economy on the continent, unlike Ghana and Kenya, has not issued any such measures toward mobile payments. The pace of the spread of the disease in the country (which records the largest number of cases in Africa) is, however, driving FinTech firms to action. FinTech firms such as Yoco (which develops and sells digital payment hardware and services for small businesses on a network of 80,000 clients that processes roughly $500 million annually), stated that with the growth of Covid-19 cases in South Africa, it had instructed its clients to encourage customers to use the contactless payment option on its point of sale machines. Its CEO, Katlego Maphai, stated that the start-up has also sped up its development of a remote payment product, that would enable transfers on its client network through a weblink.[14]

These measures are certainly welcomed and as they would go a long way in reducing cash handling and human to human contact, they are likely to significantly curtail the spread of the virus on the continent.

[13] Bank of Ghana Monetary Policy Press Release (18 March 2020) at <https://www.bog.gov.gh/wp-content/uploads/2020/03/MPC-Press-Release-March-2020-3.pdf> [Accessed May 23, 2020].
[14] Bright (n 10).

Risks of mobile money in Africa

Despite the potential of the use of mobile money services during and after the crisis, as the services become more widely used, particular attention needs to be drawn to the risks associated with their use. The ensuing paragraphs examines the risks that may arise in the operation of mobile payments and considers actions that need to be taken to mitigate such risks.

Monetary Policy

GSMA the global body that protects the interest of mobile service providers world-wide, undertook a study in 2019 to assess the risks posed by mobile money. This study assessed the impact of mobile money on monetary and financial stability across several countries in Sub-Saharan Africa. This was achieved through close monitoring of monetary and financial stability trends in African countries with high and low adoption of mobile money.[15]

In terms of monetary (or price) stability, the study found that mobile money enabled more effective monetary policy by transferring currency and assets into the formal financial system and bringing a greater share of economic activity under the influence of central bank interest rates. The study did not find any correlation between mobile money adoption and inflation.

Financial Stability

Unlike previously feared, there is currently no evidence to suggest that mobile money poses a systemic risk to the financial system or other payment systems, according to the same GSMA study referred to above. Even in the most mature markets, mobile money accounts for a much smaller proportion of transaction values than transaction volumes, highlighting the 'high-

[15] Kennedy Kipkemboi and Kalvin Bahia, 'Impact of Mobile Money on Financial Sector Development, GSMA Blog (29 March 2019) at <https://www.gsma.com/mobilefordevelopment/blog/the-impact-of-mobile-money-on-financial-sector-development/> [Accessed May 22, 2020).

volume, low-value' nature of the product. Also, the study found that mobile money expansion is associated with growth in the commercial banking sector, suggesting that concerns around the displacement of traditional banks are unfounded. The study thus concluded that mobile money is complementary to commercial banking services and can enable its diversification and expansion – or at the very least, it has no discernible impact.

Money Laundering

Money laundering is the concealment of the origin of illegally obtained money, typically by means of transfers sometimes involving global financial institutions or legitimate businesses. Several money laundering risk factors exist in the mobile money space, including: the absence of credit risk necessitating the need to know-your-customer (KYC); the non-face-to-face nature of the business relationship; and speed of transactions. Also, as anonymity is a unique feature of mobile phones, it is a clear risk factor this can facilitate money laundering. This is further compounded if the mobile money system sits outside a country's financial regulatory regime, making it almost impossible for authorities to monitor mobile money transactions. In Kenya, this has resulted in the use of M-Pesa to launder money, to bribe corrupt police officers and as a payment vehicle in kidnapping.

Money laundering risks can, however, be mitigated through the design and operation of the mobile money system in such a way that financial integrity is preserved. For instance, the risks brought on by anonymity with the use of mobile phones can be mitigated by implementing robust identification and verification procedures.

In fact, most countries' KYC legislative requirements already require that mobile operators take copies of identity documents on mobile service accounts. In doing so, these operators

increase transparency and generate useful data on transactions and customers that can be shared with enforcement agencies. However, as this would require existing reliable regimes for the verification of customer identity this may be problematic in certain African jurisdictions. In these jurisdictions alternative risk-mitigation measures can be utilised such as imposing low value limits in order to qualify as a low-risk product. This is key as if a stringent identity requirement regime is introduced, this may counter the benefit of mobile money as being inclusive as these measures may require citizens to produce documentation that they may, financially, be unable to access - such as a passport. The acquisition of a passport can be a very expensive process in certain countries in Africa and in certain remote parts, people may not be able to afford applying for a passport that would be needed to verify their identity.

As stated above, money laundering implication is worsened if mobile money systems sit outside a country's financial regulatory regime - making it almost impossible for authorities to monitor mobile money transactions. In most countries, including, Nigeria, South Africa and Zambia, mobile money operators are required to hold a license from the banking regulator to operate a mobile money service, placing them under the supervision of the regulator.

Despite, however, the need for regulation in the mitigation of money landering risks, mobile money providers face challenges in launching and scaling the full breadth of mobile financial services in countries with non-enabling regulatory environments as seen in the case of Nigeria. Enabling regulatory framework accelerate the development of the mobile money sector[16] and countries with non-enabling regulatory frameworks show a smaller number of registered and active mobile money accounts, as well as lower agent activity rates than countries with

[16] 'Mobile for Development', GSMA at <https://www.gsma.com/mobilefordevelopment/mobile-money/policy-and-regulation/> [Accessed May 22, 2020].

enabling regulation. A need for a balanced approach to regulating this industry is needed both to continue to facilitate financial inclusion and the safe mobilisation of financial resources during a pandemic. As regulators are willing to embrace mobile money in this crisis period, and in effect to open the market for more mobile money operators, it is hoped that a balanced approach to regulation would be adopted.

Crowdfunding in Africa

Crowdfunding is a mechanism for raising finance for a cause or business ventures from the public or investors, using internet / online platforms.

The four main types of crowd funding are reward based, donations based, equity based and debt-based. In rewards-based crowdfunding, backers give a small amount of money in exchange for a reward. In donation-based crowdfunding, donors donate a small amount of money in exchange for gratitude and the feeling of supporting a cause they believe in. In equity crowdfunding, investors invest large amounts of money in a company in exchange for a small piece of equity in the company. In debt crowdfunding, lenders make a loan with the expectation to make back their principal plus interest.

Crowdfunding increased in popularity in Africa over the last decade. However, its use in Africa, has been limited in comparison to other regions of the world. According to a World Bank report, in 2015, the African crowdfunding market amounted to about $70 million, accounting for less than one percent of the global crowdfunding market[17] - although a 2013

[17] World Bank, *Crowdfunding in Emerging Markets: Lessons from Eastern Africa Start-ups* (World Bank 2015) p.1 at https://www.infodev.org/infodev-files/crowdfunding-in-east-africa.pdf [Accessed May 24, 2020].

report, estimated that by 2025, crowdfunding will be a $96 billion industry growing at a rate of 300% per year.[18] Huge opportunity still exists for crowdfunding to engender financial inclusion and build businesses and entrepreneurship across the continent, which are necessary to boost economic activity through small and medium sized enterprises (SMEs) and in effect boost employment post the covid-19 crisis.

For this to happen, however, the regulatory infrastructure needs to be robust enough to enable its further development within the crowdfunding space.

Crowdfunding platforms are usually structured as follows: An entrepreneur will post a business pitch to a website. These pitches include a fundraising target that the entrepreneur hopes to reach. There are also non-African platforms that allow African entrepreneurs to pitch their businesses and raise capital from funders abroad. However, certain international platforms may use payment systems that restrict contributions originating in lower-income countries. Frequently, funders are members of the entrepreneur's social network but in many cases, funders may be the general public or institutional investors looking for small businesses to support. Most crowdfunding activities in Sub-Saharan are donation-based, but there has been some significant early developments around equity-based and debt-based platforms in South Africa, Kenya and Ghana.

There has been a steady growth in the number of crowdfunding platforms in Sub-Saharan Africa which can be attributed to the high demand for capital, the surge in mobile penetration, and the growing African middle class. At the end of 2015, there were 57 crowdfunding

[18] World Bank *Crowdfunding's Potential for the Developing World* (World Bank 2013) p. 43 at https://www.infodev.org/infodev-files/wb_crowdfundingreport-v12.pdf [Accessed May 24, 2020].

platforms headquartered in Africa of which 21 were based in South Africa.[19] Also, almost half of the money raised through crowdfunding in 2015 — and the significant majority of crowdfunding projects launched — took place in South Africa.[20] Most of these platforms are designed to serve a local consumer base and tend to support projects that operate in their host country only. With the covid-19 pandemic, and the need for more individuals and SMEs to access finance, these numbers are likely to increase.

Crowdfunding opportunities for recovery after the Crisis

Crowdfunding presents three clear opportunities for entrepreneurs on the African continent to access finance both during and after the crisis.

As seen in the section on mobile money services, access to credit is often constrained - banks are highly risk-averse, and potential borrowers are often too small-scale, or lack the credit history and other data, to qualify for bank loans. By enabling entrepreneurs to appeal directly to supporters or potential customers without onerous inquiries into their creditworthiness, business histories or incomes, it creates more avenues for businesses to access capital.

Second, as a purely digital mechanism, African crowdfunding can leverage the increased use of mobile networks to transact business. The rapid expansion of mobile technologies in Africa in the last decade, is a well-known fact, and indeed, people across Africa are using phones for transactions ranging from common purchases to peer-to-peer micro-lending. Even though there is less familiarity (and in certain cases, trust) in Africa when it comes to online fundraising as

[19] Afrikstart, *Crowdfunding in Africa Report (2016)* at <http://afrikstart.com/report/wp-content/uploads/2016/09/Afrikstart-Crowdfunding-In-Africa-Report.pdf> [Accessed May 24, 2020]..
[20] *Ibid*, p.1.

a capital-raising tool, the prevalence of mobile phones could allow for rapid increases in crowdfunding activity in the context.

Third and finally, crowdfunding platforms subsidize the costs of marketing and promotion by typically allowing entrepreneurs to use the platform for free. The platforms themselves have a built-in user base, and most of the platforms that are currently active in Africa have no subscription costs. Listing a venture on a crowdfunding platform not only increases exposure to investors, but it also enables entrepreneurs to benefit from the platform's infrastructure (e.g., online presence) and brand recognition.

These factors can all come into good use and can make crowdfunding a useful tool to facilitate economic activity in the post Covid-19 recovery plan.

Legal and regulatory challenges of crowdfunding in Africa

Despite the opportunities outlined above, there are some regulatory challenges with the development of crowdfunding in Africa. The challenges are borne largely from the fact that investors and African entrepreneurs who use crowdfunding platforms mostly operate in an unregulated space.

First, the absence of regulation means an absence of adequate investor protections. The absence of laws requiring disclosures and data protection which enable contributors to have opportunities for legal redress when violated, would not unsurprisingly, dissuade investors from funding entrepreneur ventures through this mechanism. By contrast, in the United States, Title III of the Jumpstart Our Business Start-ups (JOBS) Act regulates equity crowdfunding and permits companies to issue securities through crowdfunding platforms. U.S. law requires

businesses seeking crowdfunding to make substantive disclosures that provide investors with information. Similar disclosure rules in African nations would enable investors to make informed decisions and potentially improve investor confidence.

Another area of regulatory concern is the lack of clarity about the legal status of African crowdfunding organizations which is a huge concern for international investors. For instance, most equity or debt crowdfunding organizations in Africa are not licensed as financial services companies as a result, some investors are concerned that they may be violating money laundering and terrorism financing laws by making contributions to these platforms. In order to encourage more crowdfunding, governments need to mitigate these concerns by enacting laws on crowdfunding, which among other things, would clarify the status of crowdfunding organisations and allay investor concerns around money laundering.

Some countries are beginning to take steps in this direction, for example, the Financial Services Board in South Africa released a list of potentially-applicable existing regulations and encouraged those seeking to raise finance through crowdfunding to contact the Board to ensure the lawfulness of their campaigns. There is reason to believe that as the crowdfunding industry grows in African markets, so too will the push for an adequate regulatory framework. Nonetheless though, in a report launched by the World Bank in 2019, based on a survey conducted between April and June 2019 which involved more than 110 jurisdictions globally, it was stated that the survey found more change in lower income countries with almost 64% of countries in Africa expected to change their regulatory framework for crowdfunding by early 2021.[21] This is expected to include regulation covering equity and debt-based crowd funding.

[21] World Bank and CCAF, Regulating Alternative Finance: Results from a Global Regulator Survey (2019), p. 29 at <https://openknowledge.worldbank.org/bitstream/handle/10986/32592/142764.pdf?sequence=1&isAllowed=y>

Since a lot of start-ups solicit financing locally, and access to the internet through mobile phones facilitate this, access to a larger regional market would be very useful to crowdfunders and investors as it would present more opportunities to them. As such, a regional framework designed around these infrastructures would be useful since the vast majority of crowdfunding platforms available across the continent today are locally-oriented and do not support international payment mechanisms which enable most crowdfunding platforms across the world to attract capital internationally. Raising finance within the region can therefore be a useful channel to be used to facilitate financial inclusion of start-up entrepreneurs who may not be able to access finance through the formal financial sector and thus promote the growth of start-up and small businesses across the African continent. This would, however, require a robust regional regulatory regime. Regional cooperation in this way would be hugely beneficial both during and after the crisis in order to facilitate the economic recovery process through crowdfunding across Africa post Covid-19.

Cryptocurrencies and access to finance in Africa

Cryptocurrencies are defined as decentralised convertible virtual currencies. They are 'decentralised', meaning that they are issued without a central administering authority. They are ' convertible' as they can be exchanged for fiat currency such as pounds, dollars and euros and this facilitates their use for settling commercial transactions. They are cryptography-based, distributed open source and function on a peer-to-peer basis. Significantly, the underlying protocols on which most cryptocurrencies are based do not require or provide user

(Accessed May 24, 2020). Also see Alfonso Garcia Mora, 'Keeping pace with alternative finance' at <https://blogs.worldbank.org/psd/keeping-pace-alternative-finance> [Accessed May 25, 2020].

identification and verification. Also, the historical transaction records generated on the blockchain (the technology behind bitcoin, which serves as a public ledger of all cryptocurrency transactions) are not necessarily associated with an individual's identity.

Cryptocurrencies are a recent phenomenon and Bitcoin was the first to gain international reputation as a digital currency that could be used to settle transactions after it was anonymously created in early 2009. Amongst other things, they have the potential to facilitate financial inclusion as they require no central administrating body to coordinate their use and parties that use them can make payments directly on the blockchain on a peer to peer basis. They are easy and a quick mechanism to transfer funds from person to person either between parties signed up to the cryptocurrency networks or through cryptocurrency exchanges or cryptocurrency wallets that enable the ease of transfer of cryptocurrency from one party to another. By by-passing the sometimes, stringent requirements for accessing the formal financial sector and opening a bank account, they can facilitate financial inclusion and enable individuals excluded from the formal financial sector transact nationally and internationally with parties willing to accept cryptocurrency for goods and services sold. To that extent, they can facilitate financial inclusion in Africa.

Since they are convertible, their potential to be converted to local fiat currencies through exchanges, also means that they can be useful during the pandemic. Rather than the use of cash which, as stated above, has been linked to the spread of the disease, they can be used to effect transactions if there is a widespread acceptance of them.

Despite these advantages, however, the use of cryptocurrencies raise a number of concerns for financial regulators and governments around the world.[22] These regulatory concerns, are more pronounced in African states as most have not taken a definitive stance on how to regulate them or the exchanges and wallet providers that facilitate their circulation.

Regulating cryptocurrencies / cryptoassets in Africa

Money laundering

According to INTERPOL, cryptocurrencies are known to significantly facilitate money laundering as they hide the identities of transacting parties. As it is, money laundering is a significant problem since Africa loses on average about US$50 billion a year through it, according to the Organisation for Economic Cooperation and Development (OECD) in 2018. With the growth of cryptocurrency transactions money laundering is set to rise. To confirm rise in cryptocurrency transactions, Paxful, a virtual currency wallet provider (VASP), stated in January 2019 that the volume of transactions it had processed from the continent had risen by more than 130 percent and between October 2018 to October 2019)[23]

Money laundering and other financial crimes are facilitated by cryptocurrencies due to the ease with which they are transferred from person to person and also as the identities of transacting parties are encrypted and hidden. The latter characteristic has, however, been the subject of recent international regulatory intervention through the Financial Actions Task Force (FATF), the international standard setter against money laundering and terrorism financing. The FATF has instituted what in US banking has long been referred to as a funds "Travel Rule" (enabling

[22] See Iwa Salami, 'Cryptocurrencies – Cross-border Regulatory Dimensions', *European Financial Review*, (April – May 2018) at <http://www.europeanfinancialreview.com/?p=23432> [Accessed April 24, 2020].
[23] Adrian Zmudzinski, 'P2P Crypto Trading Volume increased 2800% in South Africa, Says Paxful' Cointelegraph (29 October 2019) at <https://cointelegraph.com/news/p2p-crypto-trading-volume-increased-2800-in-south-africa-says-paxful> [Accessed May 24, 2020).

the application of similar KYC required for banks), to virtual assets service providers (VASPs) including cryptocurrency exchanges and wallet providers. This rule requires VASPs to securely transmit (and store) sender and receiver information whenever cryptoassets moves.

The FATF recommended that its 37 member countries — representing some 80 percent of the world's GDP — enact this "travel rule." Basically, the FATF's new cryptoassets travel rule compels VASPs to securely share customers' information with other VASPs whenever cryptoassets move (for transactions above USD/EUR$1,000). Furthermore, they need to obtain and hold required originator information as well as required and accurate beneficiary information.[24]

Whilst these provisions are welcomed and necessary to curb money laundering (through cryptoassets) their implementation in Africa is much more complex as cryptoassets firms and VASP remain largely unregulated across Africa. So, for instance, while South African regulators are relatively progressive on cryptoassets, they remain unregulated. According to the SARB, there are currently no specific laws that govern their use and no regulatory compliance requirements exist for trading them.[25] However, in a joint consultation paper by the Intergovernmental Fintech Working Group (IFWG) and the Crypto Assets Regulatory Working Group[26], on Policy Proposals for Crypto Assets in January 2019, it was suggested that South Africa should implement the FATF recommendation on cryptoassets. Suffice to mention that this was before FATF adopted the travel rules for cryptoasset trading.[27]

[24] FATF Interpretative Note to Recommendation 16.
[25] *Virtual Currencies/Crypto-Currencies*, SARB at <https://www.resbank.co.za/RegulationAndSupervision/FinancialSurveillanceAndExchangeControl/FAQs/Pages/VirtualCurrenciesCryptocurrencies.aspx> [Accessed May 24, 2020].
[26] Crypto Assets Regulatory Working Group, Consultation Paper on Policy Proposals for Crypto Assets (January 2019), at http://www.treasury.gov.za/comm_media/press/2019/CAR WG Consultation paper on crypto assets_final.pdf [Accessed May 24, 2020].
[27] Ibid.

On the other hand, Nigeria has adopted a cautious approach and in January 2017, the Central Bank of Nigeria (CBN) issued a circular signed by CBN Director, Kevin Amugo, requiring cryptocurrency exchanges' banks and other financial institutions customers to comply with standard AML/KYC requirements.[28] At another meeting of bankers in March 2017, CBN Deputy Director, Musa Itopa Jimoh stated, "Central banks cannot control or regulate bitcoin. Just the same way no one is going to control or regulate the internet. We don't own it."[29] These two statements appear to conflate the trading of cryptocurrencies on decentralised and centralised platforms. While it is difficult to regulate the trading of cryptocurrencies on decentralised platforms, such as on the bitcoin network itself, progress is being made to regulate them on centralised platforms such as the through FATF requirements that VASP fulfil the travel rule as highlighted above. So, while the bitcoin network itself cannot be regulated, the trading of bitcoin on centralised platforms can be.

In the case of Kenya, the Kenya Central Bank were forced to clarify their position on cryptoassets following the 2015 court case between Safaricom and the cryptocurrency exchange BitPesa. In this case, Safaricom suspended its MPESA services to Lipisha Consortium and Bitpesa because Bitpesa was engaged in a money remittance business using Bitcoin without approval from the CBK. The court held that Safaricom was within its rights to have suspended its services to Lipisha and Bitpesa for operating a money remittance business without CBK approval as Safaricom could be found to be in breach of anti-money laundering

[28] Central Bank of Nigeria, Circular to Banks and Other Financial Institutions on Virtual Currency Operations in Nigeria (12 January 2017) at <https://www.cbn.gov.ng/out/2017/fprd/aml%20january%202017%20circular%20to%20fis%20on%20virtual%20currency.pdf> [Accessed December 2019).

[29] See Amit Jaiswal, 'The Central Bank of Nigeria Stand on Bitcoin' (7 March 2017) at <https://coinpedia.wordpress.com/2017/03/07/the-central-bank-of-nigeria-stand-on-bitcoin/> [Accessed May 24, 2020].

regulations by allowing Bitcoin trading and remittances through its M-PESA platform. This is due to the anonymity associated with Bitcoin trading, which is in contravention of KYC requirements in remittances and money transfer regulations.[30]

After this case the CBK issued a warning stating that "Bitcoin and similar products are not legal tender nor are they regulated in Kenya. The public should therefore desist from transacting in Bitcoin and similar products".[31] However, appetite for virtual currencies remains strong in Kenya, and volumes transacted are the third highest in Africa (behind South Africa and Nigeria). Despite the warning by the CBK, there is no law prohibiting their use. Since cryptocurrency exchanges continue to operate in Kenya, these VASP should be regulated in so far as compliance with AML/KYC standards are concerned.

African countries should endeavour to adopt the approach suggested for South Africa by the IFWG to adopt FATF standards. This is more pertinent to South Africa, Nigeria and Kenya, the three countries with the highest volumes of cryptocurrency transactions in Africa.

Investor protection

There have been numerous cases of crypto assets scams in Africa such as well-known Bitcoin Wallet 2019 (South Africa), Velox 10 Global 2019 (Kenya), Bitcoin Global 2018 (South Africa), Nigeria Calabar Company 2018 (Nigeria), Mavrodi Mundial Moneybox - MMM

[30] Sonal Sejpal and Geunhak Shin 'Bitcoin and other virtual currencies from a Kenyan legal perspective' at <https://www.africalegalnetwork.com/wp-content/uploads/2018/04/Bitcoin-and-other-Virtual-Currencies-from-a-Kenyan-Legal-Perspective.pdf> [Accessed December 4, 2019].
[31] Central Bank of Kenya, 'Public notice: Caution to the public on virtual currencies such as bitcoin', at <https://www.centralbank.go.ke/images/docs/media/Public_Notice_on_virtual_currencies_such_as_Bitcoin.pdf > [Accessed May 24, 2020).

(South Africa, Kenya and Nigeria) 2012 -2017. All of these have involved investing in bitcoin and exit scams.[32]

These reveal the operational risks that could occur if cryptoasset firms / VASP do not institute the necessary security infrastructure to avoid such implications on investors. The whole area of the status of cryptoassets (whether they constitute securities or commodities and the effect of this on retail investors) across the world has been varied with countries adopting different approaches ranging from non-regulation, to an outright ban such as in China and North Korea.

In the case of South Africa, there is no current reference in the Financial Markets Act 19 of 2012 to cryptoassets in the definition of 'securities' and the registrar of securities services has not prescribed cryptoassets to be instruments similar to any of the securities listed in the FMA.

In the Nigerian case, the circular signed by CBN Director, Kevin Amugo, referred to above stated "… Consumers may therefore lose their money without any legal redress in the event that these exchanges collapse or close business."[33] In January 2018 the Senate warned Nigerians against investing in cryptocurrency investments and requested that the CBN and other regulators do more to educate the public on these risks.[34] On 28 February 2018, the CBN issued another statement stating that "for the avoidance of doubt, dealers and investors in any

[32] Steven Weru, 'Bitcoin Scams in Africa: Their History and how to avoid becoming a victim' at <https://bitcoinmagazine.com/articles/bitcoin-scams-in-africa-their-history-and-how-to-avoid-becoming-a-victim> [Accessed May 24, 2020).

[33] Central Bank of Nigeria, Circular to Banks and Other Financial Institutions on Virtual Currency Operations in Nigeria (12 January 2017) at <https://www.cbn.gov.ng/out/2017/fprd/aml%20january%202017%20circular%20to%20fis%20on%20virtual%20currency.pdf> [Accessed May 24, 2020].

[34] Leke Baiyewu, 'Senate warns Nigerians against investment in bitcoins', Punch Newspaper (31 January 2018) at <https://punchng.com/senate-warns-nigerians-against-investment-in-bitcoins/> [Accessed May 25, 2020].

kind of cryptocurrency in Nigeria are not protected by law".[35] Nigeria, therefore, offers no protection to cryptocurrencies investors.

In the case of Kenya, as stated above, the Kenya Central Bank were forced to clarify their position on cryptoassets only after the Safaricom and BitPesa 2015 case where they stated that the public should therefore desist from transacting in Bitcoin and similar products as they are not legal tender. Despite the warning by the CBK there is no law prohibiting their use and the appetite for cryptoassets remains strong in Kenya as volumes transacted are the third highest in Africa. Suffice to mention that the Capital Markets Authority (CMA) has now set up a regulatory sandbox which will help the CMA gain visibility into new innovations as the innovator tests their products and services in live environments. In June 2017, the CMA published the Stakeholders' Consultative Paper on Policy Framework for Implementation of a Regulatory Sandbox to Support Fintech Innovation in the Capital Markets in Kenya. [36] In this paper they highlighted cryptocurrencies as one of the capital market based Fintech innovations. The boundaries that the regulatory sandbox puts around live testing also reduces risks to consumers from new financial products and services.

It is not surprising though that these African countries have not taken a definitive stance in regulating cryptoassets investments — much like other countries in the world where it is indicated that cryptoassets are not regulated and not subject to securities laws. This is primarily as securities would usually be issued by company against whom the holder of securities will

[35] Central Bank of Nigeria, 'Virtual Currencies not Legal Tender in Nigeria' Press Release (28 February 2018) at <https://www.cbn.gov.ng/Out/2018/CCD/Press%20Release%20on%20Virtual%20Currencies.pdf> [Accessed 24 May 2020].

[36] Capital Markets Authority, *Stakeholders' Consultative Paper on Policy Framework for Implementation of a Regulatory Sandbox to Support Fintech Innovation in the Capital Markets in Kenya*, 2017, p. 8-10 at < https://www.cma.or.ke/index.php?option=com_content&view=article&id=353:stakeholders-consultative-paper-on-policy-framework-for-implementation-of-regulatory-sandbox-to-support-financial-technology-fintech-innovation-in-the-capital-markets-in-kenya&catid=12&Itemid=207> [Accessed May 24, 2020].

have a claim. As cryptoassets do not have this character, having not being issued by a company or central administrator, no one can be held accountable for investors claims. Despite this though, a regulatory framework can be instituted for the operation of crypto transactions on centralised platforms where things like operational risks from exchange hacking, as well as the facilitation of trade on centralised platforms can be regulated. These could be through issuing stronger security requirements to avoid cryptocurrency exchange hacks and exit scams referred to above; also through the application of the FATF travel rules for fulling AML/KYC standards and building in mechanisms to calculate capital requirements provisions for cryptocurrency exchanges' operational risks.

Suffice to mention that countries such as Zimbabwe which had previously banned cryptocurrency transactions, announced[37] in March 2020 that it is developing a regulatory framework for cryptocurrencies that will establish a clear procedure for firms to become compliant with the country's financial regulations and therefore be allowed to do business with banks. This approach and further regulatory clarity would pave the way for the use of cryptocurrency to mobilise resources during and after the covid-19 crisis and is to be welcomed.

Monetary policy implications

At the moment cryptoassets do not fulfil all the functions of money (that is that they can be used as a medium of exchange, unit of account and store of value) in African countries. Even the most popular cryptoasset in Africa, bitcoin, does not have a significant impact on the real economy or on monetary policy as it is not widely used to pay for goods and services. However,

[37] Andrey Shevchenko, 'Zimbabwe returns to crypto as reserve bank proposes regulatory sandbox' at <https://cointelegraph.com/news/zimbabwe-returns-to-crypto-as-reserve-bank-proposes-regulatory-sandbox> [Accessed May 21, 2020].

this could change drastically upon the introduction of new global digital currencies such as was proposed by Facebook in 2019 when it announced its digital currency, Libra, which it had planned to launch in 2020. This announcement faced huge opposition from governments and regulators around the world.

Although the idea of this currency was the facilitation of financial inclusion and so its operation may be deemed to be useful in the context of the covid-19 crisis, however, one of the main criticisms of libra, amongst others[38] was its potential implication on monetary policy particularly in countries with weak currencies. The widespread use of such a currency in these jurisdictions - including sub-Saharan Africa countries with weak currencies - would have had potential monetary policy implication for these countries. National central banks were likely to lose their ability to conduct monetary policy and thus weakening their ability to introduce the necessary economic policies to stimulate their economies in times of economic distress.[39] Nonetheless, due to international opposition, this project has since been revised. Were a digital currency of this nature to be introduced for a global platform such as Facebook, it could have huge monetary policy implications for African countries, despite its acclaimed goal of facilitating financial inclusion.

Decentralised Finance

Closely linked to the discussion above on cryptocurrencies, is decentralised finance. This is in effect non-custodial finance which utilises decentralised platforms and smart contracts to enable users transact traditional financial services including lending, borrowing and investment

[38] For more on this see R. Fanni, 'A Scientists Opinion: Interview with Dr Iwa Salami about the Libra Project' *The European Science Media* Hub (4 September 2019) at <https://sciencemediahub.eu/2019/09/04/a-scientists-opinion-interview-with-dr-iwa-salami-about-the-libra-project/> [Accessed May 24, 2020].
[39] Iwa Salami, 'From Bitcoin to Libra: A Global Public-Private Partnership Approach to Regulation' (23 September 2019) at <https://www.europeanfinancialreview.com/from-bitcoin-to-libra-a-global-public-private-partnership-approach-to-regulation/> [Accessed May 24, 2020].

services on a peer to peer basis. The underlying assets used here are cryptocurrencies which can be borrowed or lent on such platforms as well as providing mechanisms for users to invest.[40] Decentralised finance promises to be the future of financial services both for banking and investment services which would give users (both retail and institutional investors) the opportunity to transact directly with each other without the use of intermediaries such as banks and brokers. They are decentralised applications built largely on the Ethereum blockchains and are distributed open source.

Although still nascent, with lower volumes of transactions in comparison to centralised exchanges, decentralised platforms have the potential to grow. Also, since these platforms have the potential to boost financial transactions among users during and after the crisis they are likely to prove useful in the long term. However, a lot would need to be worked out from the view point of their regulation before they can be widely acceptable services that can contribute to the economic recovery process after the pandemic.[41]

Some of the huge regulatory challenges raised by decentralised applications is that they are distributed open source and except the regulation of the platforms are programmed in the source code of the platforms by software developers, these cannot be regulated or shut down by any regulatory authority.

Also, as they are distributed open source and remain 'stateless' in their operation they raise governance and responsibility issues. Who becomes responsible when things fail or when there are bugs in smart contracts that result in investors losing money? Should platform providers

[40] For more on this see Iwa Salami, 'Decentralised Finance – The Case for a Wholistic Approach to Regulating the Crypto Industry' JIBFL, June 2020, forthcoming.
[41] Ibid.

and developers be held responsible? If so, why should developers be held responsible for misconduct of users accessing the platforms? Also, who would be holding them responsible, when transactions occur on a global scale? These questions still need to be addressed by global standard setters. African regulators should therefore keep their eyes peeled on these developments as the need for a wholistic approach to regulating the crypto space would include the regulation of cryptocurrency transactions happening on both on centralised and decentralized platforms.

As they have the potential to grow and to be used in a post covid-19 recovery process, the approach to their regulation should embrace collaboration with all necessary stakeholders. Regulators should as such be willing to engage with a wider group of stakeholders, including academia, businesses, software developers and engineers, investors, consumers and users.

IV. The Adoption of Regulatory Technology

Regulatory Technology (RegTech) is the adoption of technology such as artificial intelligence (AI) and machine learning (ML) to both assist with the regulation of financial institutions. It is also the application of technology by financial firms to facilitate more efficient and cost effective compliance with regulations around client identity management, transaction monitoring, risk management, regulatory reporting, compliance and trading in financial markets. In the cryptoassets space and with respect to regulating the VASP, RegTech solutions are sought for mainly identity management and transaction monitoring. RegTech solutions for identity management of VASP platforms focus on counterpart due diligence and KYC procedures, anti-money laundering (AML) controls and fraud detection. Solutions include: digitalization of client or partner onboarding processes, digitization and sharing of

customer/partner information, gathering and analyzing customer and transaction data, and identifying suspicious transactions based on automated triggers.

RegTech solutions for transaction monitoring focuses on conduct-of-business requirements, and solutions offer real-time transaction monitoring and auditing, end-to-end integrity validation, anti-fraud and market abuse identification systems, back-office automation (post-transaction settlement, closing procedures), and risk alerts. RegTech solutions providers for cryptocurrency exchanges and other VASP platforms include: Chainalysis and Elliptic which are the earliest providers, known for providing solutions that are able to identify parties transacting on blockchains.

For countries to adopt RegTech effectively in the crypto space, they would at least first need to appreciate that: 1) there is a need for regulation such as the regulation of cryptocurrency exchanges; 2) have a regulatory framework for this outlined in law and 3) be keen to institute a robust supervisory regime As such, African countries, as a starting point, would need to first set up a regulatory framework for crypto assets that necessarily includes regulating centralised cryptocurrency exchanges.

V. Regional Approach to FinTech Regulation

The African Continental Free Trade Area (AfCFTA) became operational in July 2019. Through the creation of a single market, the AfCFTA is expected to boost intra-African trade for all African companies. With the opportunity to access finance in the ways discussed above, if done in the context of a single (regional) market, presents huge opportunities for SMEs, investors

and in the long run African economies with huge job reaction prospects across the continent. This would not be achievable without regional harmonisations of standards in FinTech services across African countries. A coordinated regional approach to regulating these areas would be significant for the facilitation of the economic recovery process post covid-19.

The achievement of a coordinated financial regulatory framework can be done within the context of existing regional economic communities (RECs)[42] which is enshrined in the African Union (AU) and the African Economic Community (AEC) agenda to achieve monetary union for the whole of Africa by 2028 in six stages.[43] An integral part of this plan includes the achievement of financial harmonisation, first among RECs[44] and then across the entire continent.[45] However, for an effective regional regulatory framework to be achieved, in the context of FinTech, as discussed above, certain requirements need to be in place. These would include for example: devising regional standards for regulating mobile money services in Africa; instituting a regional regulatory regime for crowdfunding; preparing for a robust framework for regulating the use of cryptocurrencies in Africa which should embrace FATF provisions for VASP; effective co-ordination among national supervisors; [46] strengthening the general legal environment as a foundation for robust regional regime for FinTech regulation in Africa[47] and adopting RegTech at a regional level for the FinTech developments.

[42] For more on this see Iwa Salami, Financial Regulation in African Frontier Markets – Can the EU Approach Work? (2011) *Law and Financial Markets Review* 5(5), pp. 380-387.
[43] African Economic Community Treaty 1991 (AEC Treaty) at https://au.int/sites/default/files/treaties/37636-treaty-0016_-_treaty_establishing_the_african_economic_community_e.pdf
[Assessed May 24, 2020). Art 6(2), states that an African Central Bank and the single currency would be achieved in six stages.
[44] *Ibid*, stage 2.
[45] *Ibid*, stages 5 and 6.
[46] Iwa Salami, 'African Financial Markets – Going Global or Staying at Home?', (2011) *Journal of International Banking Law and Regulation* 26 (11), pp. 35 – 44.
[47] Ibid.

However, due to the past challenges of financial integration and harmonisation,[48] African economies would need to be resolute in their agenda for cooperation knowing that an African region which embraces financial innovation is billed to facilitate the AfCFTA – which would be a great tool for the facilitation of economic recovery after the Covid-19 crisis.

VI. Conclusion

The Covid-19 crisis has given the world lemons but African countries can make lemonade through the opportunities presented by FinTech. For FinTech to play a meaningful role in the economic recovery process, African economies would need to take a balanced regulatory approach to financial innovation. A useful approach to adopt by African regulators would be that regulation should facilitate financial innovation and not stifle it. It should do so but not at the expense of financial stability, market integrity and investor protection. The rise and growth of FinTech products and services such as decentralised finance, is a clear indication that the approach to regulation can no longer be a top down one but would necessarily involve regulators' engagement with the FinTech industry. This approach would be useful in creating a conducive environment for FinTech to be put to good use for the recovery of African economies post the Covid-19 crisis.

[48] See generally, I. Salami, Financial Regulation in Africa: An Assessment of Financial integration Arrangements in African Emerging and Frontier Markets (Routledge 2012).