

ANNUAL BANKERS' Conference **2021**

**Bend but don't break: How the financial sector can thrive
in the era of the 4th Industrial Revolution**

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The Deposit Protection Fund of Uganda (DPF) is a legal entity created by the Government of Uganda to ensure that depositors are paid their protected deposits in the event of failure of a contributing institution.

A Contributing Institution (CI) is one which is licensed by Bank of Uganda and periodically makes a financial contribution to the DPF. These include: commercial banks, microfinance deposit-taking institutions and credit institutions.

The DPF, which is also referred to as the Fund, was established as a legal entity following the enactment of the Financial Institutions (Amendment) Act, 2016. The process of operationalizing the Fund commenced in April 2017 with the inauguration of the Board of Directors by Honorable Minister of Finance, Planning and Economic Development.

Frequently Asked Questions

- 1) **What is the mandate of the DPF?**
 - To contribute to financial sector stability by ensuring that protected deposits are paid on time in the event of failure of a contributing institution, hence building public confidence in the financial sector.
 - To act as a receiver or liquidator of any closed contributing institution if appointed by Bank of Uganda.
 - To perform such other functions as may be conferred upon it by law.
- 2) **How is the DPF funded?**
 - Annual Premium: All contributing institutions make an annual premium payment to the DPF.
 - Investment Income: The contributions are invested in Government of Uganda treasury instruments and this helps to increase the Fund size.
- 3) **How does the DPF compute and collect the annual premiums?**
 - Annually, DPF serves contributing institutions with a notice specifying the expected annual premium amount and the period within which it should be paid.
 - The annual premium is at least 0.2 per cent of the average weighted deposit liabilities of the contributing institution over the previous financial year.
 - The annual premium should be paid to the Fund in the period not more than twenty-one days after the date of service of the notice.
 - A contributing institution which for any reason fails to pay its premium to the Fund within the period of 21 days is liable to pay a civil penalty interest of one half per cent of the unpaid amount for every day outside the notice period on which the amount remains unpaid.
- 4) **How does the DPF compute and collect the Risk Adjusted Premiums?**
 - If the Central Bank ascertains that the affairs of a contributing institution are being conducted in a manner which is detrimental to the interests of depositors, it may, by notice, increase the contributions of that contributing institution beyond the annual premium stated above.
 - The increased contributions are referred to as Risk Adjusted Premiums. These are based on the quarterly ratings resulting from the BoU's quarterly off-site financial analysis reports.
 - A Contributing institution whose overall performance shows an unsatisfactory or marginal rating shall be charged on a quarterly basis as follows:
 - o Marginal: additional charge of 0.1 percent of the average weighted deposit liabilities on top of the annual contribution.
 - o Unsatisfactory: additional charge of 0.2 percent of the average weighted deposit liabilities on top of the annual contribution.
- 5) **Where does the DPF keep the money it receives from contributing institutions?**
 - The money received from contributing institutions is deposited in an account held at Bank of Uganda.
 - These monies are then invested in assets with minimal risks such as Government of Uganda treasury bills and treasury bonds. Income from the investment is reinvested.
 - In the event of failure of a Contributing Institution, and subsequent receivership, a depositor of that Contributing Institution can lodge a claim with DPF. Claim forms shall be readily available to the public.
- 6) **Who are covered by the Deposit Protection Fund?**
 - All depositors of contributing institutions.
 - The coverage is per depositor per contributing institution.
 - Joint accounts are treated as separate persons for the purposes of payment of protected deposits.
- 7) **Are all financial institutions in Uganda members of the Deposit Protection Fund?**

No. Only those financial institutions licensed and supervised by Bank of Uganda are members of the DPF.
- 8) **How much compensation am I entitled to when a contributing institution closes?**
 - Currently it's up to UGX 10,000,000 per depositor per contributing institution.
 - It should be noted that DPF determines the 'protected deposit' for payment purposes, by getting the total deposits of an individual in a particular contributing institution and deducting any liability of that individual to the institution.
- 9) **How soon can the customer get his money from a contributing institution which has been closed?**

According to the Financial Institutions Act, 2004 as amended, depositors shall be paid within ninety (90) days of closure of the contributing institution. DPF will nevertheless, ensure that depositors get their money earlier than the time period provided for in the law.
- 10) **Do depositors need to pay money to the Deposit Protection Fund of Uganda?**

No, It is only Contributing Institutions that are required to make a contribution to the DPF.
- 11) **How do I know if my deposits are protected?**

As long as your deposits are with a contributing institution which is regulated by Bank of Uganda and the amount is within the current protected limit of UGX 10,000,000, they are protected.
- 12) **What happens to the rest of my money?**

Deposits above the protected limit will be paid by the liquidator after the assets of the closed institution have been sold off. The amount paid out will depend on the recoveries made.
- 13) **What kinds of deposits are covered by the Deposit Protection Fund of Uganda?**
 - All types of deposits received by a contributing institution in the normal course of business are protected. These include savings, current accounts and fixed deposits.
 - It also includes foreign currency deposits though these will be converted to Uganda shillings using BoU determined closing mid exchange rate on the day the institution was closed.
- 14) **How does the DPF contribute to financial sector stability?**
 - DPF protects a large percentage of retail depositors. More than 90 percent of the depositors in the sector are fully covered by the UGX 10,000,000 limit.
 - DPF creates confidence in the financial sector by ensuring that customers are paid their deposits in time in the event a contributing institution is closed.
 - Contributing institutions endeavor to put in place adequate risk management systems in order to avoid penalties levied by the DPF.
- 15) **At what point might DPF be called upon to pay protected deposits?**

In ensuring financial sector stability, the DPF works closely with the Bank of Uganda. BoU has a range of options it can use to ensure that contributing institutions exit the sector without inconveniencing depositors. As such, the Bank of Uganda would advise DPF to pay depositors out of the fund, as the very last option. This is in line with the International Best Practice.

Your deposits are protected



DPF

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Protection
Fund of Uganda**
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ARE PROTECTED**

BY THE

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FUND OF UGANDA**

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UGX 10,000,000**

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- Credit Institutions and
- Microfinance Deposit-taking Institutions - MDIs

Julia Clare Olima Oyet
Chief Executive Officer
Deposit Protection Fund
of Uganda

AHA Towers, Plot 7 Lourdel Road, Kampala

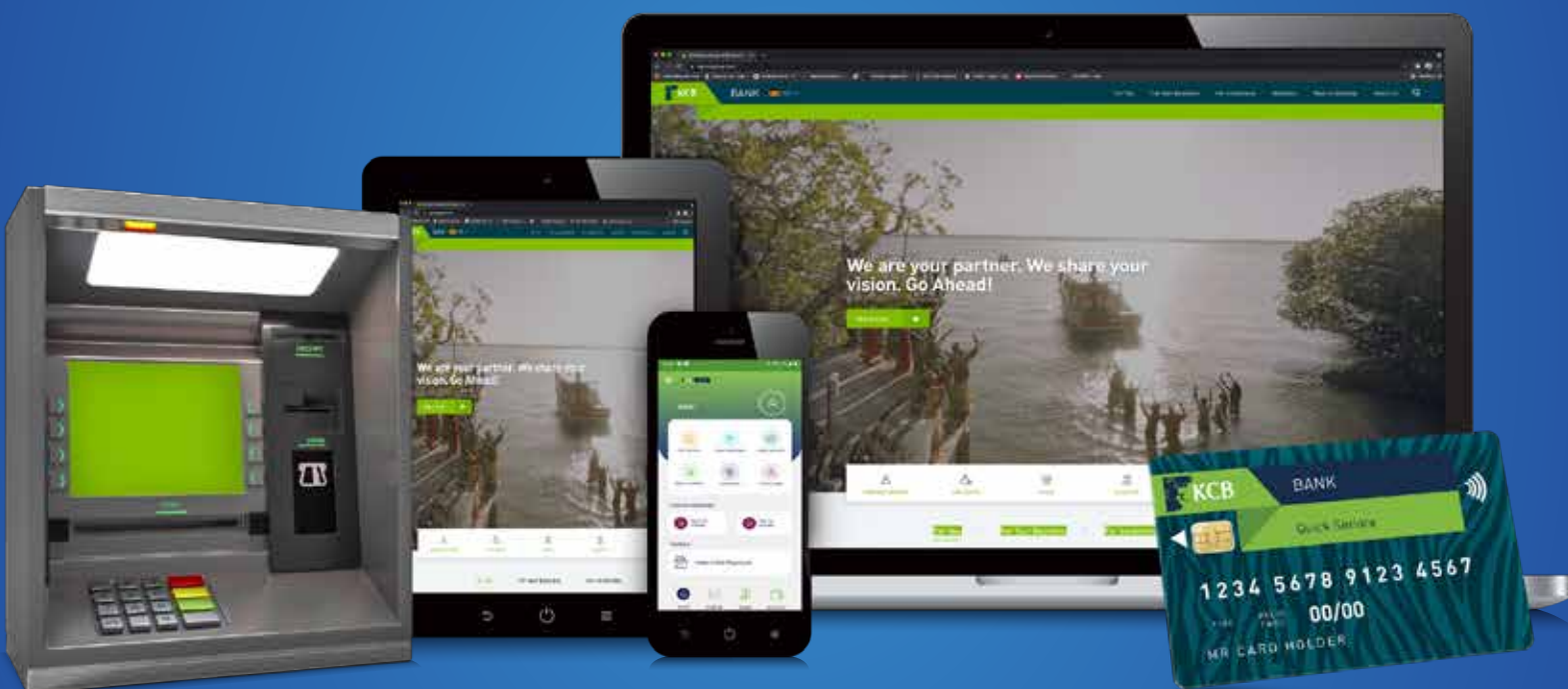
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CONTENTS

BOU Governor's Foreword	20
Chairman's Foreword	22
ABC 2021 Program	46
Speaker and Presenter Profiles	30
Key Highlights From the 2019 ABC	46
Published Articles	
ABC 2021 : Bend but don't break: How the financial sector can thrive in the era of the 4th Industrial Revolution	50
Banking on green business Leveraging opportunities of the 4IR to operationalise green finance for SMEs	56
Confronting Fraud and Cyber Security Risks – Real and emergent risks, and mitigation	64
Cyber Security Fraud and the Growth of Digital Services	72
Digital ID & Finance 4.0: How banks can stay relevant in the face of the 4th Industrial Revolution	78
Why a rigid and risk-averse legal and regulatory framework is an impediment to innovations in Uganda's financial sector?	84
Evolution of Fintech Solutions as a tool of Financial Inclusion in Developing Countries THE PAST, THE PRESENT AND THE FUTURE - A CASE OF UGANDA	90
Payment Aspects of Financial Inclusion in the Fintech era	100
Legal and Regulatory Considerations for E-Money Issuers Under the Ugandan National Payment Systems Framework : Lessons from Kenya and South Africa	110
Bank of Uganda takes over regulation, control of Mobile Money & Airtel Money	116
Regulatory Developments in Payment Systems in Uganda	122
The Communications Market & relation to payments space	126
Driving Innovation, Affordability and Financial Inclusion through Partnerships with Fintechs	128
Leaving no one behind in the digital era	133
Leveraging the government e-payment gateway to enhance digital payments	137
Developments in payments Ecosystem in Uganda and how key players can partner for maximum Leverage	145
News Paper Published Articles	155

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Welcome to the 4th Edition of **the 2021**



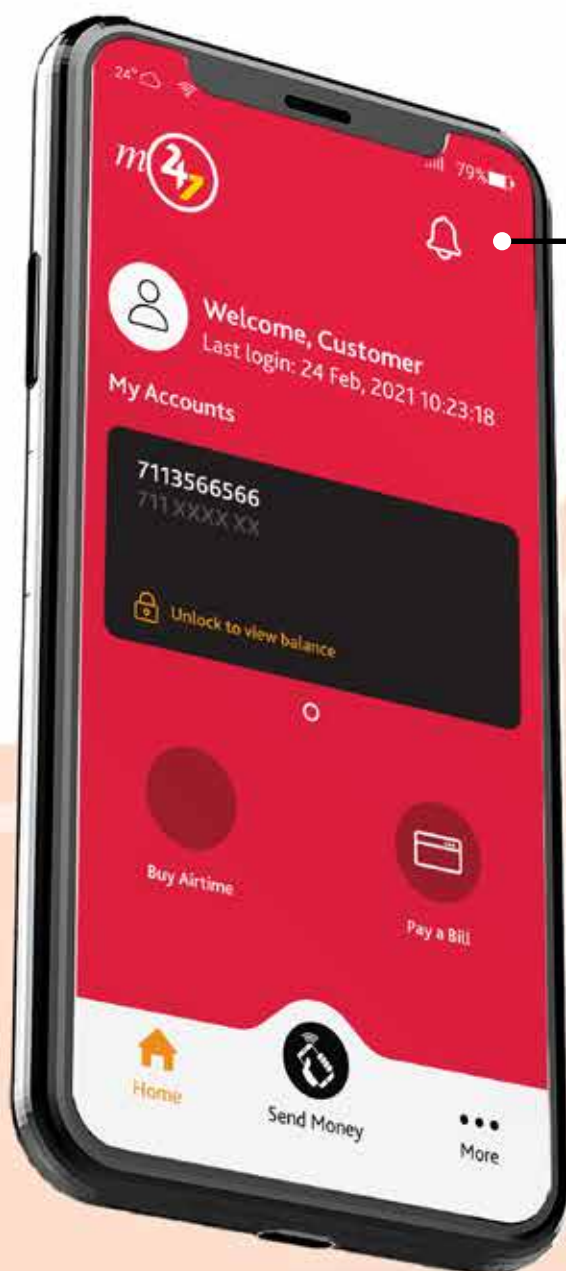
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Fintech Group Shakes Hands with 4th Wave

Fintech partners with 4th Wave to launch cutting-edge Supply Chain Financing & Collections Digital Platform



Vincent Ondiff, Fintech Group General Manager

Fintech International Group, a leading enterprise technology solutions provider in Africa has announced their partnership with 4thWave, a Canada-based Finance and Banking As-A-Service Platform provider.

Through this partnership, Fintech is launching Kapilink – an innovative Digital Platform that brings together lenders and businesses to facilitate Supply Chain Financing and Collections in one place. Kapilink gives businesses access to finance without affecting bank credit lines on one hand and on the other, it helps lenders deploy their capital through the low-risk Supply Chain Finance method of lending.

COVID-19 has been inimical to Micro, Small & Medium Enterprises (MSMEs) across the world. Sadly, however, traditional lending models have not afforded firms' easy access to working capital, even under the contemporaneous extended credit environment.

Having recognized this gap in the market, Fintech Group's General Manager, Vincent Ondiff said "Kapilink brings together financiers, buyers and suppliers in one platform and eliminates cashflow challenges most SMEs face in day-to-day supply chain cycle. The platform assists buyers optimize their cash flow by enabling financing sellers account receivables or even buyers accounts payables.

Following together with our Canadian-based partner 4th Wave, we are unveiling our cloud-based financial capital platform – Kapilink. As Fintech we are confident that Kapilink will precipitate an unheralded growth in supply chain financing in emerging economies across the African continent."

To commemorate this strategic partnership, Partha Saha, 4th Wave's Senior Vice President – Global Market Development stated, "We are confident that 4th Wave's experience in Supply Chain Financing in emerging economies, coupled with Fintech International Group's deep insights of the Sub-Saharan Africa will alleviate the financing issues that plague MSMEs in these countries while catalysing inclusive economic growth by introducing a paradigm shift in MSME financing."

Fintech Group is a leading enterprise information technology solutions and services provider that helps the Financial Services Industry transform, improve efficiency, and elevate their value through Core, Payment and Channel technology solutions.

Headquartered in Mauritius, Fintech has offices in Kenya, Malawi, Uganda and Zimbabwe which has enabled them to successfully deliver solutions to over 20 countries across Africa, making Fintech a preferred service provider in the region.

About 4th Wave

4th Wave is a Canada based B2B FinBaaS Platform provider with focus on providing white labelled Digital Platforms solutions to the Banks and Financial Institutions in emerging economies. The 4th Wave platform has laser like focus in increasing Revenue for our partner financial institutions.

The plug & play solution enabled by low-code platform design enables fast go-to-market. The company has been founded by successful professionals and serial entrepreneurs with years of experience in Banking and Technology domain in global markets.



Partha Saha, 4th Wave Senior Vice President



Supply Chain Financing & Collections

Kapilink facilitates Supply Chain Financing by helping banks & financial institutions connect to SME's on a single platform improving working capital management and liquidity generation.

- Minimal default risk.
- Higher Interest income
- Portfolio diversification
- Positive PR
- Inclusive economic growth
- Fee income from collections



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Governor's FOREWORD



Prof. Emmanuel Tumusiime-Mutebile
Governor, Bank of Uganda

The global financial system is undergoing rapid structural transformation and digitalization, largely occasioned by the 4th Industrial Revolution (4IR). The 4IR is set to fundamentally alter the financial sector landscape and we do not yet know just how far these technological innovations will unfold. While there are immense opportunities to be exploited from the 4IR, there are also challenges that we not only have to contend with, but navigate through.

The Annual Bankers Conference 2021 on the theme: ***"Bend but don't break: How players in the financial services sector can thrive in the era of the 4th Industrial Revolution"*** is thus timely. Indeed, this conference could not have come at a better time than now, when recourse to technological innovations has been critical in mitigating the adverse consequences of Covid-19 pandemic in the financial sector.

The financial industry should embrace the 4th Industrial Revolution (4IR) and the digitalization agenda. Africa in general, and Uganda in particular is still lagging behind in the utilization of financial technology. The financial sector should therefore leverage upon the 4IR in order to benefit from the

transformative potential that it provides.

We have witnessed the transformational power of mobile money services and agent banking in increasing the outreach of financial services to the unserved and underserved segments of our society, which is critical for poverty eradication and inclusive growth. We should therefore continue to leverage on the financial technology (Fintech) to improve and automate the delivery and use of financial services in order to enhance financial inclusion and economic transformation.

Nonetheless, financial sector's heavy reliance on information technology has associated cyber risks. There has been a significant increase in cyber-attacks in the banking sector globally, to the extent that they are now considered one of the industry's biggest threats. Over the last decade, cybercriminals have evolved in technology, thus enhancing their techniques and skills.

Investment in cybersecurity is therefore vital and financial institutions should focus on building robust security systems to ensure operational resilience, while adopting newer technologies that provide a seamless banking service. Collaboration and co-operation in cybersecurity strategies within the financial sector is also critical. The sharing of information can make a big difference in guarding against attack and reducing detection and response times.

In conclusion, the 4IR and the accelerated progress in digital technologies have inevitably led to increased competition in the financial sector. Indeed, financial institutions have had to re-examine their business models in order to remain relevant. The key challenge though is how to position a financial institution to benefit from the 4IR, while managing the risks that it presents. Overcoming the challenges while taking advantage of the opportunities demand high levels of commitment and co-operation within the financial sector.

Prof. Emmanuel Tumusiime - Mutebile,
Governor Bank of Uganda





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thanks to Equity.**

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UBA Chairman's FOREWORD



Mr. Mathias Katamba

Chairman Uganda Bankers' Association
Chief Executive Officer - DFCU Bank

It is with great pleasure that I welcome you to the 4th Annual Bankers Conference 2021.

The conference is being held virtually under the theme *"Bend but don't break: How the financial sector can thrive in the era of the 4th Industrial Revolution"*.

The Fourth Industrial Revolution (4IR) has been dimensioned to refer to our current period of rapid technological growth which is fundamentally changing the way we live. By drawing on a multitude of advanced technologies, 4IR blurs the lines between the physical, digital, and biological worlds.

The theme of the conference is very relevant during these unprecedented times, and the 4th industrial revolution (4IR) presents both opportunities as well as challenges not only for the financial sector but all other sectors and spheres of life.

The speed, breadth and depth of the 4IR is compelling us to rethink how countries and industries develop, organizations create and sustain value and how individuals live, sustain themselves and flourish whilst adding value to society. These opportunities can be harnessed to positively impact a great number of countries, societies, organizations, families, and communities, whilst mitigating the potential perils thereto.

The financial services industry finds itself in the

proverbial eye of a storm, precipitated by the 4th Industrial Revolution.. New fintech entities, mobile money operators and other entities are competing for their share of various markets previously dominated by banks for example retail payments, savings, and loans, as well as data collection and storage as it relates to financial products and services.

With the Fourth Industrial Revolution, consumers are now able to afford and access the digital world; with technology enabling new products and services that increase their efficiency and pleasure in life in faster and cheaper ways - This is a critical aspect of financial inclusion.

In Uganda, formal financial inclusion has nearly doubled since 2009, increasing from 28 percent in 2009 to 58 percent in 2018 largely driven by digital financial services namely mobile money. Access to financial services digitally, has the potential to increase income-generating capacity, manage risks, lower the cost of money transfers, and improve savings behavior. Whilst there has been so much progress in terms of financial inclusion, there is still a long way to go.

The Ugandan Banking & financial services sector is going through a digital transformation and are leveraging technology to grow and maintain the competitive edge in the market and serve their customers more efficiently.

The pace of digital adoption over the past three years has been phenomenal and this trend is likely to increase. The increasing role of technology has heightened customer expectations and transformed the way customers interact with financial institutions and access financial services.



Looking at the customer journey from on-boarding to account management, loan origination to collection and settlement, payments and accessing funds, customer care and issues resolution, etc. - customers need not access branches or wait for hours to access the said services. Digital technologies have offered an opportunity for the banking and other sectors to unlock new pathways for delivering services consistently, and impact economic growth through inclusive finance, enabling the underserved populations in rural and peri urban areas across the country and unbanked to enter formality through retail electronic payments platforms and virtual savings and credit supply technological platforms.

Already, the number of bank accounts by end of March 2021 had grown to over 18.5 million compared to 12.2 million in December 2018.

Other financial inclusion channels like agency banking have reported growth in the number of agents to over 15,716 by end of March 2021 compared to 7,513 by December 2018.

Payments via cheques is reducing rapidly and the central bank has

recently announced plans to phase out all cheque limits in favour of digital payments.

The banking & financial sector is currently implementing the access to the national identity & registration authority (NIRA) project aimed at enabling the interface between the National ID System (NIRA) and the banking & financial services sector to facilitate identity authentications at e-transaction processing as well assist in e-kyc validations at account opening.

The expected benefits of the interface will include ease & growth of account opening, rapid growth of e-products & services including credit transactions due diligence, and the establishment of a single reference customer view for existing customers. The sector has further established key partnerships with the Telecoms and Fintechs that has increased reach & access to financial services and thus directly facilitated the agenda of financial inclusion.

. In line with the above and as an example, the banking & financial services sector has significantly improved the payment of taxes using various channels as follows:

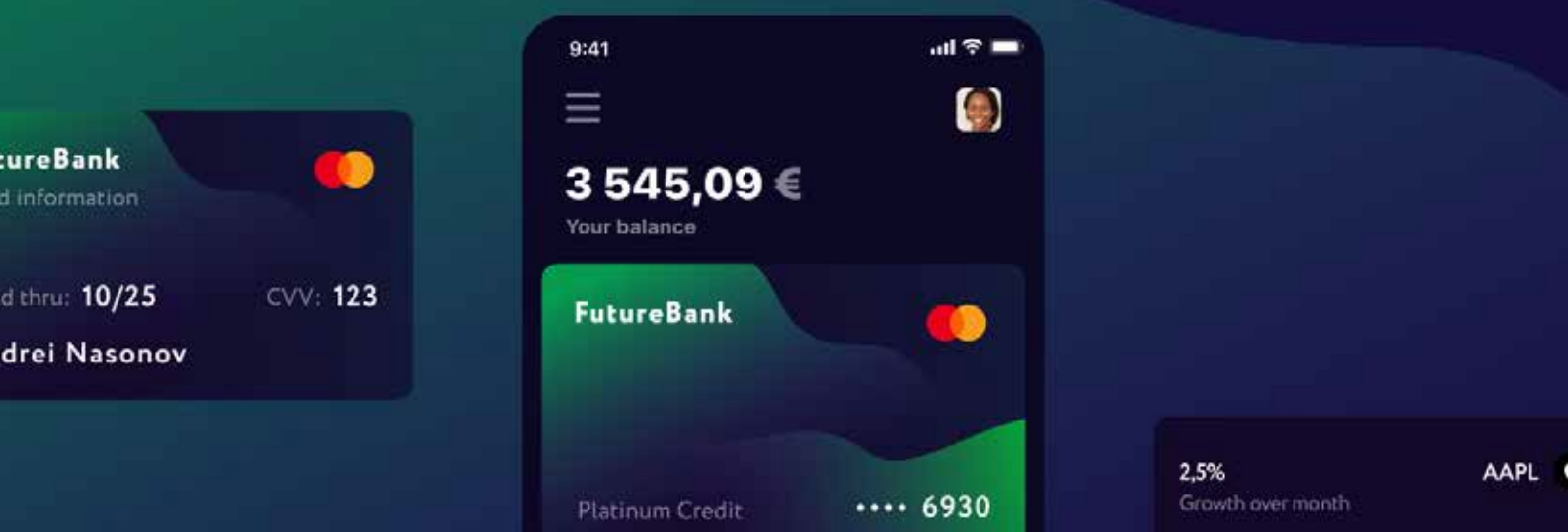
1. In addition to internet & mobile banking platforms, financial institutions have extended touch points closer to taxpayers through agent banking outlets which receive tax payments at various locations across the country.

2. Process improvements such as those indicated below have enabled 24/7 tax collection, reduced error rates, brought about convenience, reduced cost of tax payment, faster turnaround time because of via automation & digitization

- a. Direct integrations with URA e-services platform eliminating manual transaction processing.
- b. Payment registration numbering & transaction amount validation before processing.
- c. Instant payment notifications and processing thus improving customer experience.

Increased use of technology carries risks like cybercrime among others. In addition to the existing security & control measures in place to mitigate such risks, we plan to set-up a security operations center with specialized forensic capabilities to ensure readiness, support proactiveness, detection, defense, and incidence management. The security center will ensure





strategic and effective collaboration with all key stakeholders.

Another key development in Uganda was the enactment of the National Payment Systems Act, 2020 (the NPS Act) and supporting regulations, which among other objectives, seeks to regulate the payment systems by the central bank and provide for safety and efficiency of payment systems. This development has already culminated into the separation of the MNOs from the telecoms and further promising positive changes in the payment space.

The COVID-19 pandemic emerged as the most significant adverse shock, taking a toll on human life, and bringing major disruptions to supply chains, global, regional, and national trade, capital flows and investment to countries across the globe. During the first phase of the COVID-19 pandemic, the banking sector with the guidance and support of Bank of Uganda (BOU), instituted and provided cushioning support to customers as follows, Customers were encouraged to utilize the existing digital/e-payment platforms and minimize trips to service centers by revising as follows,

- i. Complete waive off (zero rating) of charges for bank to wallet transactions below Ugx. 30,000/- per day for the duration of the lockdown.
- ii. No charges for agent banking transactions of up to Ugx. 50,000/- per day for the duration of the lockdown.
- iii. No withdrawal charges across all bank ATMs for amounts up to Ugx. 50,000/= for the duration of the lockdown.

The increased use of digital technologies during the COVID-19 lockdown and going forward through channels like agent banking, mobile money, on-line shopping, on-line education, digital disease

surveillance and monitoring, and dissemination of public health messages shows the great contribution technology is making to support faster economic recovery and strengthen resilience against similar shocks.

In this COVID-19 period, financial institutions restructured loans of corporate and individual customers including extending the moratorium on loan repayment for borrowers who were affected by the pandemic and this process is still going on up to end of September 2021.

The banking and financial services sector also mobilized both individually as well as collectively under the UBA umbrella together with the Deposit Protection Fund of Uganda (DPF) and raised both financial & in-kind support of a total of Ugx 2.8 trillion.

In Uganda, the outlook continues to be highly conditional on the availability of vaccines, the path of the virus and the new more contagious variants, and trade-off between continued efforts to mitigate spread of the virus and economic recovery. Already, the second wave has reared its ugly head with devastating impact and given the limited supply of vaccines and round of tighter restrictions including the 42-day lockdown, uncertainty remains high. The adversely impacted sectors including hospitality and tourism, education, housing and real estate, domestic trade and manufacturing will likely remain constrained despite moderate pick-up in the economic activity between January and June 2021.

The 4IR revolution has changed not only what we do and how we do it, but also how we humans live, interact, socialize, and work. The technological developments that this revolution will bring are there to offer convenient options, means of solving

problems using smart technology, offer people endless opportunities, effective mobility, services

“The banking and financial services sector also mobilized both individually as well as collectively under the UBA umbrella together with the Deposit Protection Fund of Uganda (DPF) and raised both financial & in-kind support of a total of Ugx 2.8 trillion”

and better access to products and services. We now have flexible working hours supported by a new framework and staff enablement, virtual meetings, engagements and training, online customer engagements and onboarding, prioritization of the online banking solutions for customers, decrease of working space, new workplace designs and creation of a shared working space for staff working from home.

To leverage the opportunities presented by the 4th industrial revolution and manage the potential risks thereto, financial service entities and the business fraternity require the assistance of strategic partners in the realms of governance, risk and compliance who will aid in adequately scanning their operating environments, redefining conventional definitions of value, and closing the loop between reporting and strategy formulation.

The 4IR comes with challenges on countries, corporations, governments, societies, and individuals and may include the need for investment, changing business models, data issues, legal questions of liability and intellectual property, standards, and skills mismatches. Further societal challenges include job losses, disqualification, skills challenges, increased social insecurity, infrastructure challenges, new kinds of stress as well as security and privacy.

The successful adoption of the 4IR will rely on the ability of governments, business, and citizens to commit in supporting the transformation of society into a modern and smart society driven by advanced technology, skills, innovation, and responsive policy. The bottom line is that business leaders and senior executives need to understand their changing environment, challenge the assumptions of their operating teams, and relentlessly and continuously innovate.

Neither technology nor the disruption that comes

with it is an exogenous force over which humans have no control. All of us are responsible for guiding its evolution, in the decisions we make daily. We should thus grasp the opportunity and power of 4IR and direct it toward a future that reflects our common objectives and values.

Conclusion

I look forward to rich deliberations, and recommendations which will culminate in increasing the financial sector's ability to thrive responsibly in the era of the 4th Industrial revolution.

I welcome & convey our gratitude to the Governor of the Central Bank of Kenya, Dr. Patrick Njoroge for accepting to deliver the keynote address at the annual bankers' conference 2021.

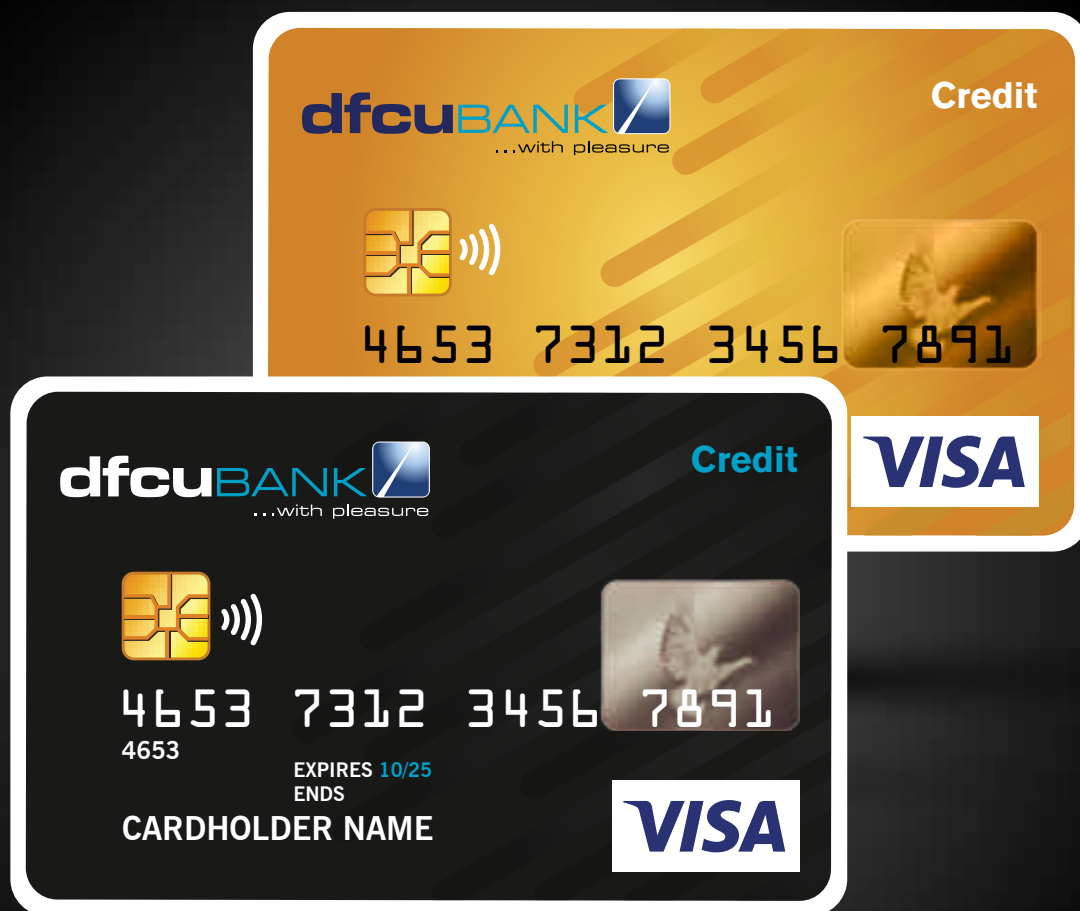
Special thanks and gratitude are similarly conveyed to the Governor, Bank of Uganda and his entire team for their support towards this conference. To all our sponsors & partners including Mastercard, Experian & Raxio Data Centre, and the member financial institutions themselves, we say thank you!

Finally, I would like to say thank you to the panelists, writers and all the other key stakeholders for the time taken to share knowledge, insights, and experience during the preparation for, and during the conference, in these challenging times.

We count on your continued support on bringing alive all the recommendations that will be made in the conference on 26th & 27th July 2021.

Mathias Katamba
Chairman
July 2021





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ABC 2021 Program

26th July 2021

26 th JULY 2021		
OPENING SESSION (NILE ROOM)		
9.00am	Welcome (Safety Moment and rules of engagement)	Mr. Michael Niyitegeka Director-Refactory
9.10am	Welcome Remarks Uganda Bankers Association (UBA)	Ms. Sarah Arapta UBA Vice Chair
9.25am	PANEL SESSION 1 Moderated by Ms. Julie Kugonzebwa Tumuzoire , Financial Services, Financial Sector Deepening Uganda TOPIC: Redefining Financial Inclusion & deepening access to financial services PANELISTS Mr. Joseph Lutwama , Director of Programs, Financial Sector Deepening Uganda (FSDU) Mr. James Onyutta , Managing Director, FINCA Uganda Limited (MDI) Mr. Ivan James Ssettimba , Head Africa Office, Alliance for Financial Inclusion (AFI) Mr. Timothy Musoke , Chief Executive Officer, Laboremus Uganda Ltd	
10.25am	Q & A Session	Ms. Julie Kugonzebwa Tumuzoire Financial Services, Financial Sector Deepening Uganda
10.55am	Short Break	
11.05am	PANEL SESSION 2 Moderated by Mr. Michael Niyitegeka , Director, Refactory TOPIC: Driving insights through Data Analytics and harnessing opportunities from the unprecedented processing power & storage capacity in 4IR PANELISTS Mr. James Byaruhanga , General Manager RAXIO Data Centre Mr. Paul Nel , Head of Innovation Experian Africa Mr. Soren Heitmann , Operations Officer, International Finance Corporation (IFC), World Bank Group. Mr. Akeem Lawal , Divisional CEO, Payment Processing. Interswitch Group.	
12.05pm	Q&A session	Mr. Michael Niyitegeka Director, Refactory
12.30pm	End of Day 1/Closing remarks	Mr. Wilbrod Humphreys Owor Executive Director, Uganda Bankers Association



ABC 2021 Program

27th July 2021

27 th JULY 2021		
OPENING SESSION (NILE ROOM)		
9.00 am	Welcome (Safety Moment and Rules of engagement)	Mr. Michael Niyitegeka Director, Refactory
9.05 am	Welcome Remarks from Uganda Bankers' Association	Mr. Mathias Katamba UBA Chairman
9.20 am	Remarks from Official Sponsor	Mr. Raghav Prasad , Mastercard Division President Sub Saharan Africa.
9.35 am	Remarks from the Ministry for ICT & National Guidance	Mr. Vincent Waiswa Bagiire Permanent Secretary - Ministry of ICT and National Guidance,
9.50 am	Remarks by BOU Governor	Prof. Emmanuel Tumusiime Mutebile Governor, Bank of Uganda
10.20 am	Keynote Address: Topic: Bend but don't break: How the financial sector can thrive in the era of the 4th Industrial Revolution By Dr. Patrick Njoroge GOVERNOR CENTRAL BANK OF KENYA	
11.10am	PANEL SESSION 1: Moderated by Ms. Julie Kugonzebwa Tumuzoire , Financial Services, Financial Sector Deeping Uganda TOPIC: Tracking Developments in the Payments Space: Emerging Trends and future outlook	
	PANELISTS	
	Dr Tumubweinee Twinemanzi , Executive Director Supervision, Bank of Uganda.	
	Mr. Shehryar Ali , Country Manager East Africa, Mastercard	
	Ms. Anne Juuko , Chief Executive Officer, Stanbic Bank Uganda Ltd	
	Mr. Peter Kawumi , Board Chairman, Financial Technology Service Providers Association (FITSPA)/ Country General Manager Interswitch	
12.10pm	Q&A session	Ms. Julie Kugonzebwa Tumuzoire Financial Services, Financial Sector Deeping Uganda
12.30pm	PANEL SESSION 2 Moderated by Mr. Michael Niyitegeka , Director, Refactory TOPIC: Confronting Fraud & Cyber Security Risks.	
	PANELISTS	
	Mr. Naturinda Makuru Hosea , Head Information Security, Stanbic Bank Uganda.	
	Dr. Vilius Benetis , Cyber Security Consultant, NRD Cyber Security.	
	Ms. Caroline Marion Acio , Chief State Attorney (Forensics), Office of the Director Public Prosecutions.	
	Mr. Andrew Mubiru , Director Forensics, Uganda Police Force	
1.30pm	Q&A Session	Mr. Michael Niyitegeka , Director, Refactory
2.00 pm	CLOSING OF CONFERENCE	

Speaker & Presenter Profiles



Prof. Emmanuel Tumusiime-Mutebile
Governor, Bank of Uganda

He is credited with many of the sound economic policies adopted by the Uganda government at the urging of the central bank during the 1990s and the first decade of the 2000s.

He has also worked as a consultant for multilateral and regional organizations including the World Bank, International Monetary Fund, and Organization for Economic Corporation and Development, Macroeconomic and Financial Management Institute of East and Central Africa, UK Department for International Development, the North-South Institute in Canada, and for the governments of Rwanda, Kenya, Tanzania, Eritrea, and Nepal.

Tumusiime-Mutebile is the chancellor of the International University of East Africa, a private university established in 2011, with an urban campus in Kampala, Uganda's capital. He holds Fellowships of the World Bank Institute, and Rotary Foundation of Rotary International.

Emmanuel Tumusiime-Mutebile is a Ugandan economist and banker. He is the governor of the central bank of Uganda.

He was first appointed to that position on 1 January 2001 and was this year 2021 re-appointed to serve for another five-year term.

Professor Mutebile has previously held the position of chief economist and in 1992, he was appointed permanent secretary to the newly combined ministry of finance planning and economic development until 2001 when he was appointed Governor.



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Keynote Speaker



Dr. Patrick Njoroge

- Kenyan economist
- Banker and
- The 9th Governor of the Central Bank of Kenya

Dr. Patrick Njoroge was appointed to be the Governor of the Central Bank of Kenya, with effect from 19th June, 2015. In this capacity, he is the Chief Executive Officer (CEO) of the Central Bank and chairman of the Monetary Policy Committee (MPC).

He holds a PhD degree in Economics from Yale University (1993), a Master of Arts degree in Economics (1985) and a Bachelor of Arts degree in Economics (1983) from the University of Nairobi.

Dr. Njoroge joined the Central Bank from a varied career at the International Monetary Fund (IMF) spanning 20 years based in Washington DC. Prior to his appointment as Governor, Dr. Njoroge was Advisor to the IMF Deputy Managing Director from December 2012, where his responsibilities included assisting in overseeing the IMF's engagement with a large swath of IMF members.

He also served as Deputy Division Chief in the IMF's Finance Department (2006-2012), IMF's Mission Chief for the Commonwealth of Dominica (2005-2006) and in other capacities since 1995. Prior to joining the IMF, Dr. Njoroge worked as an Economist at the Ministry of Finance (1993-1994) and as a Planning Officer at the Ministry of Planning (1985 -1987). Dr. Njoroge's professional and research interests lie in Macroeconomics, Economic Policy, International Finance, Development Economics, Econometrics and Monetary Policy.

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Speaker & Presenter Profiles

27th-July 2021 – Morning Session

Official Sponsor



Mr. Raghav Prasad

Division President, Sub-Saharan Africa,
Mastercard

In January 2018 Raghav took on the role of Division President for Sub-Saharan Africa based out of the regional headquarters in Dubai.

In this role, Raghav focuses on establishing the Mastercard brand presence in Africa, deploying innovative payment solutions and partnering with local governments and regulators.

Focus will be placed on advancing Mastercard's business in Africa, and the organisations goal of developing a world beyond cash.

Since joining Mastercard, Raghav has held a number of leadership roles at country, regional and global level, contributing significantly to various areas of the business. In early 2017 he held the position of President, Payment Gateway Services where he was responsible for the strategic direction and

global end-to-end management of the business. Raghav is not new to the Middle East and Africa region, he previously held the position of General Manager for the Gulf Countries, responsible for all aspects of Mastercard's business in the region giving him a solid foundation for his new role as Division President for one of the fastest growing divisions in International Markets (IMK) for the technology company.

With almost 30 years of experience in the financial sector, Raghav has previously held leadership positions at Citibank and RBS Group UK.

During his six years at RBS he moved from being the Managing Director of Global Commercial Cards to serve as Managing Director of Global Merchant Services (WorldPay).

During this time he was also a member of the global management committee of the Transaction Banking Group at RBS.



Dr Tumubweinee Twinemanzi,
Executive Director Supervision,
Bank of Uganda

Tumubweine Twinemanzi, is a Ugandan economist and central banker who, effective 7 February 2018, serves as the Executive Director of the Bank Supervision Directorate of the Bank of Uganda, the country's central bank and national banking regulator.

Prior to his appointment to his current position, he served as the Director of Industry Affairs and Content (Economic Affairs) at the Uganda Communications Commission (UCC).

Twinemanzi, obtained a Doctor of Philosophy degree in Economics from the University of Texas at Dallas, awarded in 2009. He also holds other academic qualifications from the University of Florida at Gainesville and from the Barcelona Graduate School of Economics, in Spain.



Mr. Ivan James Settimba,
Head Regional
Office, Africa
& Arab Region
at Alliance
for Financial
Inclusion (AFI)
Bstat, MBA

Ivan is an analytical, focused, self-driven professional with numeric, research and communication skills. He is a seasoned banker and financial specialist having worked with the Bank of Uganda in different portfolios including Deputy Director Financial inclusion, Assistant Director, National Payments Systems Division, Principal Banking Officer and Senior Banking Officer.

Ivan is a Price2 Certified Practitioner, and Payments and Settlements Systems Specialization Fellow with a rethinking financial inclusion certification from Harvard University.



Mr. Mathias Katamba
Chairman Uganda Bankers' Association
Chief Executive Officer - DFCU Bank

On the 14th May 2021, Mathias Katamba was re-elected to serve a second term as the Chairman of the Uganda Bankers' Association.

Mr. Katamba is the Managing Director and Chief Executive Officer of dfcu Bank. Prior to joining dfcu, he was the Managing Director of Housing Finance Bank for 5 years.

Mathias has over fifteen years' experience in the Banking and Financial services sector, twelve (12) of which have been at C-Suite level. He holds a Masters of Science in Financial Management from the University of East London, UK, a Bachelor of Arts in Economics from the University of Greenwich and Postgraduate Diploma in Public Relations from the Chartered Institute of Public Relations.

He has also attended several advanced executive leadership trainings.

He has previously served as Chairman of the Uganda Institute of Banking and Financial Services and is a Director at UAP Old Mutual General Insurance.

Speaker & Presenter Profiles

Master of Ceremonies/ Moderators



Mr. Michael Niyitegeka
Program Director
Refactory at Clarke International
University

Michael is also the ICDL Africa Country Manager for Uganda. He is passionate and practices Leadership Development, Business Technology Strategy and Business Advisory services. He holds an MBA from MsM/ESAMI Business School and is a Franklin Covey Certified Facilitator.

He possesses 19 years of working experience in both the private and public sectors. Michael worked with Makerere University for 12 years in varied capacities as a researcher, trainer and head of Corporate Relations. He also worked with coffee exporting firm managing supply side operations in western Uganda. He has extensive consulting experience with government, private, regional and international institutions.

Michael was a member of the ICT Technical Working Group of the Presidential Investor Round Table and the Advisory group for the Government of Uganda on the 4th Industrial Revolution Technologies. He is a member of several technology innovation review panels both locally and internationally. He is a Rotarian and is passionate about mentoring the next generation of technology business leaders.



Ms. Julie Kugonzewa Tumuzoire

Juliet is a Financial Services Specialist with indepth knowledge and experience in payment solutions with regards to customer needs, products/service design and build, distribution and delivery channels and reengineering processes, operating and business models.

She has 13 years of banking experience (of which 10 are at senior management level including 6 years of executive management) with distinguished performance in project/change management, process improvement & alignment and service management.





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Nansana: Ntate Building, Nabweru Trading Centre

Nateete: Plot No 1396/ 1148, Masaka Road

Mukono: Plot 125, Highway Hostel Building

Speaker & Presenter Profiles

26th-July 2021 – Morning Session



Mr. Joseph Lutwama
BA, MA, CDFP
Director of Programs,
Financial Sector Deepening Uganda

Joseph Lutwama is a Business Strategy, Financial Markets development and Regulation Expert with a strong background in Economics and Research. Mr. Lutwama holds an MA in Economics and Planning from Makerere University. He has over 10 years' experience in undertaking research and consultancy assignments focused on economic and business development, Financial markets Development and Regulation as well as regional integration.

In his 11 years at the Capital Markets Authority, Mr. Lutwama played a critical role in the development of the capital markets legal and regulatory framework and spearheading the regional integration of the East African capital markets. Mr. Lutwama also participated in the negotiations that resulted in the East African Community Common Market and Monetary Union Protocols.

Mr. Lutwama is currently the Head Business Environment at the Financial Sector Deepening (FSD) Uganda. In this role Mr. Lutwama is responsible for providing support for policy and institutional change to remove barriers to access financial sector



Mr. James Onyutta
ACCA, BBA Finance and Certified
Expert in Risk Management
Chief Executive Officer
FINCA Uganda Ltd.

James is a seasoned banker, professional accountant, finance specialist and a certified risk expert, as CEO and Managing Director of FINCA Uganda.

James is responsible for the day-to-day management of the Company which includes direct responsibility for the management of the economic and human resources of the Subsidiary, its operational and financial performance, as well as the development of its institutional capacity.

He has held various portfolios at senior management including Chief Finance Officer both FINCA Tanzania and subsequently FINCA Uganda and Chief Accountant at FINCA Uganda.

James is an outcomes-orientated manager who does not lose sight of the details, is always cognizant of the process, balancing "means" and "ends" appropriately at all times.

James has great energy, enthusiasm, excellent creativity and is very good in finance.

Speaker & Presenter Profiles

26th-July 2021 – Morning Session

Guest of Honour



Mr. Vincent Waiswa Bagire
Permanent Secretary - Ministry of
Information, Communication, Technology
(ICT) and National Guidance

Vincent is a thought leader in the ICT-for-development field in the region and internationally. He holds an MBA (Hons), Glasgow Caledonian University, MSC (Hons) in Macroeconomics, University of Bradford, Computing and Information Science, University of Derby; Library and Information Science, Makerere University.

Formerly the Chief Executive Officer, Bridges org a Washington DC based IT policy not-for-profit is now Permanent Secretary, Ministry of ICT and National

Guidance in the Government of Uganda.

Before joining the Ministry he was a Member of Parliament and Chairperson, Parliamentary Sessional Committee on Information and Communication Technology.

He also established the Centre for International ICT Policy for East and Southern Africa (CIPEA) as well as BROSDI, a non-profit organization, Uganda. He is an Ashoka Fellow for life, Archbishop Desmond Tutu Leadership Fellow and a Young Global Leader of World Economic Forum.

He has also attended professional courses at Said Business School, University of Oxford, Wits University in South Africa and Lee Kuan Yew School of Public Policy among others.



Mr. Timothy Musoke
Co-founder and Chief Executive Officer
Laboremus Uganda Ltd
BSC Computer Science and Software
Engineering
Board Member Fontes Foundation

Timothy is a co-founder and CEO of Laboremus Uganda, a fintech delivering digital infrastructure that enables financial institutions go digital.

His forte is analyzing business problems and identifying the most appropriate digital solutions in the financial sector. Laboremus' vision is to leapfrog financial services on the Africa continent by leveraging technology.

Timothy possesses a passion in developing young talent and turning them into hyper productive engineers.

This passion translated into Laboremus co-founding Refactory, a top tech academy in Uganda. The academy transforms aspiring software developers into industry ready professionals.

Speaker & Presenter Profiles

July 26 2021 – Mid Morning Session



Mr. James Byaruhanga
General Manager

Raxio Data Centre Uganda
Bsc Computer Science, Board Member
Fontes Foundation and Founder H.O.D
Seasonal

James has over 20 years of experience in the IT industry, having served as a manager for several leading telecom companies and internet service providers. He oversees the daily business and commercial operations of Raxio Uganda and works closely with customers to ensure a high quality of service.

James carries a wealth of expertise and knowledge about Uganda's market dynamics, as well as an extensive network of enterprise and telco connections.

James previously held a variety of positions including Principal, Chief Operating Officer and Chief Technology Officer at Roke Telkom, a leading-edge alternative internet service provider.

He was responsible for the company's technical infrastructure and planning for Roke's operations both in Uganda and in neighbouring countries such as Kenya, Rwanda, Zambia, and the Democratic Republic of Congo.

Prior to Roke, James spent 5 years at MTN Uganda in various technical consulting roles, and 3 years at Africa Online in Uganda and Ghana.



Mr. Soren Heitmann
Operations Officer, IFC

Soren leads the Applied Research and Learning program for IFC's Financial Institutions Group. He works at the nexus of data-driven research and technology to deliver learning and innovation for IFC's Africa advisory services projects on SME Banking and Digital Financial Services, applying these insights to increase operational value and realize positive development impact.

He has a background in cultural anthropology, database management and software engineering. He authored the Data Analytics and Digital Financial Services Handbook and has published research in prominent academic and professional journals.



Mr. Paul Nel
Head of Innovation Experian Africa

Paul is a corporate journeyman with a passion for entrepreneurship, innovation and bringing relevant products and services to the market. Paul has worked in FMCG, Financial Services and the entrepreneurial world for over 25 years across Africa, Asia and China. Currently, Paul is running the innovation platform for Experian Africa in order to bring opportunity to life.

Speaker & Presenter Profiles

July 26 2021 – Mid Morning Session



Mr. Akeem Olujinmi Lawal
Divisional Chief Executive Officer at
InterSwitch Group

Akeem is part of the founding management team at InterSwitch Group and currently leads the Payments Processing division of InterSwitch Group as Divisional Chief Executive Officer.

He has over twenty (20) years' experience in electronic payments, payments technology, strategy and business management. His experience includes the implementation and management of projects in the Financial Services sector, Information and Communications Technology as well as in the Oil & Gas industry. He was the head of the Engineering team that built the InterSwitch Super Switch infrastructure. Prior to joining InterSwitch, he worked in the Petroleum and ICT Industry working in both TELNET (Nig) Ltd in Lagos and Oildata Wireline Services Port Harcourt.

He has been an integral part of the Fintech revolution in Africa, not only as co-founder of the first African fintech Unicorn, but has also been involved in supporting Fintech companies in various capacities across the continent.

He is an enthusiast of the intelligent use of technology for the transformation of Africa. He has a passion for creative endeavour and ground breaking innovation. He has been at the forefront of new technology developments in oil and gas with Oildata and payment systems technology with InterSwitch.



Mr. Andrew K. Mubiru
Ag. Director Forensic Services
Uganda Police Force

Andrew is the Director Forensic Services for the Uganda Police Force. He is passionate about technological advancements towards combating crime. He is currently leading a team with a mission to; support the administration of justice, enhance the value of forensic science, and inspire the next generation of forensic practitioners. He holds a MSc in Forensic Science from Kings College London.

Andrew has 17 years of working experience in public sector as a forensic practitioner. He has supervised several key forensic investigations and testified as an expert witness in numerous cases. Andrew superintends over the Cyber Crime Unit of the Uganda Police Force that has been at the center of combating cyber-crime and related offences. He recently led a multi-agency team that unraveled the mystery surrounding the 2020 mobile money fraud.

Andrew is an Affiliate Member of the Chartered Society of Forensic science (UK), a PECB Certified Lead Assessor for ISO17025 and Lead Manager for ISO21500, a Forensic Expert on International Criminal Investigations as part of the Roster of Experts for the Justice Rapid Response based in the Hague

Speaker & Presenter Profiles

27th-July 2021 – Morning Session



Mr. Shehryar Ali
Country Manager East Africa,
Mastercard
BSc Computer Science

Shehryar is seasoned banker with enormous experience in international payment, portfolio managements and card payments.

Shehryar is creative and resourceful, and his innovative ideas have benefited various companies in his employment journey including Citibank, Barclays Bank, Mashreq Bank, Bank One Limited.

Shehryar is Ali aspires to lead a dynamic organization end to end, grow the business and profitability and build the required infrastructure and leadership team.

Shehryar is a winner of key honors and awards including Winner of Visa International Bankcard Management School - Team Simulation in Miami, Award for Highest Ever Loans Record, Ileads Program Completion Certificate, Launched Citi Mobilink Credit Card and Top Performer Recognition 2015 - Barclays Africa



Dr. Vilius Benetis,
Cyber Security Consultant, NRD Cyber
Security.

Vilius is a Cyber security professional, focused on mission to Secure Digital Environments via:

1. Constructing and modernizing CSIRT/SOCs for nations, sectors, critical infrastructures, MSSPs. Consulting governments on CII methodologies to choose and implement
2. Building CII sensor networks and national Internet infrastructure monitoring for situational awareness and response
3. Enabling resolving national security and law enforcement challenges by automation of digital forensics and intelligence analysis processes
4. Creating technological resilience to cyber threats for organisations by designing and implementing needed technology change.
5. Assisting organisations to assess risk and compliance for cyber threats.

He has good knowledge of finance sector, energy sector, government sector, defense sector needs for handling cyber threats. Existing experience covers: national cybersecurity strategy, incident response and resolution, centralized forensic labs establishment, OSINT instrumentation, early warning capabilities, cyber-defense research. Infosec architect capabilities include: infrastructure design, integration and implementation projects experience (for ex. SIEM, PAM, EDR, authentication, encryption solutions, forensics, GRC). Leads a team of IT/cyber security experts.

Active researcher, contributing to ISACA CSX and www.cisecurity.org activities, trainer for ISACA CSX-F. Speaker for different cybersecurity for national and international events on how to achieve sanity in cybersecurity.

Speaker & Presenter Profiles

27th-July 2021 – Morning Session



Ms. Anne Juuko,
Chief Executive Stanbic Bank Uganda

Anne Juuko is the Chief Executive of Stanbic Bank Uganda, a position that she was appointed to in 2020. Anne has a wealth of experience in the financial industry with regional and global expertise in banking for over 20 years.

She has been a part of the Standard Bank Group for over 8 years having joined as Head of Global Markets for Stanbic Bank Uganda and was later appointed Head of Corporate and Investment Banking at Standard Bank, Namibia.

Anne started her banking career in 2001, worked in various roles before being appointed as Vice President, Head Fixed Income, Currencies and Commodities at Citibank Uganda Limited and was later seconded to Citibank Kenya as Vice President, Customer Sales and Derivatives Marketing.

She later joined Stanbic Bank Uganda in 2012 as Head of Global Markets and in 2017 was appointed Head of Corporate and Investment Banking Standard Bank Namibia and served on the Executive Committee to drive the strategic vision and deliver on business priorities for the Corporate and Investment Banking division.



Mr. Peter Kawumi, Board Chairman
Financial Technology Service Providers
Association (FITSPA)
Peter Kawumi – Country General
Manager, Interswitch

Peter's career spans over a dozen years with roles in technology, project & fund management, business analysis and retail banking, including leading the Digital Finance departments in regional and local banks.

He has extensive experience in developing and commercializing products, new customer acquisition, digital channel utilization and scaling plans in consumer services.

Peter is a Microsoft Certified Systems Engineer (MCSE), holds a BSc (Hons) in Software Engineering from Kingston University and a Master of Business Administration (with Distinction) from the Edinburgh Business School.





Mr. Hosea Naturinda Makuru
Head Information Security, Stanbic
Bank Uganda

Hosea is a visionary Information Security Leader with over fourteen (14) years' experience in Technology Risk and Information Security Management for Banks, FinTech's and Telecoms across different markets in Africa and the UK. He is currently working with Stanbic Bank Uganda as the Head Information Security.

He has established Information Security Management Programs, built and managed diverse teams responsible for Governance, IT risk assessments and Penetration testing, designing and implementing controls for Financial Systems, Infrastructure Security, Responding to Incidents, monitoring digital infrastructure for anomalies and suspicious activity, testing controls through audits to ensure they are operating as intended to protect business systems.

Prior to joining the Stanbic Bank, He worked with Housing Finance Bank for 6 years as a Senior Manager IT Security; establishing the Bank's pioneer Information Security Program. Hosea started his post graduate career at the Global Assurance and Advisory firm Ernst & Young as Systems Security Analyst. He holds a Master of Science degree in Data Communications and Software Engineering (distinction) from Makerere University.

He is a Cisco's Certified Cisco Academy Instructor, CCAI-CCNA, ISC2 Certified Information Systems Security Professional, CISSP #529377, EC-Council Certified Ethical Hacker, CEH #ECC83504764293, CompTIA Certified Advanced Security Practitioner, CASP #COMP001021243436, Certified Scaled Agile Framework, SAFe 4 Practitioner #ID7681127-8771, Microsoft Certified: Azure Fundamentals, AZ-900 #H404-1375 and ISACA's Certified Information Security Manager, CISM #1426551.



Ms. Caroline Marion Acio,
Chief State Attorney (Forensics),
Office of the Director Public
Prosecutions

A Qualified Lawyer, working as a Chief State Attorney, and Head, Cyber Crime Unit in the Office of the Director of Public prosecutions (ODPP), with 20 years of professional practice as a criminal prosecutor, in courts of record, ten years specialising in corruption and white-collar cases, and six at a Senior Management level.

Has successfully prosecuted several high-profile corruption cases including cybercrime cases in the country, and several thereafter.

Has guided the Police on complex issues regarding digital investigations. Oversees the management of cybercrime cases and other cases involving digital investigations.

Holds a Master of Laws in Computer and Communications Law from Queen Mary University of London; specialising in cybercrime, Digital investigations, Information Security, European Union (EU) Data Protection Law, with a deep understanding of the General Data Protection Regulation (GDPR) and other Global privacy legal regimes as well as their practical application to the Administration of Justice; a Post Graduate Diploma in Public Administration and Management; Post Graduate Diploma in Legal Practice, and Bachelor of Laws, among others; A Certified Fraud examiner (CFE) and Certified Information Privacy Professional (CIPP/E).



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Key Highlights From ABC 2019



Uganda Bankers Association held the third Annual Bankers Conference in 2019 under the theme: “De-risking financing & investment in agriculture to promote decent youth employment and inclusive growth” that facilitated a focused discussion among key players & stakeholders around making financing of agriculture attractive to financial service providers, leveraging on several perspectives for mitigating risk including market incentives, technology, insurance, research, specific policy frameworks & a wider support & collaborative framework to ensure sustainable growth & investment in the agriculture

sector of Uganda. The desired output of the conference was to get recommendations to support a significant increase in the scope and level of funding to the agriculture sector by raising the total credit from financial institutions from the current 12 percent to over 20 percent in the next four to five years, and for this number to keep on increasing in the subsequent years.

In his remarks, UBA Chairman, stated that there was need to deal with governance issues in SMEs as well as a holistic approach to address the challenges that prevent financial institutions from extending facilities to the

agriculture sector. The Governor of Bank of Uganda, Prof. Emmanuel Tumusiime Mutebile, in his remarks, called upon Government to steer demand driven agriculture development by boosting export-oriented manufacturing and growth of tradable services to meet the growing urban demand for food.

The guest speaker Ms. Marianne Schoemaker, Managing Director Rabo Partnerships during her keynote address emphasized the need for the sector and stakeholders to invest in strategies and models that support derisking to enable financial institutions extended credit towards agricultural



sector. She further shared that financial institutions needed to invest in understanding the food agricultural value chains right from the farm to the plate, the entire eco-system

During this conference, three breakaway sessions were held within which in-depth conversations were facilitated among speakers and all addressed issues around agricultural financing and how this can be improved. The Royal Netherlands Ambassador to Uganda, H.E. Henk Jan Bakker, officiated over the closing ceremony and concluded with a slogan: Targeting, Tailoring, Layering; which he translated as follows:

- 1) Targeting: Be clear what type of customers you want to reach, know their business, understand what they need and what they can afford.
- 2) Tailoring: Model your financial package so that it fits to the specific needs of customers and their businesses.
- 3) Layering: Combine the financial products & services with other products (like insurance, guarantees, training) to achieve optimal de-risking

HIGHLIGHTS AND KEY TAKE AWAYS ARISING OUT OF THE DELIBERATIONS OF THE ANNUAL BANKERS CONFERENCE 2019 HELD ON July 16, 2019



Key role of Banks and Financial institutions in de-risking financing and investments in agriculture to promote decent youth employment and inclusive growth

- Financial institutions should invest in understanding the agricultural sector by knowing the kind of farmers they want to reach, the nature of farming they are engaged in, so as to understand their credit needs and what they can afford. This would facilitate tailoring and modeling financial packages that meet the needs of the specific farmer categories and their businesses.

- Banks were advised to follow their money by paying monitoring visits to the farmers who have accessed agricultural loans as a means of offering guidance and early assessment of their ability to pay back in order to avoid non-performing loans.

- Apart from offering stand-alone financial products,



Banks could obtain optimal de-risking by combining their financial products with other products such as insurance, guarantees and training offered in collaboration with other partners, as a means of leveraging commercial money.

- There is need for financial institutions to build strong partnerships and ecosystems with a long horizon. The partnerships can be built with development partners who can improve access to capital for financing farmers and agri-businesses or with other private sector actors and the public sector through blended financing in order to 'leverage' additional funds for strengthening the financial players and mechanisms.

- Still on partnerships, financial institutions were advised to identify and collaborate with value chain champions in the entire agricultural sector as a means of identifying value chain integrators who can work as change agents, obtaining thorough understanding of the differences in the agriculture value chains by nature of commodities and location, the profit margins, determining how they work and how to merge the value chains and in further understanding of all the ecosystem-actors and the role they play in influencing the agricultural sector. By so doing, bankers will be better placed to determine what it means to fund agriculture and the likely implications.

- There is need for the financial institutions to leverage digitization and agricultural technology. There are many initiatives and also innovations that offer digitization options that can be used

to capture and analyse data on weather patterns and other parameters that help to understand the volatility of the agricultural sector as well as data pertaining to financial behavior and credit worthiness of farmers that can enable the banks to understand, anticipate and mitigate agricultural financing related risks as well as benchmark bankable and non-bankable farmers. In addition, technology can be used to train and build the capacity of farmers in financial management.

“

The Governor of Bank of Uganda, Prof. Emmanuel Tumusiime Mutebile, in his remarks, called upon Government to steer demand driven agriculture development by boosting export-oriented manufacturing and growth of tradable services to meet the growing urban demand for food.

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ABC 2021 : Bend but don't break: How the financial sector can thrive in the era of the 4th Industrial Revolution

By UBA Secretariat

Background

We stand on the brink of a technological revolution that has fundamentally altered the way we live, work, and relate to one another.

In its scale, scope, and complexity, the transformation is unlike anything humankind has experienced before.

One thing is clear however: the response to it must be integrated and comprehensive, involving all stakeholders.

The digital revolution that has been occurring is characterized by a fusion of technologies that has blurred the lines between the physical, digital, and biological spheres.

The 4th Industrial Revolution is distinct because of its: velocity, scope, and impact. It is disrupting almost every industry/sector in every country and the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance. The possibilities of billions of people connected by mobile devices, with unprecedented

processing power, storage capacity, and access to knowledge, are unlimited. And these possibilities will continue to be multiplied by emerging technology breakthroughs.

Banking sector vulnerability

Across the economic landscape, the banking sector has arguably been most severely affected by the proliferation of disruptive technology. Disruptive technologies have markedly changed the way entities in the sector operate and deliver products and services to their clients. Take for example retail payments, formerly a staple of big banking institutions with regards to facilitating payments, and its critical role in data collection like loans, mortgages and cards. However, this value creation model has considerably changed as the retail payments market has been notably disrupted by mobile money operators & new fintech start-ups that have come up over the last decade.

Innovations such as mobile applications, new and more convenient means of authentication, and modernizations in historically brick-and-mortar solutions such as expense management and lending have brought about additional threats for the banking sector placing them under increased industry and competitive pressure.

Digitization has impacted economic growth through inclusive finance, enabling the unbanked to enter formality through retail electronic payments platforms and virtual savings and credit supply technological platforms. Financial service entities, and the business fraternity more broadly, require the assistance of strategic partners in the realms of governance, risk and compliance. Strategic partners that will aid in adequately scanning their operating environments, redefining conventional definitions of value and closing the loop between reporting and strategy formulation.



// The 4th Industrial Revolution is distinct because of its : velocity, scope, and impact

Without this, traditional juggernauts may find themselves obsolete as the winds of change continually move the 4IR closer to hand.

The impact on government

As the physical, digital, and biological worlds continue to converge, new technologies and platforms will increasingly enable citizens to engage with governments, voice their opinions, coordinate their efforts, and even circumvent the supervision of public authorities.

Simultaneously, governments will gain new technological powers to increase their control over populations, based on pervasive surveillance systems and the ability to control digital infrastructure. On the whole, however, governments will increasingly face pressure to change their current approach to public engagement and policymaking, as their

central role of conducting policy diminishes owing to new sources of competition and the redistribution and decentralization of power that new technologies make possible.

Ultimately, the ability of government systems and public authorities to adapt will determine their survival. If they prove capable of embracing a world of disruptive change, subjecting their structures to the levels of transparency and efficiency that will enable them to maintain their competitive edge, they will endure. If they cannot evolve, they will face increasing trouble.

This same is true in the realm of regulation. Regulators must continuously adapt to a new, fast-changing environment, reinventing themselves so they can truly understand what it is they are regulating. To do so, they need to collaborate closely with business and civil society especially in the sandbox environment.

The Fourth Industrial Revolution will also profoundly impact the nature of national and international security, affecting both the probability and the nature of conflict. The history of warfare and international security is the history of technological innovation, and today is no exception with cyberwarfare.

The impact on people

The Fourth Industrial Revolution, finally, has changed not only what we do but also who we are. It is affecting our identity and all the



Disruption is also flowing from agile, innovative competitors who, thanks to access to global digital platforms for research, development, marketing, sales, and distribution, can oust well-established incumbents faster than ever by improving the quality, speed, or price at which value is delivered.

Transportation and communication costs are dropping, logistics and global supply chains becoming more effective, and the models of trade have changed and opened up new markets and economic growth.

Major shifts on the demand side are also occurring, as growing transparency, consumer engagement, and new patterns of consumer behavior (increasingly built upon access to mobile networks and data) force companies to adapt the way they design, market, and deliver products and services.

On the whole, there are four main effects that the Fourth Industrial Revolution has on business—on customer expectations, on product enhancement, on collaborative innovation, and on organizational structures. Whether consumers or businesses, customers are increasingly at the epicenter of the economy, which is all about improving how customers are served.

A world of customer experiences, data-based services, and asset performance through analytics, requires new forms of collaboration, particularly given the speed at which innovation and disruption are taking place. And the emergence of global platforms and other new

issues associated with it: our sense of privacy, our notions of ownership, our consumption patterns, the time we devote to work and leisure, and how we develop our careers, cultivate our skills, meet people, and nurture relationships. Our relationship with our smartphones is a case in point. Constant connection may deprive us of one of life's most important assets: the human relationships. One of the greatest individual challenges posed by new information technologies is privacy.

We instinctively understand why it is so essential, yet the tracking and sharing of information about us is a crucial part of the new connectivity. Debates about fundamental issues such as the impact on our inner lives and of the loss of control over our data will only intensify in the years ahead.

Challenges and opportunities

The Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for populations around the world. To date, those who have gained the most from it have been consumers able to afford and access the digital world; technology has made possible new products and services that increase the efficiency and pleasure of our personal lives.

Technological innovation also continues to lead to a supply-side miracle, with long-term gains in efficiency and productivity. Many industries are seeing the introduction of new technologies that create entirely new ways of serving existing needs and significantly disrupt existing industry value chains.



business models, finally, means that talent, culture, and organizational structures will have to be rethought.

The bottom line is that business leaders and senior executives need to understand their changing environment, challenge the assumptions of their operating teams, and relentlessly and continuously innovate.

Shaping the future

Neither technology nor the disruption that comes with it is an exogenous force over which humans have no control. All of us are responsible for guiding its evolution, in the decisions we make on a daily basis as citizens, consumers, and investors. We should thus grasp the opportunity and power we have to shape the Fourth Industrial Revolution and direct it toward a future that reflects our common objectives and values.

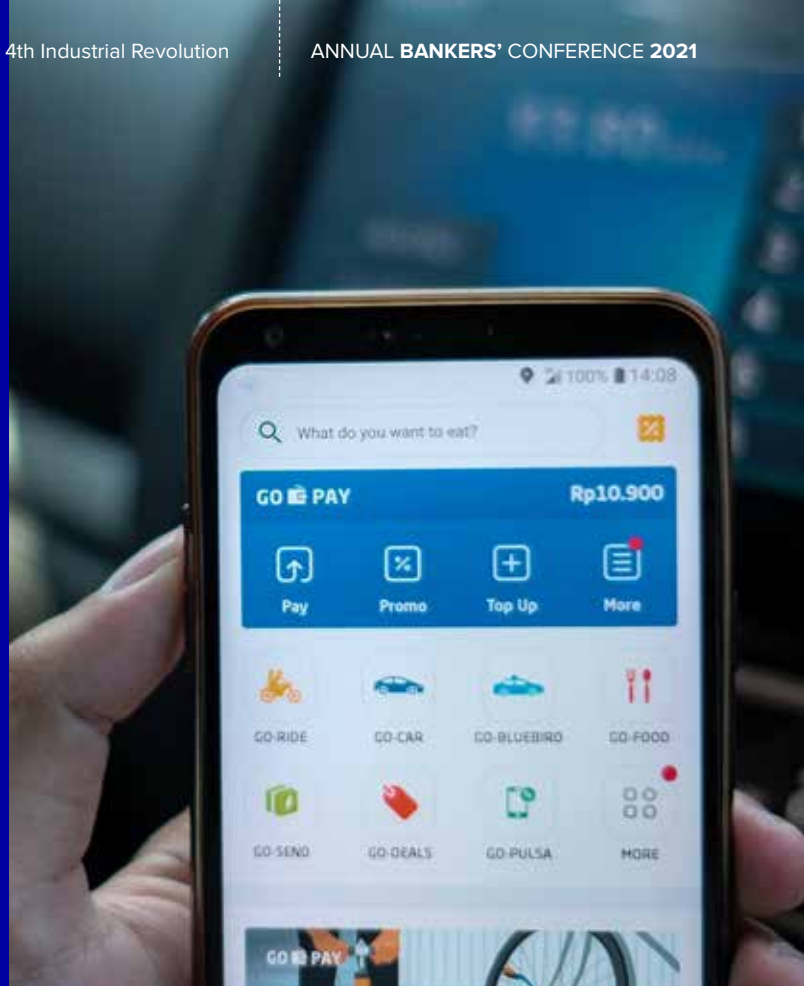
Source: Various articles from the World Economic Forum

Objectives:

This year's conference aims to facilitate a focused discussion among financial service providers and all its stakeholders as to how financial institutions can remain proactively responsive and still thrive in the era of the 4th industrial revolution.

The conference will specifically

a) Take stock of the impact of the 4th Industrial revolution on the economy including the



financial sector, and use these experiences to shape responses, interventions, strategies and initiatives as appropriate.

b) Formulate specific financial sector approaches and initiatives to respond & promote the flourishing of new business opportunities & related value chains that have arisen thereof, as well build resilience & growth of the banking sector itself.

c) Highlight the critical roles that needs to be played by other key stakeholders including the Government, regulators, legislators, private sector actors, development partners in this process.

Conference sub-themes for breakaway sessions will include

1. Tracking developments in the payments space: Emerging trends and future outlook.
2. Driving insights through data analytics and harnessing opportunities from the unprecedented processing power & storage capacity in 4IR
3. Confronting fraud & cyber security risks.
4. Redefining financial inclusion & deepening access to financial services



Bancassurance a valuable tool for increasing Insurance Penetration

Ms. Lydia Kayonde



The success of the bancassurance market depends on the environment that it operates in. The internal environment involves the activities within the organization while the external environment focuses on activities outside the operations of the organization. The main drivers of bancassurance growth are: a supportive regulatory regime is needed, insurers having access to the banks' client base and a digital culture. Also, there is need for a positive fiscal treatment of long-term savings products.

In 2012, PWC's study also found out that bancassurance integrated model has an advantage. Banks can build on their existing relationships and they are often more trusted than independent advisors. The study also concurs with the supportive regulatory regime needed. The sales of insurance by banks is high in countries where products tend to be relatively simple and standardised.

Bancassurance is an opportunity to increasing insurance penetration in the economy. There also exist opportunities for bancassurers to exploit in order to increase their profitability as well as insurance penetration. The opportunities which include: delivery of after-sales services, increasing customer loyalty, diversification of customer portfolio and lifetime value. Banks are already armed with an arsenal of information about their customers which they can leverage on. A well-designed insurance product will attract more customers and offering free additional services to clients boost their morale and encourages them to try out the products designed for them. Many people in diverse areas need information about insurance and banks can use their networks in all branches to sensitize them. Life insurance can be used to eliminate the hazards of both secure and unsecure lending. As the bank issue a loan, it can insure the loan against risk of default of the borrower in case of death. For instance, if the borrower purchases a house using the loan, the dependants will be affected by the uncleared loan since the home acts as security for the loan. The bank may have to take ownership of the house and auction it in order to gain back the loan money. The life insurance package will thus

completely repay the debt if it had been taken. A property acting as a security to the loan may be damaged due to theft, natural disasters or fire. This will be a loss both to the bank and the borrower. The bank can recover its liability through the insurance cover.

For banks, bancassurance remains a potentially attractive proposition as it allows them to leverage their existing infrastructure for an additional income stream. By creating a non-interest income, it helps banks hedge their exposure to the markets and retain customers. Due to their potential benefits, banks are likely to continue pushing for these arrangements and bancassurance in Uganda should continue to see growth.

Banks have been slow to move their bancassurance products down the path toward digitization, however. Complex sales processes for insurance products, as well as competing priorities with other banking products, may be to blame.

Still, in the face of record-low interest rates, many banks see the potential non-interest income that bancassurance can offer and have been seriously considering their bancassurance strategies. Enabled by digital processes and analytics, three essential components—personalization, superior customer experience, and omnichannel engagement—will shape the winning formula for sustained bancassurance growth.

Banks in Uganda have been clearly focused on the bancassurance channel for selling life insurance products, which tend to have higher average sale prices and profit margins than most non-life products. Indeed, life products fit particularly well into the bancassurance framework. They are related to financial products—credit life products skyrocketed with the credit boom. And where banks have access to their clients' personal financial assets, they often work to promote life policies with built-in cash value as an alternative form of investment. In contrast, many banks have been deterred from putting much effort into marketing non-life insurance products, which have lower average sale prices and commissions. Few banks have meaningfully increased sales penetration of

auto and commercial lines, though many banks have done reasonably well coupling home insurance with mortgage products. More recently, banks—reacting to historically-low interest rates—have been on the hunt for new sources of non-interest income. And as a result, they have started to recognize the potential of stand-alone non-life product sales.

Whether banks are looking to increase sales of non-life or life products, the use of digital tools will be key. While every bank follows its own path toward creating a winning multichannel model, few have mastered the game and excel digitally. Most banks continually evolve their digital strategies and review the “core” of their digital offer. In this process, however, banks often treat bancassurance products in a tactical, rather than a strategic way. As a result, banks tend to

insert these products into other offerings rather than making them a discrete part of their digital channel strategy. In short, fewer customers visit physical bank locations, and banks have been slow to make up for this descent. Due to Covid 19 pandemic, fewer customers visit physical bank locations, and banks have been slow to make up for lost branch sales by implementing a comprehensive digital model for bancassurance. The lack of such a model becomes even more relevant when considering many banks’ renewed focus on lending products sales. The combination of fewer visits and an increased emphasis on lending products diminishes opportunities for selling non-lending products—such as bancassurance. Therefore, it is pivotal that banks find smart ways to sell bancassurance digitally. Bancassurers need simple, fully

automated, and end-to-end processes that reduce barriers to sales in digital channels as well as barriers to relationship managers. In addition, they need to improve the customer experience and conversion along the sales funnel.

Bancassurance has the potential to help Uganda meet its goals of higher penetration and insurance density. Bank branches are far more abundant than insurance broker offices, while banks themselves have the benefit of already being credible institutions, which can help clients get more comfortable with the idea of buying insurance.

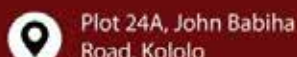
Bancassurance may not support inclusiveness directly, as the country is underbanked and the poor have little contact with formal financial institutions, but it may increase the uptake of insurance in the country.



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Banking on green business

Leveraging opportunities of the 4IR to operationalise green finance for SMEs

Abstract

The future of growth in Uganda is green. Reflected in government commitments to green growth, mitigating and adapting to climate change – including the recently passed Climate Change Bill –, and job creation, economic models that further environmental and social targets are gaining traction. This transition is reflected in the private sector, including among small and medium enterprises (SMEs) that bring low carbon products and services to the market, deliver solutions that build the resilience of communities to climate shocks, and create green quality jobs along their value chains.

The business case for investing in green SMEs is, however, muddled by a lack of aggregated information about the bankability and impact of these technologies and business models. For banks in Uganda to tap into the opportunity of providing green finance to SMEs, information on the performance of green technologies and business models as well as the impacts of investments must be made available. The Fourth Industrial Revolution (4IR) presents a unique opportunity to leverage the value and data generated by SMEs to enable the financial sector to invest in green growth and inform how we move towards a green and inclusive economy in Uganda.

1. Opportunity: Investing in green growth through SMEs

New and scaled solutions are needed to tap into opportunities for quality job creation and sustainable growth, and to secure future well-being within ecological bounds. Solutions for sustainable, inclusive growth are developed and delivered at scale by a multitude of actors at different levels, from local to global. Small and medium enterprises (SMEs) play an important role in anchoring and adapting solutions to local needs, ensuring that green growth opportunities translate to impacts at a community level. The opportunity for investing in green growth driven by SMEs is informed by prioritisation of sectors and indicators at a national level, realised and planned activities of SMEs, and the development and roll-out of targeted financial products.

1.1 Green Growth and Investment in Uganda

The Uganda Vision 2040, Uganda Green Growth Development Strategy (2017), and Third National Development Plan (NDP III) 2020/21 – 2024/25 outline clear commitments to environmentally sustainable and socially inclusive growth that prioritises green job creation, low carbon emissions, and climate resilience. The Uganda Green Growth Development Strategy focuses on five investment areas of agriculture, natural capital management, green cities, transport, and energy. The strategy targets accelerating annual economic growth from 5.2% (2012/13) to 7.8 percent by 2040, increasing per capita income from US\$743 (2012/13) to US\$9,500 by 2040, and increasing income distribution measured by the Gini coefficient from 0.43 (2010) to 0.32 by 2040, among others.

Policy Landscape For Green Growth in Uganda



To achieve these and other targets, financing needs to be mobilised – with a target of US\$1.8 billion per year, compared to nominal GDP of \$36.484 billion in 2020. This funding is expected to be contributed from multiple sources, including the public sector, environmental fiscal reforms and subsidy reforms, sustainable procurement, certification of sustainable production and trade and inclusive green social enterprises, green energy investments and incentives, green innovation and payments for ecosystem services, and international funding (UGGDS, 59). Within this, the banking sector in Uganda must play a central role in leveraging available funding.

1.2 SMEs as Drivers of Impact at Scale

SMEs are central economic players in Uganda, providing employment to over 2.5 million people and contributing around 90% of private sector production (FSDU 2015). Investing in SMEs that adopt a triple bottom line approach of valuing people, planet and profit is therefore fundamental to achieving key national policy objectives of job creation and environmental sustainability. SMEs integrate environmental considerations into their core business model or processes by (a) producing and distributing products and services that contribute to climate change mitigation, adaptation, or resilience-building, and/or (b) integrating cleaner and resource efficient production in their value chain.

Green SMEs span sectors, technologies and business models, and provide products and services that solve a multitude of environmental challenges ranging from access to clean energy for productive use, valorisation of waste, and preservation of biodiversity, among others (see, for example, the activities of WANA Energy Solutions, Tulima Solar, or Bodawerk International). By employing product monitoring systems and smart sensors, gathering customers insights, and collecting information on market dynamics, these SMEs generate valuable data on the demand for, uptake, and use of green products and services. An opportunity exists for investment in such bankable green SMEs to scale their solutions and for the generation of insights on the development of a green and inclusive economy.

1.3 Green Finance Ecosystem in Uganda

Opportunities for banks to align their products to the evolving needs of green SMEs are expanding

This brings potential benefits of both building a customer base of green SMEs in Uganda – thereby bolstering current SME portfolios – and accessing global green finance flows. Trends in overall green finance flows indicate that global capital earmarked for supporting green investments is expected to expand in coming years, with \$867 billion in green finance committed since 2015 (CPI 2020). Global

green finance funding sources are gradually expanding capital earmarked for green investments into the private sector, including SMEs, as end beneficiaries (GCF 2016, 2020; GEF 2018; SEED 2020).

Some examples of banking sector support and opportunities for green SME finance in Uganda are outlined in the Green Banking Ecosystem in Uganda. Currently, the green banking ecosystem is concentrated primarily on clean energy and agriculture investments. The market potential for investment in a wider set of green investments (such as sustainable tourism, green manufacturing or waste management) is even larger. The potential for business growth within green finance is therefore yet to be fully realised within the Ugandan banking sector.

1.4 Green Banking Ecosystem in Uganda

Credit enhancement facilities are available to Ugandan banks from the Rural Electrification Agency, (on behalf of the Ministry of Energy and Mineral Development), notably as Solar Loans to support the costs of investing in a solar system at a household or on business premises. Furthermore, the Uganda Energy Credit Capitalisation Company (UECCC) extends financing to renewable energy companies through various products, particularly for solar, hydro and biomass working capital as well as capex facilities.

The Clean Technology Fund, from aBi Finance with support from KfW, offers direct financing to SMEs and indirect financing via financial institutions for agri-businesses to invest in clean technology, including soil and water management measures, waste reduction and management, energy efficient transportation/logistics, improved chemical efficiency and adoption of less environmentally harmful fertilisers, and more.

The AgrInvest Initiative is a blended finance initiative of the Uganda Development Bank (UDB), implemented by the Food and Agriculture Organisation of the United Nations (FAO) with EU support, that leverages public finance to secure private investment in the agrifood sector with a strong focus on green finance tools and investments.

The Green Climate Fund has allocated an estimated \$73.8 million of total funding to support green investments in accordance with the Nationally Determined Contributions in Uganda, some of which has been dedicated to technical assistance, direct credit lines and other mechanisms to engage local financial institutions.

The Agricultural Enhancement Programme and Rural Enhancement Programme offered by the East African Development Bank (EADB) have partnered with commercial banks and microfinance institutions to offer over 2,000 loans valued at UGX 40 billion to rural SMEs and over 2,000 loans (totalling UGX 84 billion) to agricultural SMEs in Uganda as of 2019, thereby supporting 13,894 permanent and 18,040 temporary jobs. Though this portfolio is not wholly linked to green investments, EADB is actively expanding its strategic commitment to addressing environmental challenges.

2. Challenges: Reducing transaction costs and aggregating impacts

Despite an increasing focus and commitment to (through government policies and earmarked financing) green investments and the support of SMEs, a challenge remains in ensuring finance is effectively delivered to green SMEs as borrowers. As SMEs develop, test, and scale green business models in the market, they require access to external financing that supports them to secure the fixed capital and working capital necessary to deliver their products and solutions at scale.

Example: Bankable Green SMEs and Investment Needs

Green SMEs across sectors involved in the first year of the Uganda Green Enterprise Finance Accelerator (UGEFA) have proven business models with average annual revenue growth of 30-50%+ per year on average. These enterprises are looking to secure debt financing with an average ticket size of ~UGX 300m (EUR 70k) for:

Type of investment desired :

- Capital expenditure: 29%
- Working capital: 17%
- Both : 54%

Common investment requests :

- Production machinery
- Buying raw materials
- Vehicles for distribution
- Expand geographically (sales branches)
- Product development
- Technology and software investment
- Logistics collection and distribution centres

Often, these green SMEs face limitations in accessing financial products tailored to their businesses from banks due to limited information available on their markets (for example the market for sustainable tourism) and technologies, or a lack of awareness of available financial products suited to their needs. This points to a first challenge:

- (a) Insufficient evidence of longer-term market performance of green technologies and business models across sectors

The scarcity of information on green technologies and business models is reflected in a limited expertise of green technology in banks, including at the level of loan officers, and insufficient marketing of product offers across bank branches (GIZ 2014; ACTADE 2017). This relates closely to a second key challenge:

- (b) Lack of organisational capacities to assess the viability of green investment performance projections

This lack of market and performance information and expertise is exacerbated by the informal and disaggregated nature of information that is available. Together, this results in high transaction costs for both assessing and disbursing finance to SMEs seeking financing for green investments across sectors. It also hinders the capacity of the financial sector to fully assess and report on the opportunity for financing green SMEs.

3. Solutions: Data-driven green SME investment frameworks

Globally, momentum is building to mobilise the resources and information needed to finance the transition to a green and inclusive economy. The EU Green Deal acknowledges the need for tools catered to financial institutions to build trust in and an understanding of the meaning and broader environmental, business and societal impacts of "sustainable investments" across the financial sector. The EU taxonomy for sustainable activities directly echoes Green Deal commitments by classifying activities and products by their contributions to climate change mitigation, adaptation and broader contributions to environmental sustainability.

The taxonomy ensures that financial sector actors (and others) have trustworthy, transparent, evidence-backed tools to identify viable green investments in their financing decisions. This taxonomy has inspired and been informed by the proliferation of other tools and frameworks designed to support the financial sector in assuming its role in financing environmentally sustainable economies.

Global evidence and frameworks of green investments can be transferred and adapted to the specific market conditions and opportunities in Uganda. The adaptation of such insights will support collation and classification of evidence of the market and investment performance of green SMEs. Frameworks such as the EU taxonomy, adapted in line with the priority areas outlined in the Uganda Green Growth Development Strategy, for example, could help to determine the eligibility of SMEs for green financial products, the target audience to whom green financial products should be marketed, and align internal reporting frameworks within the banks.

It could also support the standardised aggregation of data to build information on green markets, technologies and business models in Uganda. By providing clear definitions of green investments underpinned by categories for data collection and reporting, banks are able to better design and market green finance products across sectors.

Activities are already underway to collate data and draw insights into the bankability of SME green investment projects in Uganda. Various actors have taken the first steps to leverage 4IR to deliver data-driven tools that facilitate green finance:

Data-driven green banking tools

Through the AgrInvest Initiative, the FAO is working with UDB staff to develop tools for environmental impact tracking, namely to calculate the carbon balance of an agricultural (EX-ACT) or livestock (GLEAM-I) projects. With UNCDF, the initiative supports the uptake of digital tools within the bank, from client profiling to risk assessment with reference to geodata to deliver loans using a digital payment

system, overcoming issues of reaching rural agribusiness customers. The bank applies big data analytics to better understand and monitor agricultural investments and how these investments contribute to poverty reduction.

Within its implementation of the Green Uganda's Urbanisation and Industrialisation project, GGGI has partnered with Makerere University to develop a knowledge and engagement platform to collate and share insights relating to green cities development around key areas of effective and efficient waste management.

The Uganda Green Enterprise Finance Accelerator (UGEFA) is collecting data and insights from working with green enterprises in Uganda to address existing information gaps within the financial sector. Over four years (2020-2023) the Accelerator will support over 200+ green SMEs in the sectors of clean energy, sustainable tourism, sustainable transport and mobility, waste management, and green manufacturing (including agro-processing). The programme will mobilise \$14 million in financing for these enterprises. These businesses will be traced to develop a comprehensive understanding of common technologies, investment needs, and investment performance over time.

Drawing from the opportunities of the 4IR, data-driven green SME investment frameworks can support banks to assess, access and report on the business opportunity of lending to green SMEs. In particular, by ensuring information transparency and decentralised decision making, these frameworks can address the current high transaction costs resulting from information gaps.

3.1 Ensuring Information Transparency

Ensuring information transparency enables the financial sector to develop green SME products that are backed by convincing evidence of green SME market and investment performance. This evidence could include market demand for the products and services provided by SMEs, financing needs and impact potential of common green business models and technologies, and the performance of financial



transactions with green SMEs. Core activities related to the development of transparent information on the performance of green SMEs include:

- Classifying green SME business models (accounting for sector, technology and business activities) linked to standardised global impact indicators.
- Collating validated data on the market and investment performance of these green SME businesses.
- Standardising financial products to benchmark green technologies against environmental impact data (e.g. emission savings, resource efficiency) and performance of common investments in the sector.
- Using information gathered to target marketing and development of financial products to the needs of green SMEs and to align reporting.

3.2 Decentralised Decision Making

Enabling decentralised green SME competences at the level of bank branches and loan officers can help build the green SME customer base. Operating in a wide range of sectors – from sustainable tourism to climate-smart or organic agriculture, and waste management – green SMEs are dispersed across the country. SME loan officers need to be empowered and equipped with clear green banking policies to apply the green SME investment taxonomy in their lending decisions. Core activities in this area include:

- Facilitating the development of green banking policies and processes within banks that are informed by available green investment

information and assessment of the business case for offering green finance products and services.

- Leveraging these green banking policies and available tools to build the capacities of loan officers to make sound lending decisions in favour of green investments.

4. Key Recommendations

Starting with this year's Annual Bankers Conference, further insights and collaborative efforts from across the banking sector are needed to:

- Inform how banks can access trustworthy, transparent, evidence-backed tools (building on opportunities in the 4IR) to identify viable green investments in their financing decisions.
- Align on opportunities for SME support within priority green sectors in Uganda and the likely impacts of green investments in these areas.
- Respond to common challenges of accessing and deploying financing to a pipeline of bankable green SMEs, building the capacity of financial institutions and enterprise support programmes to operationalise green finance.
- Build a common understanding of green banking opportunities across the financial sector, both at the individual bank and national policy levels.
- Establish a hub for green financing capacity building and knowledge sharing with strong leadership from the Uganda Bankers' Association.

5. Author Biographies



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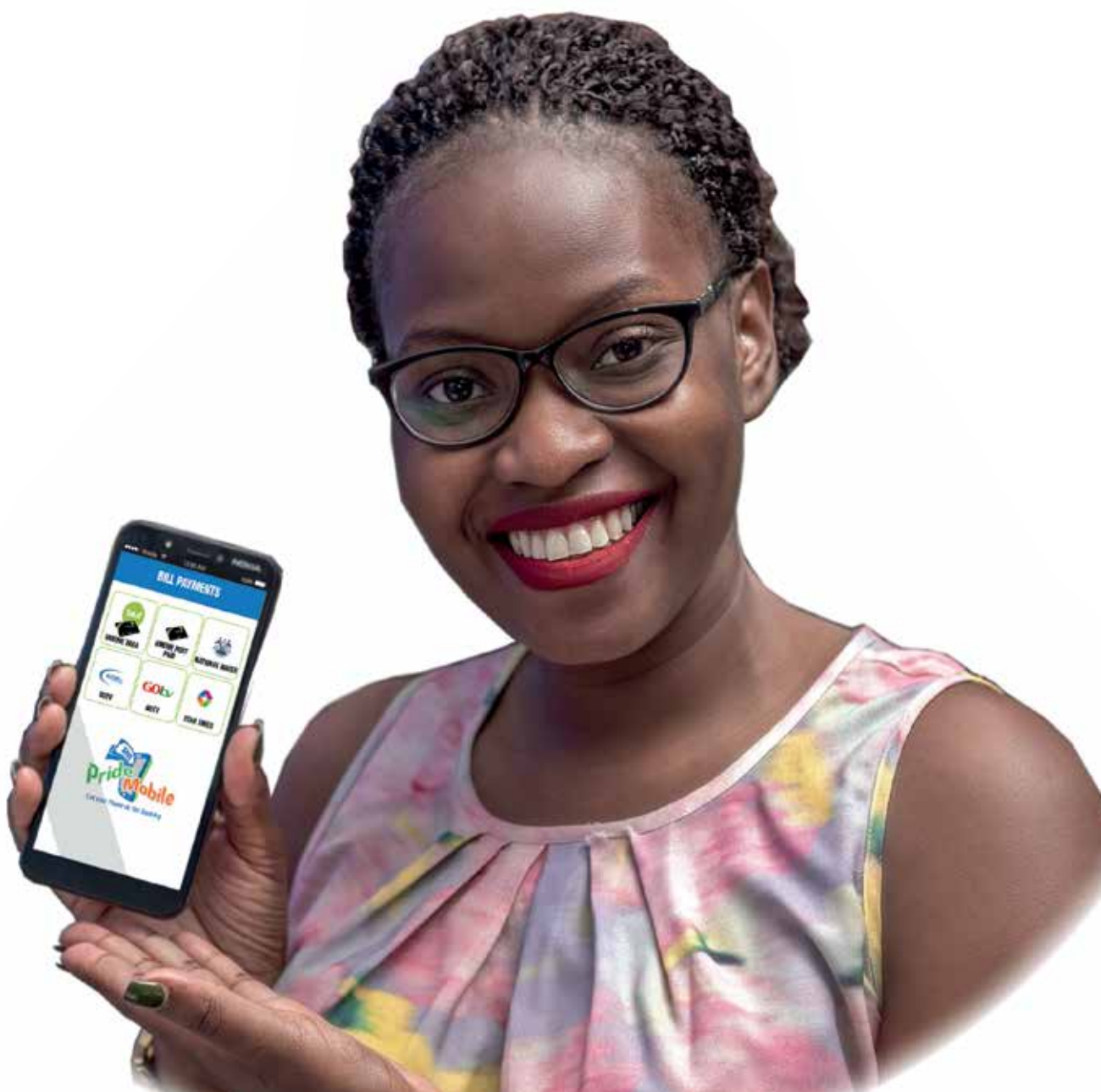
Camilla Shearman is a Consultant at adelphi focused on Green Entrepreneurship in the SEED and Uganda Green Enterprise Finance Accelerator (UGEFA) programmes. Camilla leads the Catalyser programme and co-leads Impact Measurement and Monitoring at UGEFA. Her work has included the development of enterprise support tools, implementation of business advisor trainings, and facilitation of multi-stakeholder dialogues. Camilla studied her Masters in Economics and Business with a focus on sustainability at Sciences Po Paris, and conducted her capstone project with the European Investment Bank on civil society engagement in international financial institutions.



Martin Rohler is an independent consultant and Senior Associate at adelphi. He provides support for the adelphi finance and green entrepreneurship teams, including the Uganda Green Enterprise Finance Accelerator (UGEFA), in the areas of energy efficiency, SME and agricultural finance. A banker with roots in agriculture, Martin has successfully filled roles as a consultant, CEO, entrepreneur and board member with extensive project, product, budget and personnel responsibility. He has over 20 years of experience in over 35 countries with a focus on emerging and transition economies.



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‘Your Growth is Our Pride’

Confronting Fraud and Cyber Security Risks – Real and emergent risks, and mitigation

Hosea Naturinda Makuru, Head Information Security Stanbic Bank



In his multi-volume work, the Phases of human progress, George Santayana asserts that progress, far from consisting in change, depends on retentiveness, those who cannot remember the past are condemned to repeat it.

To articulate any meaningful proposal to confront Fraud and Cyber Security Risk especially in the 4th Industrial Revolution (4IR) it is necessary to revisit that key incidents whose sophistication in orchestration and scale of impact have in many ways shaped the current trends of the Cyber Security practice. The recap also provides a glimpse into the character of the adversary through his works.

During the weekend of 5th February 2016, cyber criminals attempted to steal USD 951M from the central bank of Bangladesh in a well-organized and highly coordinated cyber-attack. Although a significant fraction of the fraudulent transaction instructions was halted largely due to a series of spelling and formatting errors and the money recovered, USD 81M was cashed out through Banks in Southeast Asia. Now known as the Billion-dollar central bank heist, it remains the largest cyber heist on record. Several other Banks have suffered similar attacks over the last 5 years, among them Banco del Austro (BDA) in Ecuador (USD 12M), Vietnam's Tien Phong Bank (USD 1.13M), NIC Asia Bank of Nepal (USD

4.4M) and Cosmos Co-operative Bank of India (USD 14M).

Travelex the world's largest foreign exchange bureau was hit by a ransomware cyber-attack in the final week of December 2019. This attack that took several critical systems offline severely crippling their global operations for two (2) weeks eventually cost the company up to USD 35M in ransom and fines. The incident coupled with the impact of the Covid19 on Air travel forced Travelex into bankruptcy 4 months later.

On Friday May 12th, 2017, several Microsoft Windows Operating systems computers began to fail whilst displaying an error that your files have been encrypted, with an address to which Bitcoin must be paid to recover the files. This ransomware attack, WannaCry quickly escalated into a worldwide cyber-attack affecting more than 200,000 computers across 150 countries within four (4) days severely disrupting several industries among them health care services, travel, telecommunications, manufacturing, and Financial services. The cyber-risk-modeling firm Cyence estimated the global economic losses from WannaCry at USD 4 billion.

SolarWinds, a major technology firm that provides Information Technology Management software was compromised in a major cyber-

" On Friday May 12th, 2017, several Microsoft Windows Operating systems computers began to fail whilst displaying an error that your files have been encrypted, with an address to which Bitcoin must be paid to recover the files."

attack through its Orion Software. The global attack first publicly reported on December 13th, 2020 had a blast radius affecting at least 18,000 organizations with several breaches beginning as early as March 2020. This supply chain attack and its ensuing data breaches is now considered among the worst cyber-espionage incidents due to the sensitivity and profile of the targets and the duration (eight to nine months) in which the hackers had access.

On May 7th, 2021, the Oil Pipeline system company Colonial suffered a ransomware cyber-attack impacting the computer equipment managing the pipeline resulting in a billing failure and shutdown of pipeline operations causing massive fuel shortages that lasted up to 1 week. The attackers exfiltrated 100Gb of data which they threatened to make public if ransom was not paid in an elaborate double extortion scheme. It is reported that USD 5M was paid in Bitcoins to resolve this stand-off.

According to the Uganda Police crime report for 2020, a total of 256 Cybercrime cases were reported compared to 248 cases of 2019 and 198 cases reported in 2018 representing a 63% jump in 2 years. Over 15.9Bn (USD 4.5M) was stolen in 2020 compared to sh11.9bn (approx. USD 4M) stolen from commercial banks and telecom companies through fraudulent mobile transactions in 2019.

According to the latest Verizon Data Breach Investigations report 2021, financially motivated attacks continue to be the most common and organized crime continues to be the number one perpetrator. According to a Cyber and Information Security Consortium report, overall cybercrime cost the world over USD 1 trillion (cumulative cost of cyber incidents added to the economic outlay of security measures) equivalent to 1% of the global GDP and cyber security failure is duly one of the World Economic Forum top 10 Global risks for 2021.

The Impact of COVID-19

There was notable surge in Cyber Attacks in 2020 as threat actors capitalized on the global pandemic to compromise computers and mobile devices with malware, steal credentials and execute financial scams. Overall, the volume of phishing email traffic went up 200%, over 46,000 phishing sites were brought online per week and malware-related incidents, shot up 48% from 2019. This increased exposure is attributed to 3 common causes including:

1. Lockdowns limiting travel fueled a surge in online shopping e.g. At some point Amazon suspended shipping of non-essential items in favour household staples and medical supplies and listed 100,000 more delivery jobs.
2. The attack surfaces changed and expanded rapidly as many organizations and businesses went digital without much preparation coupled with large scale adoption of work from home technologies. At the height of the pandemic, Satya Nadella of Microsoft remarked that we had seen 2 years' worth digital transformation in 2 months.
3. Anxiety, fear, and panic fueled by disinformation and fake news resulted in increased search for pandemic related details online further exposing unsuspecting users to ransomware cartels.

However according to Rob Lefferts, corporate vice president for Microsoft 365 Security,



deeper analysis of global data shows that these COVID-19 themed threats were retreads of existing attacks that have been slightly altered to tie to the pandemic. Lefferts added that this meant we are seeing a changing of lures, not necessarily a surge in new attacks.

Why is Cyber Risk Accelerating?

The scientific objective of the internet was getting computers to talk to each other for research and academic endeavors. Today, it is completely integrated into all aspects of our lives anchoring a new era of global digital commerce.

Inevitably organized crime has followed the migration of value from physical stores online by automating and taking advantage of the popularity of email and sheer size of the internet to achieve cybercrime at a scale eclipsing drug cartel. In addition to the fundamental design challenges of the internet, below are some of the factors responsible this trend.

•Technology Lag and the Complexity of modern business systems architecture

It is not uncommon to find critical business systems supported on Microsoft Server 2003 and Windows XP more than 6 years after Microsoft officially retired and stopped supporting the platforms. This coupled with the modern multi-platform and multi-vendor environments where interfaces are opened up, tightly coupling legacy

and new systems to respond to a myriad of customer requirements creates an environment difficult to routinely and sustainably patch even when critical patches or fixes are released in response to known exploitable vulnerabilities.

• Skills Shortage

The Global Information Security and Work force study done by the center for cyber safety and education in 2017 projected a global shortfall of 1.8M infosec workers by 2022. Over the years this has escalated exponentially and the (ISC)² Cybersecurity workforce study at the end of 2020 reported this shortage was now 3.12 Million. The reality is we are not producing enough resources to confront this challenge.

•Increasing Availability and Sophistication of Attack tools

This is mainly due the failure to protect treasure troves of security research by security Agencies e.g., the NSA breach that led to the cybercrime outfit the Shadow Brokers stealing and publishing exploits such as EternalBlue eventually led to the WannaCry global cyberattack in 2017. This coupled with attack tools for hire and attack software as a service available on the dark web further extends the threat landscape.

- Proliferation of Internet of Things (IoT) - These are devices embedded with software, sensors and network connectivity enabling them to collect and exchange data (e.g.,

cameras, home entertainment systems, kitchen appliances and wireless routers). The Operating Systems of IoT rarely receive security patches and updates and some IoT devices do not have sufficient compute power to support firewalls and antimalware. Several also have default backdoor maintenance passwords that often remain unchanged. In the Mirai IoT Botnet incident that brought down the global DNS infrastructure in August 2016, attackers built their botnet army of half a million devices, by running a simple script against devices on the internet that attempted to log in with 61 known IoT default passwords. If they successfully logged in the IoT device was infected with malware.

•Application Development Security

The speed to market and ease of use are increasingly being prioritised in several modern software development frameworks at the expense of reliability and security.

This coupled with inadequate involvement of security specialists in the design and concept phases of software development leads to a disproportionate number of exploitable application defects and vulnerabilities in several enterprise systems online. This also applies to the software supply chain.

"There was notable surge in Cyber Attacks in 2020 as threat actors capitalized on the global pandemic to compromise computers and mobile devices with malware, steal credentials and execute financial scams."



• Transition to the Cloud

Rushed migration to cloud is increasingly resulting in cautionary tales e.g., unprotected Amazon Simple Storage Service (S3) buckets caused the capitol one breach, now among the biggest data breaches ever where records of more than 100 million customers were exposed.

• Work from Home Infrastructure

At the height of mass lockdowns in March 2020 several organizations were forced to enable remote access at scale without much preparation, this disproportionately extended the threat surface and several organizations have struggled to cope.

Why is the Current Approach Ineffective?

According to Gartner we are spending more than USD 145Bn annually on cybersecurity, but we still sit with an 100% chance of being successfully hacked in the event of a targeted attack. Below are some of the factors that explain why the prevailing approaches are not yielding.

• Security Programs based on Regulation and Compliance to Risk Management Frameworks

These tend to be static whilst prescribing measures against a risk that is highly fluid. The Chain stores Target and Home Depot were PCI DSS certified when they were compromised

in 2013. Cyber threat landscape changes daily whilst frameworks do not, and frameworks are based on controlling what legitimate users can do rather than how attackers attack. As technology evolves the threats and vulnerabilities will evolve along with it and Cyber security efforts must be a direct result of a continuous risk assessment.

• Threats and Vulnerabilities Based Strategies

Vulnerability based strategies seek to identify all vulnerabilities in the technology stack and establishing a plan according to some scientific method to remediate these vulnerabilities. The unfortunate reality is; because vulnerabilities exist everywhere, it is impossible to identify all, remediate them before they are exploited and do it continuously for all the technology and all the users. Additionally, on average 5000 – 16000 new threats are published annually, vulnerabilities increase at a rate of more than 28% with 1/4 to 1/3 of all these vulnerabilities ranked with the highest criticality. When you compare these numbers to the statistic that only less than 2% of the Common Vulnerabilities and Exploits (CVEs) get exploited annually it becomes clear why the focus on threats and vulnerabilities may be futile.

“ Inevitably organized crime has followed the migration of value from physical stores online by automating and taking advantage of the popularity of email and sheer size of the internet to achieve cybercrime at a scale eclipsing drug cartel.”



The Proposal – Cyber Resilience

This article was not written to provide a magic but is meant to share ideas and ignite a conversation which I believe is central to confronting fraud and cyber security risks. That idea is the construct of cyber resilience as a business imperative to thrive in the 4th Industrial Revolution.

To begin with, your cyber resilience program must be data led, plans informed by context specific threat intelligence, business led risk assessment and the candidate controls validated against the prevailing exploits and attack methods (also known as Tactics, Techniques, and Procedures -TTPs). E.g. VDBIR data point that more than 85% of the breaches involved the human element, 61% of the breaches involved credentials obviously necessitates specific focus to empower and

protect staff against common human vector threats such as social engineering, phishing, spear phishing and business email compromise. It also necessitates strong and robust measures for Identity and Access Management that include use pervasive of Multi-factor Authentication, Biometrics, and other specific user behavior aware parameters to validate and authorize access. This also applies to Privileged Access which must be further restricted to a version of Just in Time Access. These measures must be persistently tested for effectiveness e.g., using simulation and mock phishing campaigns.

Secondly, increased targeting of privileged and confidential data necessitates effective protection of data whether in motion, being processed or at rest with strong encryption. This should be coupled with effective backup and recovery

measures to achieve cyber resilience. This applies to both your data assets on premises and in the cloud.

The rise of devastating supply chain attacks implies robust Third-party risk management practices must be prioritized to ensure that the entire life cycle of the relationship with the third-party includes a careful consideration of the relevant exposures and a continuous assessment of protection measures for adequacy.

The data available also indicates that In the face of organized crime and Advanced Persistent Threats (APTs) sooner than later even the best defenses will be breached, which implies that business resilience must be a key component of your enterprise integrated risk management plans to enable you detect breaches in time (leveraging Automation, pervasive logging to an effective Security

Operations Center (SOC), Artificial Intelligence and Machine Learning for early detection), respond effectively to contain the attacks and minimize impact and pivot to recovery in shortest time possible. Your recovery plans must be frequently rehearsed.

The pandemic has taught us that capability to work from home needs to include all staff not just critical staff and all systems for extended periods of time, the capability to work from anywhere anytime is a business imperative and as a direct result the concept of network perimeters must be immediately reconsidered to give-way to the more agile Zero Trust architecture.

This will enable us to activate the discipline to limit trust and privileges to what is absolutely required and to incorporate the more effective risk based continuous MFA, endpoint security and extended (Application Layer) visibility into user activities.

As I conclude I must remind you that a significant part of prioritizing the right things consists in deciding and communicating quite clearly the things you will not do. The correct mindset for the financial sector to thrive in the era of the 4th Industrial Revolution is the Mindset of building towards cyber-resilience.

This consists in the commitment to do the work required to establish the appropriate governance, public sector, and private sector partnerships, modernizing the technical capability to mitigate threat as discussed above, driving the right culture and recognizing that security is a team sport and there is immeasurable benefit in belonging to a professional network or community, sharing experiences, best practices and drawing from the creativity of the crowd.
Stay Safe and Stay Secure

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Hosea is a visionary Information Security leader with over thirteen (13) years' experience in Technology Risk and Information Security Management for Banks, FinTech's and Telecoms across different markets in Africa and the UK.

He has established Information Security Management Programs, built and managed diverse teams responsible for Governance, IT Risk Assessments and Penetration

Testing, Designing and Implementing controls for Financial Systems, Infrastructure Security, Monitoring for Anomalies and Suspicious Activity, Responding to Incidents and Testing controls through Audits to ensure they are operating as intended to protect Digital Infrastructure.

He holds a Master of Science degree in Data Communications and Software Engineering (distinction) and a Bachelor Science Degree from Makerere University. He is a Certified Information Systems Security Professional (CISSP),

Certified Ethical Hacker (CEH), Certified Advanced Security Practitioner (CASP), Certified Information Security Manager (CISM), Certified Scaled Agile Framework SAFe 4 Practitioner and he is also certified for Microsoft Azure Fundamentals, AZ-900 for Cloud.

He has undergone several distinguished leadership and management training programs among them; the Digital Savvy Board Programme of MIT Sloan Executive Education and the Harvard Management Mentor training program.



Head of Banassurance, Standard Chartered Bank Uganda talks about Standard Chartered Bank's newly launched customized Bancassurance products

By Martha Aheebwa, Head Bancassurance - Standard Chartered Bank

Bancassurance is a partnership between an insurance company and any banking institution for purposes of distributing insurance products to the bank's clients. This channel helps insurers reach new markets with minimal investments since all infrastructure belongs to the bank and the banks earn commission as an intermediary.

1. Standard Chartered Bank launched Bancassurance two years ago with motor, travel, property and business insurance but has 2 new products. Tell us more about Educare.

Educare is an investment focused insurance product that allows parents and guardians to save for the future education of their children while at the same time safeguarding against financial distress that might be caused by unforeseen events such as critical illness, physical incapacity and loss of life. Although Educare is targeted mainly to parents and guardians, it is available to all people within the age group of 18 to 65 years and will provide life insurance cover up to the age of 85 years, secured through payment of regular premiums.

A policy owner can choose to have a policy with a term of between 9 and 16 years with a maximum sum assured of Ugx 950 million. The minimum monthly premium payable on this product is UGX 250,000.

2. You also rolled out the Super E-Plus plan. What is that one about?

Super E-Plus is another impeccably crafted Bancassurance product that provides a first-of-kind benefits in the market. It is a savings vehicle with a very competitive internal rate of return with additional risk benefits such as critical illness and disabilities that are not commonly covered on the Ugandan market, including death benefits as a result of Covid-19. With this product, our members

enjoy investment returns that beat inflation, partial access to savings within the investment period, flexible life cover benefits without evidence of medical underwriting, automatic waiver of premium following critical illness and disability and they qualify for a policy loan after 12 months of cover.

Both the Educare and Super E-Plus products are underwritten by Sanlam Life Insurance (Uganda) Limited.

3. Who is eligible for the Educare and Super E-Plus Bancassurance products?

Parents / guardians / Individuals with financial dependents especially school-going children and young families, anyone looking for an avenue for wealth creation and investment, people planning for their retirement, people looking to save up for any future goals, employed and self-employed are all eligible. These products are available only through Standard Chartered to our existing clients, however we welcome non-clients who are interested to open our Digital Life Account to access these products.

4. Why should anyone take out these insurance products? What are the benefits?

As you can tell, these are great products for anyone that is committed to guarantee their future and that of their loved ones. The current times have particularly demonstrated that the only time we can be sure we have is now and we must use it to be future ready.

Insurance is about financial planning and protection to absorb the shock in case of an unforeseen eventuality such as illness, disability and death. It takes care of the "what-ifs" in financial planning. Our insurance solutions cushion and protect you from the fi-

nancial impact of unfortunate events, while at the same time providing an investment vehicle.

Clients who choose to take out insurance policies through Standard Chartered Bank will therefore benefit from a unique suite of customised insurance products that have been tailored specifically to cater to their lifestyles.

We are confident that the products we have rolled out under Bancassurance will take care of our clients' insurance protection needs and provide additional convenience as they are able to take out a policy as they undertake their normal banking.

Furthermore, our clients will benefit from expert advice offered by our well-trained bank staff and an unrivalled service experience arising from the contractual service standards agreed upon between ourselves and the insurance companies which is differentiated. Our Bank staff will assist clients with following up claims' settlement and documentation, so they focus on their other business.

5. Any final words?

We are delighted to have rolled out the Educare and Super E-Plus Bancassurance products to our clients and appeal to everyone to save for a comfortable and secure future with added protection, catering for unforeseen occurrences.

You can trust us to cater to your insurance needs as a trusted financial services provider that has been in operation in Uganda for the last 108 years.

We are ready to help you arrange insurance to better manage your risk. To know more, call us on 0200524100 / 0313294100 or visit our website at www.sc.com/ug.

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Standard Chartered Bank Uganda Limited's Bancassurance business is regulated by the Insurance Regulatory Authority of Uganda. The Super E-Plus Plan is underwritten by Sanlam Life Insurance (Uganda) Limited.



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Cyber Security Fraud and the Growth of Digital Services

By Emily Gakiza



I. Introduction

The financial services sector deals with a valuable commodity called cash (tangible and non-tangible) that requires good risk management practices. Since time immemorial, anything that has been of value or has value, has seen those with the valuable item put in place practices to ensure that their ownership of the item with value is not tampered with. The concept of value has been changing through time and in the Fourth Industrial Revolution (4IR), is characterised by the fusion of the digital, biological, and physical worlds, as well as the growing utilisation of new technologies such as artificial intelligence, cloud computing, robotics, 3D printing, the Internet of Things and advanced wireless technologies among others and has ushered in a new era of economic disruption as well as the management of risk.

II. Management of Risk

Risk generally can be defined as an event having the potential or an adverse impact on the profitability and the reputation of an entity due to several sources or a distinct source of uncertainty. Every organisation faces risks in the pursuit of growth and profit. Under the Bank of Uganda Risk Management Guidelines for Supervised Financial Institutions (2010), risk is defined as the potential expected or unexpected adverse impact on a financial institution's earnings and or capital. Managers are expected to take risks that can be identified, measured, monitored within such financial institutions' capacity. For the longest time, various types of risk such as Operational risk, Strategic risk, Credit risk, Liquidity risk, Interest rate risk, foreign exchange and compliance risk have

been identified, measured and managed by Financial Institutions. These Guidelines were passed during the advent of paper cheques and movements of loads of physical cash.

Around the same time that the Risk Management Guidelines were being issued by the Central Bank, Mobile money was concurrently being launched in Uganda by the Telecom Companies- in March 2009 (MTN Uganda); Zain (now Airtel) launched Zap in July 2009, whilst UTL launched M-Sente in March 2010. Since then, mobile money and digital services and products have seen a ubiquitous growth allowing for customers in the financial services sector to quickly and with less fuss carry out their financial transactions. A client could open an account and send all relevant information (data) using their phone and an Application (App) to their bank remotely and carry out various service requests and transfers without ever stepping in the bank branch. This improvement has seen Financial Institutions embark on closing a number of their brick-and-mortar branches and now the Client's Relationship Manager is either a chat bot or a customer service representative at the end of a phone- all unseen and never the twain shall meet. As a result of these technological changes, Data is now considered the most valuable commodity, and as such risk management tools for data and related activities have come to the forefront of ensuring that these new sets of risks for this

commodity(data) can be identified, measured, and monitored.

Whilst before the fraudster could target physical cash, or forge paper cheques or other related financial instruments or target the absent-minded customer at an ATM or in the bank branch, these avenues for the fraudster to access easy cash are declining and that has meant that the fraudster has also gone digital to match the change to digital services and products. And whilst before the fraudster was most likely a local criminal, in the digital era, the fraudster is likely to be somewhere in cyber space targeting the data that an organisation collects and keeps remotely. As a result, the risk management environment becomes more uncertain due to the speed of innovation as risk managers work to keep up with the changes that innovation brings.

III. Increased Connectivity Risk

Increasing connectivity and data-intensive economic activities which involve acquisition and storage of a lot of information ranging from personal data to trade secrets has facilitated overwhelming reliance on technology. These developments have been accompanied by a change in the scale and scope of digital security and privacy risk with potential significant impacts on social and economic activities. The World Economic Forum Global Risks Report (2015) , ranked cyber-attacks alongside unemployment and climate change as one of the top 10 most significant long term risks worldwide. To understand the cyber threats relevant to an organisation, it is important to identify what information may cause financial or competitive loss or reputational damage to the organisation if it were acquired made public. Due to the increase in cyber-attacks, cyber security as a proactive risk management tool has grown in prominence for any company that is considering a continued robust existence in the 4th Industrial Revolution.

Cyber security can be defined as the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance, and technologies that can be used

to protect the cyber environment, organisation and user's assets. In order to assess the cyber security risk level of an organisation, the following questions can be asked.

- a) Who has access to the organization's most valuable information?
- b) Which assets may be the likeliest targets of cyber-attacks?
- c) Which systems would cause the most significant disruption if compromised?
- d) Which data, if obtained by unauthorized parties, would cause financial or competitive loss, legal ramifications, or reputational damage to the organization?
- e) Whether Management is prepared to act in a timely manner if a cybersecurity incident were to occur?

The Traditional IT enterprise model was based on a hardened perimeter with fewer applications run under the oversight of enterprise IT to manage an entity's cyber risk. The modern applications now in use are more complex and are now hosted in the cloud. With Covid-19, we now have an increasingly mobile workforce and multi cloud initiatives at play. The main question for any organisation now is who has what level of access, how they will be authenticated and authorised. This brings into play a new set of risk management tools to manage the level of risk being undertaken by the entity. Implicit trust has been replaced by explicit trust where authentication and authorisation are always required. In managing cyber security, it is good practice to now have in place a system that ensures that all staff become some level of risk managers and get to appreciate the level of risk that the organisation faces. There is need to assess and treat the risk and have ongoing risk monitoring and a review cycle.

IV. Online Hygiene

Cyber risks can also be largely mitigated by following a number of 'hygiene' practices. Far from being defenceless against hackers, organisations can take a few steps to help themselves. Cyber hygiene is the starting point. No organisation can address cyber threats without first putting in place basic protections. At least 80 percent of the targeted breaches can be prevented by just some of the following

measures;

- a) patching widely used software such as Microsoft Office, Web browsers and PDF viewers on a regular basis, and do the same for operating systems;
- b) monitoring networks constantly;
- c) restricting access to sensitive data;
- d) educating employees and raising security awareness;
- e) performing regular vulnerabilities checks

V. Recommendation of measures to mitigate cyber security risks

a) Build up threat intelligence

This involves knowing what cyber threats your organisation face, what risks they pose to your valuable information assets, what responses you should take and how effective they have been.

b) Regulation

While stronger regulations are necessary, they run the risk of regulatory over-reach. A lighter touch previously proposed involves issuing standards to encourage improved security. In June 2014, Britain introduced a scheme called "cyber-essentials" under which firms could apply for a certificate to show that they comply with certain minimum standards. Applicants undergo an external audit, and if successful, are awarded a badge which they can use on marketing materials. Extending such schemes to outsourcing firms in emerging markets may provide a strong incentive for them to accelerate their cyber defences.

c) Detect and respond

Monitor your networks and be prepared to respond quickly when incidents occur. Identify your most sensitive data, take additional protection measures such as segregating your internal networks, encrypting data at rest, maintaining backups and having fall back arrangements. In developed markets, this is being done systematically in some industries via Information Sharing & Analysis Centres (ISACs) in the United States . Such knowledge sharing between the public and private sector, cross-border is vital too, in emerging markets, where the next frontier in the fight against cybercrime

might well be.

d) Insurance

Insurance has for long been a risk mitigating factor and where you cannot detect, respond or avoid, you will need to mitigate the risk. It has been noted that stricter compliance requirement in legislation such as 2018's EU General Data Protection Regulation (GDPR) is helping drive the demand for cyber insurance as healthcare providers, financial services firms, and companies in all industries are tasked with keeping user data safe. The insurance also comes into play when any affected entity is trying to recover from data breaches and ransomware attacks. Market forecasts for cyber insurance policies range from **USD14billion by 2022 to USD20bn by 2025 up from less than USD1.5bn in 2016**. In 2018, Singapore announced the launch of a Commercial cyber risk pool, a facility for providing cyber insurance to corporate buyers, as cyberattacks in the Asia Pacific region become more pervasive. The pool was to commit up to **USD1 billion** in risk capacity and would be backed by capital from 20 insurance companies in the traditional insurance and insurance-linked securities markets to provide bespoke coverage .

e) Setting up a Cybersecurity Committee

To mitigate this risk, many organisations have formed a cybersecurity committee, often led by the CSO, CISO, and/or chief privacy officer, that meets periodically with stakeholders of the infrastructure, network, and security teams, as well as relevant members of IT risk and compliance management. One primary objective of the Committee is to understand the organisation's key assets, risk assessments, likelihood of threats, potential impact, and controls in place to adequately protect these assets against cybersecurity attacks. The Committee also discusses emerging threats and relevant metrics, including the results of recent penetration tests, which test the effectiveness of security defences through mimicking the actions of real-life attackers.

VI. Cyber Crime Incidents

- a) International Incidents
The greatest source of risk in cyberspace

comes from groups with the resources and commitment to relentlessly target an organisation until they succeed in breaking in and extracting value. These attackers are known as Advanced Persistent Threat (APT). Target's data breach in December 2013 was a case in point. The attackers exploited a vulnerability in Target's own networks to implant malware that spread to their stores point-of-sale (POS) machines where customers swiped their credit cards. Infecting the POS helped the attackers evade Target's defences and internal controls as the malware was written to avoid detection. Credit card data is encrypted after the card is swiped, so the malware was designed to capture the credit card data in the second between swipe and encrypting and then forwarded on to the attackers. The attack combined programming skill and knowledge of business processes to take down an otherwise well-defended company.

b) The Context of Uganda

Uganda passed the Data Protection and Privacy Act in 2019 becoming the first African country to recognise data privacy as a fundamental human right and with NITA-U as the lead organisation responsible for cybersecurity. This Act is enforced by the National Information Technology Authority Uganda which overlooks the collection and processing of individuals' data ensuring that it is well protected and kept safe. Under the NDPIII, Chapter 14 Objective 2(2) provides for the review and implementation of the National Information Security Framework and the National Information Security Policy (NISP) and a National Information Security Strategy (NISS), but these policy documents require some more inputs to make them more robust.

Cybercrime has been steadily on the rise mainly through electronic fraud with banks and telecom companies reportedly losing billions of shillings. In 2019, it was reported that Uganda lost UGX11.4bn and only managed to recover UGX51.8 million. On 10th October 2020, it was reported by the Daily Monitor Newspaper that Pegasus Technologies which acts as a third-party service provider for MTN Uganda, Airtel Uganda, and Stanbic Bank Uganda (amongst others) was hacked by unknown persons who

were able to override security controls in the system and access billions of monies through mobile money transactions using around 2000 sim cards to electronically instruct banks to send money to different mobile money accounts in different parts of the country. This incident showed the need to continuously monitor and review the cyber security measures in place to and protect data and information.

VII. Conclusion

In summary, innovation is the order of the day and most activities in organisations are going digital every day. Every organisation should ensure that it discusses the issue of cyber security as a risk that needs more robust management and oversight by Management and the Board. The following are some activities that may be done but are in no way an exhaustive suggestion or proposal in countering cyber security risks.

- a) Put in place a security framework to address third-party risks
- b) Include cyber security in your supplier contracts and service-level agreements
- c) Establish a common framework for cyber risk, to ensure shared understandings and norms
- d) Require continuous monitoring of networks
- e) Limit access to sensitive business data
- f) Conduct regular audit of suppliers

Furthermore, to better manage this risk that continues to grow every year, it can be seen that multi sectoral collaborations would provide better protection. With the COVID19 pandemic, remote working has become the new normal, and people working from home are being targeted more frequently. As the old adage goes, prevention in this case will always be better and cheaper than the cure.

“One primary objective of the Committee is to understand the organisation's key assets, risk assessments, likelihood of threats, potential impact, and controls in place to adequately protect these assets against cybersecurity attacks.”

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Putting Women First

Digital ID & Finance 4.0: How banks can stay relevant in the face of the 4th Industrial Revolution

By Timothy Musoke, Laboremus Uganda

In the 1990's Bill Gates famously quipped: "We need banking, but we don't need banks anymore". Standing on the verge of the 4th Industrial Revolution, it is time to put this prediction to scrutiny, highlight the critical roles that banks continue to play, and the essential steps banks need to implement to remain future-ready.

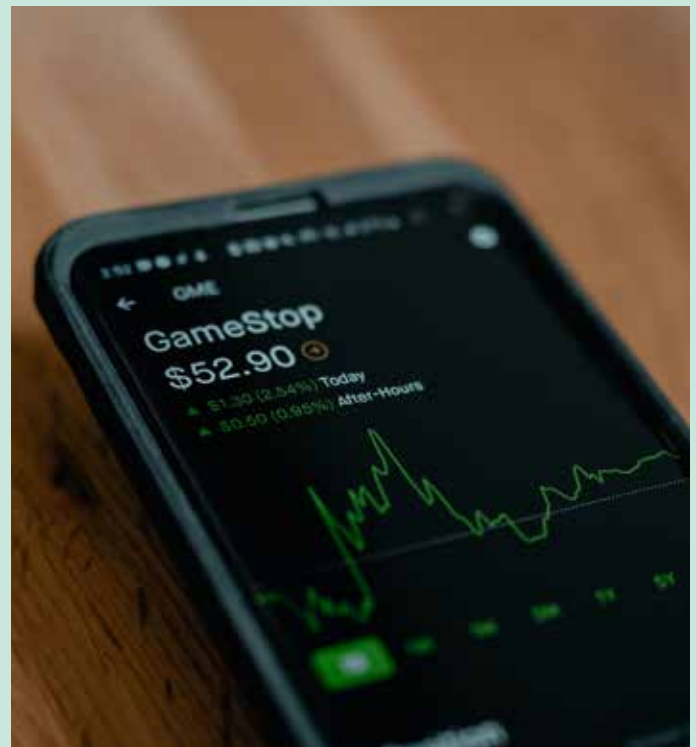
The fourth industrial revolution, or Industry 4.0, is powered by digitization, big data, machine learning and robotics, yet at its core, it is all about the seamless merger of the physical, the digital and the biological.

In countries like the UK, Norway and Singapore, the "traditional" branches are disappearing. In their place clients access their banking services online or via mobile apps, and branches have morphed into customer engagement centres with cafes rather than places for transactions.

Applying for a loan takes seconds, with credit worthiness being decided based on real time financial data, instead of a credit committee. Fintechs like Venmo and Vipps allow people to make bank transfers without having to remember any bank details, all they need is a phone number.

In Uganda the traditional branch is still king for banks. Most banking activities are still carried out in the branch, but this is already changing. By March 2020, there were nearly 11 million mobile internet connections and more than

20.5 million mobile subscribers (representing 45 per cent of the population) in the country. The population is largely rural, meaning that most of the population does not live in proximity of a bank branch. Depending on their socio-economic status, the level of mobile penetration into everyday life is close to seamless. Ugandans sell their services on WhatsApp, make payments with USSD and order food via Jumia.



The seamless integration of technology into our lives, means that we as consumers will have increasingly higher expectations for speed, quality of services, availability, and offerings. How will Ugandan banks deal



with these expectations? Customers onboarding today is a long and tedious process requiring banks to navigate an everchanging and complex regulatory landscape, and loan application processes can take up to 3 months for a consumer loan. The 4th industrial revolution offers increased demands from consumers, but also opportunities for banks. In this paper we will focus on one of the key tools to unlocking the revolution's potential: digital identity.

How will banking in Africa look in the 4th Industrial Revolution?

Banking in Africa will be driven by mobile and agency banking. Finance 4.0, a McKinsey term for the financial services part of Industry 4.0, will help grow emerging economies like Uganda by over 6% annually. Digitization is lowering barriers to entry for new fintechs, but it is also offering great opportunities for banks to utilize existing data and client bases to lower costs, increase market insight and

check off important regulatory requirements.

For African banks, mobile-first will enable branchless banking. Agency banking will service the rural population, allowing for everything from account opening to paying bills and accessing loans. The urban populations will primarily use mobile or online banking.

This does not mean that Finance 4.0 will make the branches disappear, rather, the branch will serve as a branding experience for the bank. Much like in the rest of the world, the branches will be in urban centres and be equipped with the latest technology offering excellent self-service tools. The benefits of Finance 4.0 for the automation of the financial industry cannot be understated: the digital transformation allows financial transactions to be faster, cheaper, and easier to access. It cuts financial institutions operational costs, allows for more effective, efficient, and targeted marketing, business intelligence and new and often

superior ways of credit scoring.

This opens the door for the financial inclusion of the poor and disadvantaged people through everything from smarter KYC, tailor-made products, to alternative credit scoring. Lastly, Finance 4.0 also allows for greater increased capabilities for regulators and raises the bar in terms of capturing, streamlining, and validating a customer's digital identity.

"In Uganda the traditional branch is still king for banks. Most banking activities are still carried out in the branch, but this is already changing"

While computers never got the market penetration in Africa that it enjoys in other parts of the world, mobile phones have been a gamechanger. Utilizing the potential of the great technology of the 4th industrial revolution to service audiences through channels like mobile money and agency banking will be key.

Digital identity: The key to unlocking Finance 4.0

As financial services move online, digital identification services are not just convenient, they are mandatory. Whether you are a bank offering remote onboarding of clients in rural areas through agents or an asset management firm offering clients insight into their portfolio performance through online portals, regulators and customers are unified in their demand for the speed, security and accuracy that can only be delivered using technology.

One of the world's most important financial regulators, The Financial Action Task Force (FATF), put it like this: "Digital ID systems that meet high technology, organisational and governance standards hold great promise for improving the trustworthiness, security, privacy and convenience of identifying natural persons in financial services in the global economy of the digital age."

Reliable, independent digital ID systems :

- facilitate customer identification and verification at onboarding.
- facilitate customer due diligence (CDD) measures, and
- aid transaction monitoring to detect suspicious transactions and fraudulent activity.
- open new customer segments that are challenging to service via a classical branch-setup.

Case #1: Remote onboarding

Let us use remote customer onboarding as an example. In Uganda, agency banking has been a key development in offering financial services where the potential client is, whether that is at a trading center in Nakasongola or at a market in Wandegaya.

Remote customer onboarding and thus customer verification requires a digital identity. When you lack the "luxury" of meeting customers in a branch, institutions need to rely on remote verification methods to establish a person's identity. More importantly, considering the wide variety of use cases, remote onboarding demands a

uniform process to verify both new and existing customers.

To properly service existing customers, banks also need a single-source database with validated customer identities that is centrally accessible. This will help in re-authenticating customers whenever they want to conduct a digital transaction, like applying for a loan, signing up for a savings account, or sending money to a cousin in Nairobi.

Case #2: Digital KYC

Arguably the most essential aspect of customer onboarding is KYC (Know Your Customer). Digitizing the KYC processes is a fundamental building block in the digital transformation of financial services. A national ID infrastructure designed to provide real-time KYC can help financial institutions not only validate a customer's data but can enable transaction authorization and layering of financial services.

Imagine, for example, insurance products being offered based on verified KYC of deposit taking

entities. A frictionless ID infrastructure, with appropriate governance and rules can lead to transformational growth and depth of financial services.

While better digital KYC offers opportunities, it is equally important to highlight the regulatory nightmares Ugandan banks can avoid by implementing comprehensive digital ID verification and KYC practices. In February 2020, Uganda was grey listed by the Financial Action Task Force (FATF) due to lack of enforcement of anti-money laundering (AML) and counter-terrorist financing (CFT) laws, regulations, and measurements. The grey list includes countries like Zimbabwe, Yemen, and Syria.

Being on the grey-list has several consequences for Uganda, like limited access to global financial system, more expensive access to finance due to higher risk profiles, sanctions, etc. Reliable verification of identification, along with improved transaction screening and documentation of these processes can play an important role in the process of getting Uganda off the grey-list.

According to FATF themselves: "By 2022, an estimated 60% of world GDP will be digitalised. ... [The] growth in digital financial transactions requires a better understanding of how individuals are being identified and verified in the world of digital financial services."

Financial inclusion: Digital identity to the rescue

While Uganda has been making strides in reaching the unbanked and underbanked, there is still a huge financial gap. Financial inclusion is a critical tool to enable people to make their way out of poverty, increase resilience and stimulate economic growth. A robust digital system for reliable identity verification can allow customers in remote areas to access digital financial services.

The success of mobile money has shown that there is a strong demand for financial services, also in rural areas. Most financial services are unfortunately still unaffordable for the average Ugandan, and banks are facing high operating costs when trying to service this unbanked population. Remote customer onboarding and digital KYC checks can drastically reduce the time, effort and manual processes needed to deliver secure financial services in rural areas.

"To properly service existing customers, banks also need a single-source database with validated customer identities that is centrally accessible"

In December 2020, there were 27.9 million mobile money accounts in Uganda, compared to the 17.55 million bank accounts. Financial



inclusion happens remotely and via mobile technology. These channels need digital ID verification to succeed.

Where are we today?

Bank of Uganda and Uganda Bankers Association (UBA), together with Financial Sector Deepening Uganda, realized the urgency to set the standard of a digital identity in Uganda to pave the way for the 4th industrial revolution. In 2019, the parties released a tender for the development of unified digital KYC solution to connect Uganda's supervised financial institutions to the National ID database at NIRA (National Identification Registration Authority).

Laboremus Uganda was selected as the technical implementation partner and is currently rolling out a digital ID verification to the 35 UBA member banks. The solution is critical for the financial sector because it helps financial institutions increase their customer base, offer products to a larger portion of the population, improve anti-money laundering monitoring, and reduce risks.

The ID verification solution allows banks to verify whether the ID details matches with what is in the NIRA database, thus authenticating the ID. The solution will let you know if the NIN is valid and could be found in the NIRA database, if ID card is valid based upon card number and if the names and date of birth of the customer matches with what is registered in the NIRA database.

The system is robust and secure in a multitude of ways. These include ensuring that our mobile application can only scan an original and official national ID. A copy of a national ID, which is quite common in Uganda, cannot be scanned. Additionally, the solution matches the customer's fingerprint (using an external, mobile fingerprint scanner) against the fingerprint registered in the NIRA database. All with the intent of delivering a secure and sustainable solution built for growth.

What is next?

The development of the platform was

completed earlier this year and the rollout is currently underway. Once a bank is live, additional mechanisms are enabled to verify whether the information provided remotely by a customer is valid. These include phone number verification, static facial recognition (matching a customer's face with the photo on their ID), live facial recognition (which asks customers to move their face while self-onboarding to match against the photo on the ID).

Through collaboration with NITA-U, NIRA, FSD Uganda and other development partners, additional KYC services can be added to or on top of the existing system. This includes working with NITA-U and government ministries to introduce capabilities like verification of business names, shareholder verifications, refugees, foreign nationals like expats and refugees.

Conclusion: The future could still belong to the banks

Digital ID and identity verification is crucial for banks to unlock the potentials of the 4th industrial revolution. Implementing and taking advantage of complex, secure, transparent, and user-friendly digital identification services is the key to unlocking Finance 4.0, in Uganda and beyond.

To summarize, a simple, digital ID verification system ensures better and more uniform KYC practices across the banking industry and increases the quality of supervisory monitoring and enforcement capabilities. Furthermore, it allows for a KYC setup that supports and drives innovation.

Africa might be facing increasing pressure from new and agile fintechs. However, banks and established financial institutions have an edge on resources, customer base, and data. Ugandan banks have the opportunity and power to shape and direct the industrial revolution if they choose so.

The level, range and direction of adoption decides if they will be the leading (and decisive) voice in the evolution of financial services. If they manage to successfully leverage financial technology, the future still belongs to the banks.



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Why a rigid and risk-averse legal and regulatory framework is an impediment to innovations in Uganda's financial sector?

Ronald Ochen and Enock N.W. Bulime

1. Introduction

Financial technology (FinTech) is transforming the financial sector across the globe. It holds the potential to improve efficiency and reduce operating costs, allow seamless and real-time transactions, and drive hyper-personalization by improving an understanding of the needs and behavior of customers (World Bank, 2019). In Sub-Saharan Africa, technologies like mobile money, have greatly improved financial inclusion levels and reduced the proportion of the unbanked population (Hughes & Lonie, 2007). In Uganda, mobile money has generated unprecedented access to financial services, notably for the under-banked and unbanked populations (Aron et al., 2015). For instance, Mobile Telephone Network (MTN) Uganda subscribers borrowed about Shs 435 billion in mobile money loans in 2020, pointing to the increased appetite for short-term loans (Nakaweesi, 2021).

However, globally, the innovative and disruptive nature of technology-led financial services is challenging policymakers and regulators to keep up with their rapid pace of change (Hannig, 2017). In Uganda, the level of awareness and understanding of FinTech is very low among policymakers and regulators (Financial Sector Deepening Uganda [FSDU], 2018). Further, Ugandan commercial banks are facing competition-driven largely by changes in technology, particularly in mobile money that provides a novel regulatory challenge (Mawejje & Lakuma, 2017). Also, Central Banks and regulators are traditionally risk-averse and conservative, sometimes valuing stability over innovation, which can result in poor outcomes through increased barriers to entry, stifled

innovation, inadequate consumer protection and low levels of financial inclusion (Loretta & Homer, 2018).

The study examined the nature of Uganda's legal and regulatory environment and its impact on innovations. It finds that Uganda's legal and regulatory framework is rigid and risk-averse, making it an impediment to financial sector innovations. For example, the minimum capital requirements for FinTech startups is very high and prohibitive; Shs. 10 billion for an Electronic Money Issuer, Shs. 5 billion for Switches, Shs. 3 billion for Aggregators and Shs. 2 billion for Standard licenses (Kayondo et al, 2020). Consequently, this would discourage and limit FinTech startups from entering the payments space thus impeding innovations in the financial sector. To vindicate this, FinTech startups continue to struggle raising capital and penetrating the market (Daily Monitor 2021).

Therefore, it is crucial for policymakers and regulators to understand FinTech, to create room in the legal and regulatory frameworks to better drive FinTech innovations. Furthermore, for traditional banks to remain relevant in a digitally driven and disruptive financial services sector, a flexible and responsive legal and regulatory framework is critical for tapping into new technological trends to support innovation and diversification of the product portfolio while lowering the cost to income ratios and enhancing profitability.

2. Research question and objectives

The research question answered by this study is, "What is the role of a legal and regulatory framework in bolstering innovations in Uganda's financial sector?"

The objectives of this study are:

- i. To examine the nature of the legal and regulatory framework of Uganda's financial sector and how it compares with South Africa and Kenya.
- ii. To examine the effects of legal and regulatory framework on innovation.

3. Methodology

We use case studies of Kenya and South Africa and document reviews from Uganda and other countries. Specifically, the paper focuses on the legal and regulatory frameworks of Kenya and South Africa and draws comparisons with Uganda, while identifying potential gaps and lessons for improving the existing legal and regulatory frameworks. We focus on Kenya and South Africa because they are the region's leaders in terms of financial inclusion with over 70% of the adult population having access to a bank account. Secondly, Kenya and South Africa are major FinTech centers, and until recently, Johannesburg and Nairobi were the only cities from Africa to appear on the list of global FinTech hubs (Deloitte, 2017). More so, they are the market leaders in raising online alternative finance, for instance, in 2015 they raised, respectively, USD 16.7 million, and USD 15 million. In addition, the two countries host the largest number of technology hubs in Africa (Group Speciale Mobile Association Intelligence [GSMA], 2016).

4. Results and Discussions

4.1. Review of the legal and regulatory frameworks of FinTech in Kenya, South Africa, and Uganda

Digital transformations of Kenya's financial sector were facilitated by the "test and learn" regulatory approach (Ndung'u, 2017). The launch of M-Pesa in March 2007, through a partnership between Safaricom and the Commercial Bank of Africa, hinged on pre-existing legal frameworks including the Central Bank of Kenya Act (2003) that authorizes the Bank to supervise the national payments infrastructure and the Communications Law (2006), which recognized electronic units of

money. These provided the legal foundation for telecommunication companies to store monetary value in SIM cards (Ndung'u, 2017). During this period, the Central Bank of Kenya issued a "letter of no objection" to Safaricom and enacted the National Payment System Act in 2011 and the National Payment Systems regulations in 2014, which led to the introduction of the regulatory sandbox (World Bank, 2019). In March 2019, the Capital Markets Authority of Kenya approved the regulatory Sandbox Policy guide note and opened the first call for applications to the sandbox (Capital Markets Authority Kenya, 2019).

In 2015, the South African government introduced a new Socio-Economic Impact Assessment System (SEIAS) to support the development of FinTech through ensuring proportionate regulation for the sector (World Bank, 2019). According to David et al, (2021), in 2016, South Africa made new developments in their FinTech regulatory environment, they established the Intergovernmental FinTech Working Group (IFWG) comprising of members from the South African Reserve Bank (SABR), the National Treasury, and the South African Revenue Services (SARS). The aim was to develop a common understanding among regulators and policymakers of financial technology development, its policy implications for the financial sector and economy. The IFWG launched the Innovation hub, which consisted of regulatory guidance, a regulatory sandbox unit and the innovation accelerator.

On the other hand, Uganda launched its first mobile money platform called MTN mobile money in March 2009, followed by Airtel money in June 2009, and Uganda Telecom Limited's M-Sente in March 2010. Also, other non-mobile network operators including EzeeMoney and Smart Money entered the mobile money space (Bank of Uganda [BOU], 2015). The mobile money business model in Uganda is mainly built on a partnership between a mobile money operator and a supervised financial institution. BOU and the Uganda Communications Commission (UCC) regulate mobile money operators. Specifically, the UCC licenses and supervises mobile network operators, and the Bank of Uganda approves and supervises mobile money services (Bank of Uganda, 2013).

In 2013, the Bank of Uganda issued Mobile money guidelines to regulate the mobile money industry. Later on, to close the regulatory gap, the Parliament passed the National Payments Systems Act, 2020 and it was assented to by the President in July 2020. Recently, the BOU issued a public notice on the issuance of licenses under the National Payment Systems Act, 2020 (BOU, 2021).

4.2. How does Uganda's legal and regulatory framework compare with Kenya's and South Africa's?

The current regulatory framework in Uganda is mainly rules-based, with little room for flexibility and innovation on how financial services providers comply with the regulation (FSDU, 2018). However, balancing financial stability and access to FinTech requires a principles-based strategy and not strict rules (Tsai & Kuan-Jung, 2017).

Kenyan regulations are more flexible, regulators prefer to set ex-post rules as the services and their providers evolve rather than enact a strict ex-ante regime that would limit innovation (Ndung'u, 2019a). This propelled Kenya into the poster child for creating an enabling regulatory environment, contributing to 93 percent in financial inclusion and 50 percent of their economic growth (World Bank, 2020). In addition, Kenya's regulators leveraged strong public-private partnerships, enabled mobile money interoperability and provided a conducive market environment discouraging dominance by initial entrants and enabling competition (Ahmad, 2020). Conversely, South Africa developed the SEIAS, which supported the growth of FinTech by ensuring proportionate regulation of the sector (World Bank, 2019).

Equally, the lack of a proper understanding of FinTech by regulators might lead to delays in approvals and restrictions and building knowledge about FinTech and digital finance among regulators, which is essential for effective supervision (Loretta and Homer, 2018). Uganda has a private sector led FinTech Association, the Financial Technology Service Providers Association (FITSPA) that sets the code of conduct for the industry. However,

the levels of awareness and understanding of FinTech amongst policymakers and regulators is still low (FSDU, 2018). To understand FinTech better and its implications, regulators should adopt techniques, such as the establishment of dedicated working groups and consultation platforms. For example, Kenya entered into agreements with other countries engaging in International cooperation and coordination in the FinTech sector (Didenko, 2018). South Africa developed the IFWG comprising of members from SABR, the National Treasury, and the SARS to enhance their understanding of the FinTech industry and its implications on the financial sector (David et al, 2021).

In Uganda, over the last 2 years, in a bid to increase government revenue, the government of Uganda has instituted new taxes as they relate to the telecommunication companies and mobile money transactions and services. Ndung'u (2019b) argues that increasing mobile phone transactions (mobile money, airtime, and internet) taxes in Kenya did not raise a significant amount of new tax revenue. Mobile money transactions tax disproportionately affects lower-income residents who revert to cash transactions, which could lead to lower financial inclusion. Similar studies by GSMA (2020) and Ahmad (2020) draw similar conclusions for several countries in Sub Saharan Africa.

4.3. Implications of legal and regulatory frameworks on innovations.

A rigid legal and regulatory environment can impede innovation and constrain the speed of financial inclusion. Kenya and South Africa demonstrate that progress in financial inclusion such as successful adoption and adaptation of innovations requires sound regulatory reforms. Kenya's regulators encouraged adaptation and innovations, thus creating a favorable environment for new products and enhancing their credibility (Ndung'u, 2019a). For example, M-Pesa spurred numerous innovations such as input loans to smallholder farmers under the One Acre Fund, investment in government securities using mobile transactions under M-Akiba, M-Kopa Solar enabling low-income earners to acquire solar energy solutions while paying in daily installments and M-Tiba, a

mobile phone-based health wallet where a user pays healthcare (Ndung'u, 2021).

On the other hand, Uganda's regulatory guidelines could deter the rapid entry of new, smaller, and disruptive mobile network operators (MNOs) and non-MNO to provide mobile money and other financial services. For instance, the minimum capital requirements for FinTech startups are very high and prohibitive (Kayondo et al, 2020). This will slow down the progress in increasing competition and innovation, which would boost the quality of services. Worse still, the unfair taxation of mobile money and internet services will erode gains in innovation and cripple access to financial services and efforts for deeper financial inclusion. The Government of Uganda has imposed a 12 percent excise duty on internet data, this comes at a time when the negative effects of COVID-19 have forced banks to shift their activities to digital channels, which offer various options of innovations to a highly regulated and traditional sector (Oketch, 2021).

5. Conclusion and Policy Recommendations

The study examined the nature of Uganda's legal and regulatory framework and found that the rigidity of Uganda's legal and regulatory framework stems from the stringent rules applied by the regulators and the lack of proper understanding of the FinTech ecosystem and their implications on the financial sector. Unfortunately, Uganda continues to lag

Kenya and South Africa in innovation, which is worrisome in today's environment, in which the COVID-19 pandemic has highlighted the need for enhancing innovations to counter the adverse effects of the crisis.

The study recommends the following:

- Rules and regulations should be more flexible and evolve to permit adjustment or revision to facilitate the ever-evolving financial sector innovations. The regulations should follow innovations and support financial inclusion while mitigating financial risks. For instance, the minimum capital requirements should be either reduced or adjusted to reflect the balance between the current and the potential size and profitability of the FinTech sector in Uganda.
- Regulators should engage in International cooperation and coordination agreements in the FinTech sector, similar to Kenya and more so, set up dedicated working groups and consultation platforms specifically for FinTech like the case of the IFWG in South Africa. This will enable regulators and policymakers understand the ever evolving innovations in the FinTech ecosystem and their implications on the financial sector and economy.
- Lastly, adjustments in the tax regime on internet data are required to further innovations in the financial services sector that support deepening of financial inclusion especially during the COVID-19 pandemic era where banks are shifting to digital banking services.

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Evolution of Fintech Solutions as a tool of Financial Inclusion in Developing Countries

THE PAST, THE PRESENT AND THE FUTURE - A CASE OF UGANDA

By Agnes Noelin Nassuna, Waswa Balunywa, Soren Jeppesen



1.0 Motivation for the Paper

The 4th industrial revolution stimulated the growth of fintechs worldwide (Brown, 2020). This revolution focuses on the use of artificial intelligence, robotics, 3D printing and the internet of things (IoT) closing boundaries between physical, digital, and biological worlds (Morsy, 2020).

Fintechs are financial technological electronically based innovative services and products that support payments, clearing and settlements, deposits, lending, and capital raising, investment management and services, data management, insurance, and market support (Financial stability Board, 2017; Bank of Uganda, 2019). The emergence of fintechs has affected and enabled countries globally including the operations of the financial sector.

Generally, the use of fintechs services can be traced way back to the 2nd industrial revolution (1870-1914) when the use of telephones emerged amidst other key developments in manufacturing, transportation, and

electrification (Arner et al, 2021). However, the growth of the fintech industry started taking shape during the 4th industrial revolution around 2014 when fintechs attracted the attention of regulators, investors and consumers while bringing nontraditional financial services providers on board. These products have stimulated growth of the financial sector despite the volatile and changing environment including threats and adversities like COVID-19, financial crises, and rapid changes in technology.

Fintechs are important as they increase access to financial services thus stimulating financial inclusion. This is because they help extend financial services to people who would have been otherwise excluded by the traditional financial services providers. Several advantages of fintechs have been reported. They are cheaper, universal, customer centric, convenient, secure, complements data management and are more efficient (Riemer et al, 2017; Eickhoff et al, 2017).

Despite their importance there is scanty empirical data on fintechs in Africa generally and Uganda in particular. There is need

therefore for empirical data on the fintechs if they are to be used as a tool of financial inclusion to stimulate economic growth and development. Increased economic growth is critical because Uganda is still among the poorest countries in the world with a GDP of USD 37.7 estimated to grow to USD 1,100 by 2025 (International Monetary Fund, 2020; World Bank, 2020, Global Finance, 2020). According to World Economic outlook reports of IMF (2021), Uganda is the 17th poorest country out of 195 countries in the world.

To get out of this economic position and reduce poverty, various interventions need to be pursued that can stimulate economic growth and development – stimulation of the financial sector through financial inclusion is critical; and fintech products and services will enable the same.

The purpose of this paper, therefore, is to examine and provide data on the past, the present and the future of the fintech sector in a developing economy like Uganda given their economic challenges including large informal sector, unemployment, non-commercialized agriculture which are today's realities.

According to the National Financial Inclusion Strategy 2017 – 2022, Empirical research suggests that access to formal financial services by the population can contribute to inclusive economic growth.

Consequently, the promotion of financial inclusion, which refers to the process of ensuring access to timely, affordable, and adequate financial services to all citizens in the economy, has become a goal of public policy in developing countries.

The use of evolving technology will help pave way for the future growth of the overall financial sector in such economies. This paper also seeks to highlight insights and policy implications that can be used by governments and other key stakeholders to use fintechs improve their financial sector and stimulate economic growth.

2.0 Methodological Approach

In order to synthesize the past, present and future of fintechs in Uganda and know their state of the art, the researchers adopted an integrative literature review research method using a qualitative approach. Articles reviewed included those on fintechs worldwide and Uganda in particular. This was done to enable researchers appreciate the general developed of fintechs and how Uganda might learn from the global experience. Articles were sought from Journals, reports, reviews and working papers with the help from google scholar and google search. The data was analyzed using a literature review framework and matrix analysis.

3.0 Findings and their Discussion

The key issues revealed by the reviewed articles were as follows: -

3.1 The Past - The History of Fintechs

Fintechs have globally been evolving and transforming from fintech 1 to fintech 3.5 that emerged as the world went through the various industrial revolutions. Fintech 1 started with financial globalization in the 2nd industrial revolution that involved the development of the electricity and the telephone. During the 3rd industrial revolution from around 1967 to 2008, there was the transition from analog systems to digital systems which led to digitization of financial services and with it came the birth of systems like the Automatic Teller Machines (ATM), the internet and thus internet banking, with Bloomberg a major provider of financial data, news, mobile phones among others.

These developments were mainly in developed economies and limited in developing economies like Uganda. In their early development, fintechs were very limited and were provided by the mainstream or traditional financial services providers like commercial banks. Fintech

development in developing countries arose with the 4th industrial revolution around 2014. One notable difference during this time was the emergence and growth of the fintech industry with providers of financial services who are not the traditional conventional financial providers. New providers include telephone and communication companies like Airtel and MTN, peer to peer (P2P) financial systems like online lending platforms and crowd funding like KIVA etc.

3.2 THE PRESENT

To discern the current state of affairs in the fintech industry the researchers examined the nature of product and services, the role played by these products, the factors that have stimulated the growth of fintech services within the Ugandan context and the challenges faced in the industry. The findings were as follows: -

3.2.1 Nature of Fintech Products/Services

From the reviewed literature and documents, it was noted that a variety of financial technology products and services are now offered including electronic payments, clearing and settlements, deposits, lending, capital raising, investment management and services, insurance, and market support (Financial stability Board, 2017; Bank of Uganda, 2019).

There are many nontraditional players and providers of financial services out of the traditional banking sector offering various financial and banking products and services including mobile money. Presently over 30.9 million mobile money accounts have been registered in Uganda (Bank of Uganda, 2020) and the mobile money sector is one of the fastest growing sectors in the country. Other Services offers branchless banking, handling of e-merchant payments, bulk payment services,

development of financial and billing solutions for companies especially banks, telecom, and utility companies to provide electronic financial and billing solutions. Key players in this space include MTN Uganda, Airtel Uganda, YO-Uganda Limited, Pegasus Uganda Ltd, JUMO, Nepserve, OLY, Bowmans Interswitch, among others.

Literature further revealed that, internationally, fintechs providers are coming together to form associations to stimulate the growth of the industry and for advocacy for a conducive environment. For example, in the U.S.A there is the Association for Financial Technology (AFT) which offers networking and professional development for U.S. banks, credit unions, lenders and payment companies and their executives. In Africa there is association of the Africa Fintech Network (AFN) which is a platform that unites Africa fintech leaders, organizations, and stakeholders through their country associations to exchange information and ideas and promote and support the creation of innovative technologies and deployment across and beyond Africa.

In Uganda, there is the Financial Technology Service Providers' Association (FITSPA), an association of financial technology services providers which brings together Uganda's local fintech community and global fintech institutions operating in the country. Its mission is to help create a conducive environment that stimulates innovation in Uganda's financial services sector. FITSPA has 51 members, 43 of which are direct providers of financial technology-based services and products. It is important to note that not all fintech service providers are registered with FITSPA for example among the commercial banks, only Stanbic Bank Uganda Ltd and Standard Chartered Bank are its members and among the mobile services operators, only MTN is a registered member.

"Fintechs have globally been evolving and transforming from fintech 1 to fintech 3.5 that emerged as the world went through the various industrial revolutions. Fintech 1 started with financial globalization in the 2nd industrial revolution that involved the development of the electricity and the telephone"

3.2.2 Role and Contribution of Fintechs in Uganda.

According to Bank of Uganda and IDC reports of 2019, fintechs play a very important role in achieving the national development goals of Uganda as stipulated in NDP III. Some of their specific advantages include: -

They increase financial inclusion where more people have access to financial services through fintechs especially the use of mobile technology and agent banking. According to National Information Technology Authority Uganda (2018) and Statistica (2020) over 23 million Ugandans own mobile phones which is over 70% of the adult population indicating an increase in the number which stimulates use of mobile money services and other such related services with over 12.1 million using internet related services while Internet penetration in Uganda stood at 26.2% in January 2021. This has helped further access to financial services across the country, including in places where financial institutions are not physically located to provide such services. Sending of money upcountry was simplified, eased, and increased through the mobile money technology.

In addition, fintechs have enabled the reduction of information asymmetry with the use of biometrics which are physical or behavioral human characteristics that can be used to digitally identify a person or grant access to system devices or data for example fingerprints, voice, facial patterns etc.

Fintechs have also improved service delivery and offering of timely services by conventional financial providers using automatic teller machines, branchless services, internet services as well as conventional banking digital banking services. Banks have also been able

to connect to technology driven payment infrastructure which has reduced the need for cheques and more of the use of digital payment systems including EFTs and RTGS. Through collaborations with fintechs, financial services have become more accessible and affordable (Juengerkes, 2016). The insurance and investment management industries are also taking advantage of the fintechs services, and this has increased the access to insurance services and efficiency in payments.

3.2.3 Factors Driving the Growth of the Fintech Services

The reviewed literature also highlights five major notable factors that are driving the fintech sector in the country including:

- a) Availability and stimulation of the internet and mobile technology and other underlying technologies like DLTs, biometrics and computer processing and data capacity. These are stimulated by mobile money and internet technology, distributed ledger technologies (DLTs) that facilitate peer to peer networking and electronic transfer of digital assets, artificial intelligence, cryptography, and biometrics technology.
- b) Regulation is another important factor that drives the growth of the fintech sector in Uganda. Until very recently there was no clear law governing the use of fintech products and services which was limiting and stifling the sector. The National Payments Act (NPA, 2020) was passed and now acts as a regulatory guide for the fintech sector in Uganda.
- c) Additionally, the fintech sector worldwide has been stimulated by the changing consumer preferences and demand for convenience, speed, and lower costs of financial services

(Pollari, 2016). In Uganda it was found out that more people are accessing financial services from mobile money services than from the banks (Bank of Uganda, 2020).

d) Further to the above, the shortcomings of the conventional financial institutions for example formal commercial banks and micro finance institutions have also stimulated the growth of fintech services. Among the notable shortcomings are the long turnaround times, rigidities, due process, and compliance requirements, too much paperwork, long time in processing loans, limited branches in rural areas and transport costs necessary to reach to them by the clients, among others. It is imperative to note that many of these conventional financial services providers are now collaborating with other key stakeholders like the mobile technology providers to improve their services and have also adopted agent banking.

e) One key factor that is not mentioned in the current literature on fintechs that has driven their growth is COVID-19 which came with various disruptions including economic lockdowns, limited movements, limited physical interactions and social distancing. As a result, the clients and users of financial services adopted the use of technology-based services like mobile money, internet banking and mobile banking, stimulating their growth not only in Uganda but worldwide.

Whereas a lot is mentioned in these reports about how fintechs have improved access to financial services thus stimulating financial inclusion and stimulating the growth of the fintech sector not much is mentioned on the extent to which these are being used for business performance and stimulating growth of growth of businesses, MSMEs and the economy as a whole.

3.2.4 Challenges in the Fintech Industry

Despite the growth of the fintech industry worldwide and its contribution as an innovation in the financial sector that has changed systems, processes, and behaviors, they are various challenges that come with this innovation especially in the African context that we must

address if we are to benefit holistically from it. The realities of Africa in general and Uganda in particular must be considered carefully as we adopt to this new normal in the financial sector. These realities include but are not limited to: -

a) The unskilled population and workforce - Fintechs is an emerging technology that requires the necessary skills if it is to be utilized efficiently. Many of the current and potential customers lack the necessary financial skills to fully utilize the available services. Additionally, many of the other players including some providers and their employees do not fully understand the fintech products. There is therefore need to skill all the key stakeholders including the customers in digital finance and equip them with the required skills if the industry is to succeed and flourish.

b) The infrastructure - Proper functioning of the fintech industry requires that the country has the essential infrastructure to enable proper functioning of these products. Key infrastructure requirements include electrification of the whole country including upgrading the technology and move on to the 4G bandwidth. The challenges here include the unstable and costly electricity, expensive data and recently government suggested a tax on data which is counterproductive and may stifle the growth of the sector.

c) Rural urban divide and gender challenges - Another important challenge to note here is the rural/urban divide and the gender challenges where less women especially those in the rural areas own mobile phones. Many rural areas in Uganda have no electricity at all, even in the urban areas, the electricity is intermittent. To make matters worse electricity in Uganda is expensive and some households especially in the rural areas cannot afford it. Such challenges lead to the digital divide where some people will be eliminated from accessing fintech products and services especially those living and doing business in rural areas. This may call for boosting alternative sources of energy like solar and biogas to pave way for the growth and smooth running of the fintech industry.

d) Cost of the internet in Uganda - The internet is still very expensive in Uganda - many



people cannot afford it. This is worsened by the introduction of the 12% tax on data in the budget for the financial year 2021/22, which makes the usage of the internet more expensive and in many cases inaccessible. Further, the internet in Uganda is unstable which makes the online services intermittent and fail. Early in 2021 during the presidential elections, the government switched off the internet completely and billions of shillings were lost due to this action. In some developed countries, there is free WIFI to enable and increase access to internet-based services, which is a key action that can be furthered by the government of Uganda.

e) Slow growth of the banked population and mobile money users - Whereas there is high growth in the possession of mobile phones and their usage, with the sector growing at a rate of 10% this has not been matched with the growth in the possession of bank accounts which would enable the linking of bank services to the mobile technology and stimulate services like internet banking. Additionally, it has been reported by Bank of Uganda (2020), that 45% of the 30.7 million subscribers that were recorded for the period ended December 2020, about 10.9 million mobile money accounts were inactive.

3.2.5 Regulation

Regulation is another challenge faced by the fintech industry worldwide amidst the ever-increasing innovations therefrom. Many countries have come up with various laws and regulations to facilitate the fintech industry for example the US has the JOBS Act (Jump-start Our Business Startup Act, 2012), the EU has the PSD (Payment System Directive, 2008) and the UK has the Small Business Enterprise and Employment Bill.

In Uganda we have the National Payment System's Act, 2020 (NPS Act 2020). This act is aimed at providing for the safety and efficiency of payment systems, the functions of the central bank in relation to payments system and prescribing the rules governing the overseeing and protection of payment systems, among others. The challenge of these emerging regulations is many of them treat fintechs as omnibus services that need one set of laws to regulate them, however there is a diversity of products that may not be effectively monitored as one for example we have the mobile money services vs crowdfunding/sourcing then we have data management services. All these may require different sets of regulations and guidance. However, the challenge with the act is that it is a one size fit for all and yet different

fintech solutions or services require tailored regulation for example the rules and regulations that govern mobile money cannot be the same regulations for crowdfunding or peer to peer lending platforms.

3.2.6 A Cash Based Economy

According to the Financial Sector Deepening Uganda report (2019), Uganda is mainly a cash-based economy where over 75% of the retail transactions are cash based limiting the number of transactions that are electronically undertaken.

This is very costly to the economy because cash transactions take a longer time, are unsecure, expensive and most times untraceable - This in turn ultimately limits the usage of fintech products and services.

Whereas efforts have been made to digitize government to government transactions and person to person transactions are also rising because of the mobile money services; digitization of business to person and business to business transactions are still low.

This can be attributed to the large informal sector and an economy which is more agriculture based.

Having highlighted the past and the present of fintechs in Uganda, here below is the envisioned future and the policy implications that can assist the country surmount the challenges and achieve the desired future.

3.3 The Future: - Recommendations and policy implications

Fintechs in developing economies and in Uganda particularly, offer a lot of potential to drive and reshape the financial sector to be more inclusive and more robust.

There is therefore a need to build an economy where most financial transactions are electronically based while addressing the economy challenges of a large informal sector, a high rate of unemployment, a large reliance on agriculture which is still highly subsistence, food insecurity, COVID-19 challenges, and limitations, amongst others. This calls for the following interventions from government working closely with other key stakeholders in the financial system ecosystem to further enable the transition to and use of the digital financial and other services and the education and awareness to enable the same.

There is need for a policy on training and skilling of Ugandans in digital finance. Digital finance literacy programs should therefore be developed to educate the masses on what fintech services are there on the Ugandan market, how they can use their mobile phones more as financial gadgets beyond sending and receiving money, the benefits they would reap and how to handle the arising challenges like security and risks therein.

This should be coupled with facilitating an enabling environment that supports the usage of fintechs like rural electrifications country wide, offering of free internet data and WIFI,



improving connectivity and continuously innovating more affordable and accessible products and services. Government should consider removing the taxation on the data which was introduced in the financial year 2021/22 to make data cheaper and affordable and offer free internet services working in collaboration with key stakeholders in the economy.

There is need to encourage doing business online and putting incentives that will further enable and foster the use thereof e.g., Uber Taxi and Safe Boda in the transport industry. Other sectors should also be encouraged and enabled to adopt e-business and e-payment systems – with examples that have enabled inclusion as a low cost regionally and abroad. This will reduce the usage of cash in the economy and increase the need for fintech products and services.

Government should also aim at reducing of the informal sector and commercialization of agriculture, with the use and support of technology in the agriculture value chain. Policies should aim at assisting MSMEs grow amidst the escalating effects of COVID-19, where they can have access to financial and advisory services from the government and the financial sector stakeholders. They should also be encouraged to partner with large enterprises as they digitize their services.

4.0 Conclusion

From the synthesis of existant literature we can see that there is still need for more scholarly and scientific based studies on fintech services and products in the context of Uganda. This will

create an information and knowledge base that can reliably be used for major decisions in using fintechs as a tool of financial inclusion and a stimulator of economic growth.

Whereas the current literature has focused on the providers of fintechs, more studies should be carried to gain more understanding and insight of how and the extent to which businesses and entrepreneurs are benefiting from such services.

The challenges are still prevalent, and these will stifle the efforts and strides that have been achieved so far.

Regulation needs to be continuously reviewed and improved - the current act may not solve all the challenges of the fintech sector as its an omnibus and therefore a series of tailored regulations need to be developed for example a law of crypto currencies, crowdfunding, among others.

The other issue that arises is the issue of whether there is need for only one association of these providers since they may be diverse and need different kind of advocacy for example providers of mobile money may not necessarily face the same challenges as the peer-to-peer lending platforms.

It is hoped that if such issues are addressed the future for fintech services and products will be brighter and the way forward for the financial sector may be clearer despite the escalating environmental challenges like COVID 19.

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5.0 Authors' Brief Biography

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Payment Aspects of Financial Inclusion in the Fintech era

PAFI REPORT



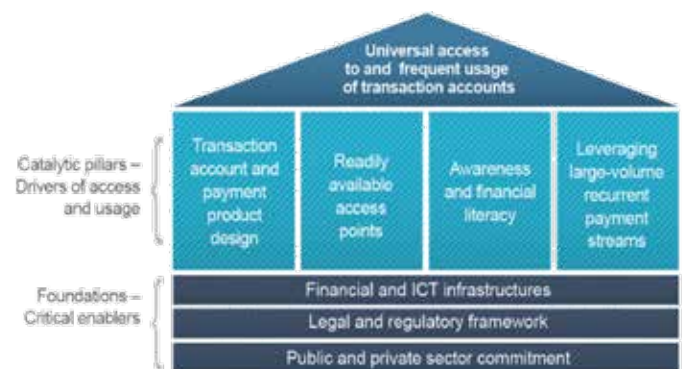
CPMI-WB Report "Payment aspects of financial inclusion", April 2016 - seven Guiding Principles (GPs)

- GP 1: Public and private sector commitment: Commitment from public and private sector organisations to broaden financial inclusion is explicit, strong and sustained over time.
- GP 2: Legal and regulatory framework: The legal and regulatory framework underpins financial inclusion by effectively addressing all relevant risks and by protecting consumers, while at the same time fostering innovation and competition.
- GP 3: Financial and ICT infrastructures: Robust, safe, efficient and widely reachable financial and ICT infrastructures are effective for the provision of transaction accounts services, and also support the provision of broader financial services.
- GP 4: Transaction account and payment product design: The transaction account and payment product offerings effectively meet a broad range of transaction needs of the target population, at little or no cost.
- GP 5: Readily available access points: The usefulness of transaction accounts is augmented with a broad network of access points that also achieves wide geographical coverage, and by offering a variety of interoperable access channels.
- GP 6: Awareness and financial literacy: Individuals gain knowledge, through awareness and financial literacy efforts, of the benefits of adopting transaction accounts, how to use those accounts effectively for payment and store-of-value purposes, and how to access other financial services. Adopt new licensing frameworks to enable entry of new players and

new business models;

- GP 7: Large-volume, recurrent payment streams: Large-volume and recurrent payment streams, including remittances, are leveraged to advance financial inclusion objectives, namely by increasing the number of transaction accounts and stimulating the frequent usage of these accounts.

The PAFI House – remains relevant in the Fintech era



Seven Guiding Principles; with key actions for consideration (for all stakeholders)

- Non-bank access to payment infrastructures
- Data frameworks need to ensure privacy in the fintech era
- Applicability of current oversight concepts and standards
- Effective protection of end user funds
- RegTech and SupTech
- Raising the bar for the cyber resilience of PSPs and financial infrastructures
- Mitigate exclusion risks



The PAFI House – remains relevant in the Fintech era

Financial inclusion starts with payments. They serve as a gateway to other financial services, such as savings, credit and insurance. Transaction accounts operated by a regulated payment service provider are at the heart of retail payment services. To improve financial inclusion, these transaction accounts need to enable end users to meet most, if not all, of their payment needs and to safely store some value. On these key premises, the Committee on Payments and Market Infrastructures and the World Bank in 2016 issued guidance on payment aspects of financial inclusion (PAFI) (CPMI-World Bank (2016)), as laid out in the first section of this report. The 2016 PAFI report outlines seven guiding principles for public and private sector stakeholders and contains possible key actions for countries that wish to put these guiding principles into practice. Since then, the PAFI framework has been adopted as the analytical underpinning for designing and implementing country-level actions and global efforts to improve access to and usage of safe transaction accounts.

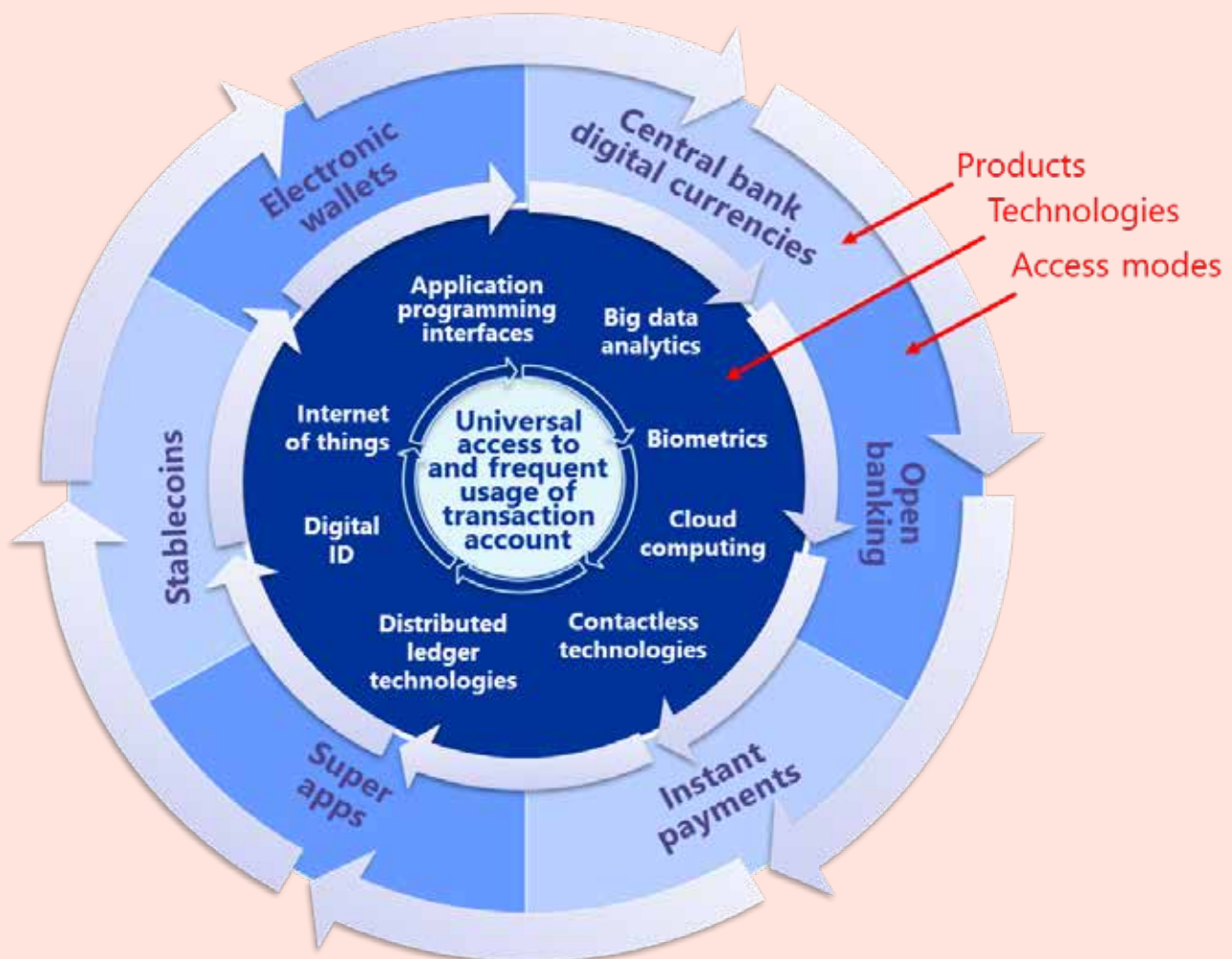
“Transaction accounts operated by a regulated payment service provider are at the heart of retail payment services”

The PAFI report envisages that all individuals and businesses have access to and use at least one transaction account operated by a regulated payment service provider (i) to perform most, if not all, of their payment needs; (ii) to safely store some value; and (iii) to

serve as a gateway to other financial services. However, several barriers affect transaction account access and usage. To address those barriers, the PAFI report outlines a framework (the “PAFI house”, Figure 1) comprising foundations, i.e. the critical enablers for payment systems and the provision of payment services, and catalytic pillars, i.e. the drivers of access and usage. Both foundations and pillars contribute to the end objective of achieving universal access to and usage of transaction accounts. The PAFI report analyses each component of this framework and provides suggestions in the form of guiding principles and key actions for consideration.

The PAFI report acknowledges the role of innovation (e.g. electronic money, especially mobile money) in facilitating access to and usage of transaction accounts. It also emphasizes the importance of enhancing existing infrastructures and adopting new delivery models to broaden the reach of traditional payment instruments and products. The report provides guidance on designing a legal and regulatory framework that fosters innovation without compromising the safety and integrity of the financial system. At the same time, the PAFI report maintains a neutral stance towards the technology used, thereby ensuring broad applicability of the PAFI guidance. This stance remains valid today, the era of fintech. Nevertheless, the increasing momentum gained by fintech developments may alter the payments landscape along with the prospects for financial inclusion.

PAFI in the fintech era – the PAFI Wheel



- Reviews fintech developments with a focus on payments;
- Analyses how they can help remove the obstacles to universal access to and frequent usage of transaction accounts, including by providing examples of concrete initiatives; and
- Provides additional guidance focused on fintech under the PAFI guiding principles.

CPMI-WB "Payment aspects of financial inclusion in the fintech era", April 2020

This report provides additional guidance on recent fintech developments that have relevant implications for PAFI's underlying objectives.

This report defines fintech as advances in technology that have the potential to transform the provision of financial services, spurring the development of new business models, applications, processes and products (IMF-

World Bank (2018)). Fintech activities can be observed in different types of financial services, such as deposits, lending and capital raising, insurance, investment management, and payments, clearing and settlement (FSB (2017)).

The scope of the present report is limited to fintech in the context of payments, clearing and settlement, to the extent that they can be leveraged to increase access to and usage of transaction accounts, ultimately improving financial inclusion.

This report (i) reviews fintech developments with a focus on payments; (ii) analyses how they can help remove the obstacles to universal access to and frequent usage of transaction accounts, including by providing examples of concrete initiatives; and (iii) provides additional guidance focused on fintech under the PAFI guiding principles.

How does fintech impact PAFI objectives



Transaction account and payment product design; Instant payments; request to pay; alternate acceptance modes; digital IDS simplified CDD; open banking



Readily available access points; challenges for agent remuneration model; electronic wallets in combination with contactless technologies QR codes can expand the number of acceptance points at low cost



Awareness and financial literacy: raising awareness to cover all segments; use of big data;



Leveraging large-volume recurrent payment streams; cross-border remittances; government social benefit transfers;

Getting funds to those in need and enabling access How will COVID-19 reshape our digital payments agenda



Simplified Customer Due Diligence



Simplified Payment and Acceptance Platforms



Remote Onboarding



Support and Coordination Between Providers and Industry



Customer Protection and Education



Incentives to Providers and Users

The PAFI report identified four "catalytic pillars" as drivers of access to and usage of transaction accounts, namely: (i) transaction account and payment product design; (ii) readily available access points; (iii) awareness and financial literacy; and (iv) leveraging of large-volume recurrent payment streams.

This section aims to determine whether and how the fintech developments described in Section 2 can boost these drivers. For each of the drivers, this section provides examples of how new technologies – and the new products, services and access modes these technologies underpin – can help resolve outstanding challenges and barriers. Through these examples, it is possible to identify four broad groups of potential benefits of fintech: (i) efficiency gains for service providers and system operators; (ii) market contestability; (iii) user experience; and (iv) ubiquity.

The analysis also shows that fintech developments thus far are not suited to support all drivers equally. Fintech seemingly offers the most benefits for transaction account and payment product design and for readily available access points, whereas it currently plays a lesser role in the areas of awareness/financial literacy and large-volume recurrent payment streams. 56. It should be noted that fintech developments are by their very nature new and/or untested, and may present challenges that, if not properly identified and addressed, could undermine the PAFI objectives. The analysis shows that, for each identified benefit, there are some drawbacks. Potential risks resulting from fintech developments relate to: (i) safety, including cyber resilience; (iii) consumer protection and data privacy; (iii) market concentration; and (iv) digital exclusion. These risks highlight the importance of effective regulatory, oversight and supervision frameworks in the broader context of the PAFI foundations (Section 4).

Fintech seemingly offers the most benefits for transaction account and payment product design and for readily available access points, whereas it currently plays a lesser role in the areas of awareness/financial literacy and large-volume recurrent payment streams

Electronic wallets are payment arrangements that enable end users to securely access, manage and use a variety of payment instruments issued by one or more PSPs via an application (see also Section 2.3.3 on super apps) or a website. The electronic wallet may reside on a device owned by the holder, e.g. a smartphone or a personal computer, or may be remotely hosted on a server but is anyway under the control of the holder.

This is irrespective of the underlying payment instrument used. Electronic wallets can support traditional payment instruments such as card payments, electronic funds transfers and e-money.

Implications for stakeholders: authorities and industry

- Adopt new licensing frameworks to enable entry of new players and new business models: innovation and competition
- Non-bank access to payment infrastructures: cooperation and positive network externality;
- Data frameworks need to ensure privacy in the fintech era
- Enhancing the applicability of current oversight concepts and standards
- Effective protection of end user funds
- RegTech and SupTech
- Raising the bar for the cyber resilience of PSPs and financial infrastructures
- Mitigate financial exclusion risks

In Summary

-Uganda is on the cusp of ushering a digital payments revolution for its citizens;

-NPS Act gazetted: opportunity to accelerate development, testing and scaling of financial products and services from non-traditional actors and thereby increase access to non-traditional finance and expand channels of financial inclusion.

-Well-developed NPS architecture: UNISS; ACH; Card infrastructure; different payment instruments including mobile money; vibrant Fintech eco-system – agent management; payments integration and aggregation (utility, school fees etc.), payment gateway and

COVID-19 impact on remittance markets

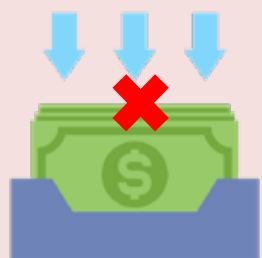
Immediate and Short Term Impact



Operational Disruptions
Financial Resiliency of RSPs

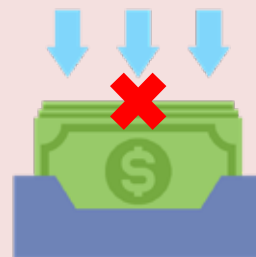


FX volatility



Reductions in income
leading to lower
remittances

Medium Term Impact



Continued and deeper reductions in
income leading to lower remittances



Returning migrants

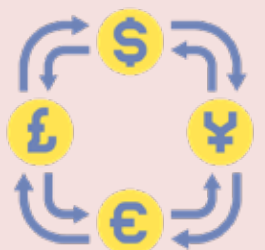
Call to action



Actively promote and enable
adoption of digital means



Treat remittance
services
as essential services



Provide support
to RSPs
to manage
financial risks

Embrace new models



Universal financial
access



AML and KYC

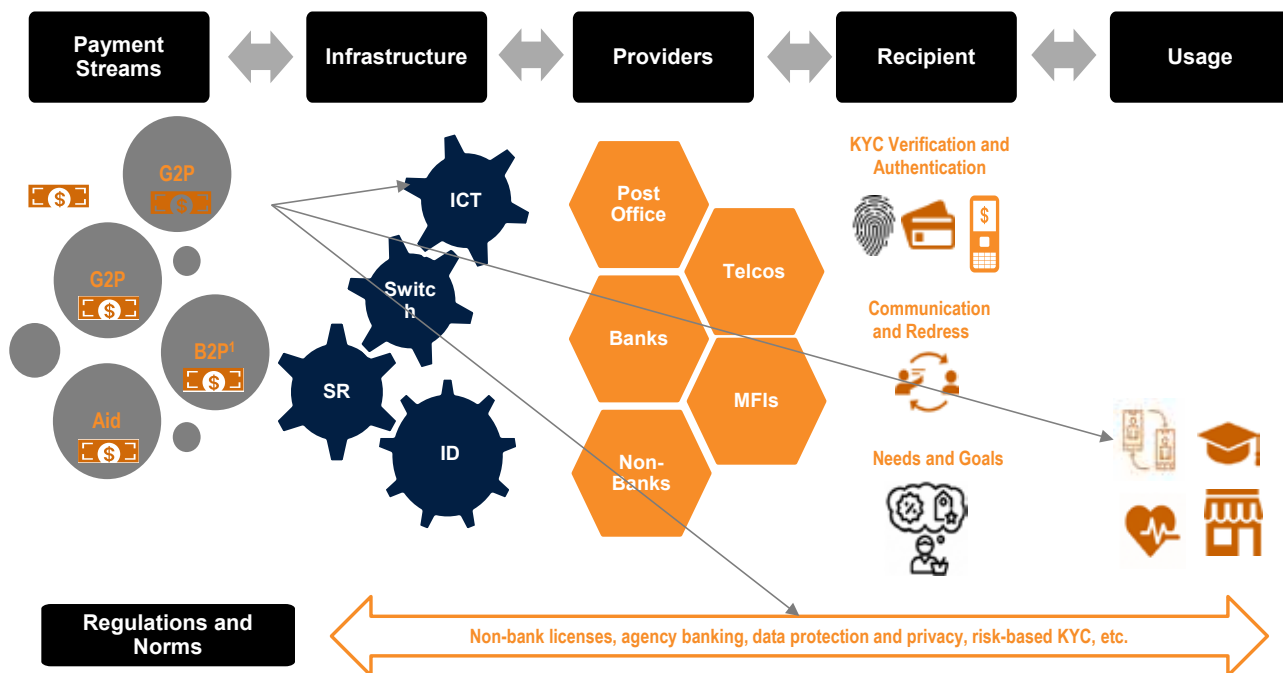


Enhance domestic retail
payment systems and
provide access to RSPs



Platform to build
scale

Accelerate shift to unified G2P architecture



aggregators; e-commerce platform with digital wallets; bike-riding service with digital wallet; NFC enabled POS terminals; EMV based QR code solution etc.

-Harness the above developments:

comprehensive regulatory framework that promotes innovation, competition, encourages cooperation amongst PSPs (bank and non-bank); promotes interoperability through risk based transparent access to payments infrastructure; leverages large-volume payment streams; provides for easy to use, low-cost and affordable payment products and services to customers; adequate customer protection measures; mitigate cyber risk through enhanced cyber security measures; increase financial inclusion through adoption of digital id and e-KYC measures; adhere to AML and CFT measures.

-Frame a comprehensive NPS strategy:

covering the medium term embracing financial inclusion and fintech in consultation and cooperation with all stakeholders.

NPS Act: opportunity to accelerate development, testing and scaling of financial products and services from non-traditional actors and thereby increase access to non-traditional finance and expand channels of

financial inclusion.

The Act applies to operators of payment systems, payment service providers and issuers of payment instruments and applies to any system or technology that enables the electronic transfer of money including electronic payments and remittances, electronic funds transfers, mobile money operators, card-based payments, aggregators, payment gateways, online payment service providers and electronic payments.

The Act grants the Bank of Uganda (NOU) the legal mandate to operate, supervise, regulate and oversee the various payments systems in Uganda; license payment system providers and e-money issuers; conduct on-site and off-site examinations, take enforcement actions, make regulations on liquidity, fair competition, customer diligence, anti-money laundering and transaction limits, etc. to ensure safety and efficiency.

The Act provides for a regulatory sandbox framework

How PostBank is Leveraging 4th Industrial Revolution Technologies to Provide Financial Solutions to Customers.



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Change is inevitable and with the gradual adoption of new technologies, customer needs and preferences are bound to evolve. Therefore, the financial sector's silver lining in this 4th industrial revolution is the chance to explore and experiment with technologies that could lead to safer, more convenient and inclusive banking solutions.

PostBank has made deliberate efforts in setting a solid foundation for greater things in the near future and that includes leading PostBank to becoming a tier 1 commercial bank. To achieve this, the aggressive integration of digital technologies and formidable partnerships to promptly serve customers come in handy. With the upgraded Internet Banking, businesses can conveniently make EFTs, manage their accounts and perform online transactions from their homes, offices or even on the move.

The bank is modernising and upgrading system to Finnacle 10, to meet evolving customer needs. In 2021, PostBank installed 24 (twenty-four) new and smart recycler ATMs that take deposits and credit customer accounts in real-time. By end of year, more recyclers will be installed to standardize the customer experience to bring the total of the new PostBank ATMs to 57. Card holders are able to use both Interswitch and UnionPay International enabled terminals across the globe.

PostBank has also maximized agency banking through its PostAgent platform, enabling customers easily perform transactions within their neighbourhoods. The bank has more than 400 PostAgents and several others on the ABC banking platform, providing readily available banking services which means that customers do not need to go to banking halls.

Exactly one year ago, over 90% of our customers relied on over-the-counter transactions, but that has been reduced to 40% meaning that over 60% are now reliant on digital banking channels.

The bank has also rolled out a multi-lingual contact centre, that can support customers remotely, 6 days a week in 5 languages.

Furthermore, the bank employs a mix of digital and brick and mortar investments to expand outreach and access to financial services especially by the underbanked population. PostBank has a fleet of 14 mobile vans that have been instrumental in serving the rural communities through initiatives like; SAGE (Social Assistance Grants for Empowerment) and Refugee payments with donors that continue to support the refugee communities.

According to a Uganda Communications Commission Q4 Market Report, in the Quarter ending December 2020, the total active mobile money accounts stood at 22.5 million up from 20.9 million in the first quarter. The number of active mobile agents had grown to 235,790 from 227,736 in September. This is indicative of the growth in number of Ugandans using feature or smart phones to access financial services.

It is against this background that PostBank has leveraged partnerships with telcos to provide a service that allows customers conduct B2W and W2B transactions, further simplifying and addressing financial needs of customers.

The telco-bank partnership which further calls for integration of mobile payment solutions is also playing a significant role in easing access to finances. For example, the seamless disbursement of COVID-19 Relief funds to vulnerable Ugandans with support from

Airtel and MTN, is an indicator of the pool of digital resources that PostBank is working with to enhance financial service provision as the rise of cashless transactions continues to unfold.

As part of the bank's intent to forge relationships that benefit its customers, PostBank also forged a partnership with Wazalendo (SACCO group) to provide customized ATM cards that directly meet their banking needs.

With our over 1M customer base, PostBank remains dedicated to taking on a dynamic approach that will continuously satisfy our customers changing needs and preferences since our esteemed customer remains at the core of what we do daily.

About PostBank Uganda.

PostBank Uganda (PBU) is a public company limited by shares and formed under the Public Enterprises Reform and Divestiture Statute of 1983 and the Uganda Communications Act, 1997. It was incorporated under the Companies Act in 1998 and is owned by the Government of Uganda with 100% shareholding.

PostBank Uganda has since grown to boast of 49 branches countrywide, stretching from Yumbe to Kabale, from Kotido to Masaka, and over 400 Post Agents.

It has branches, ATMs, mobile vans, and contact centers in *Amolatar, Anaka, Arua, Bombo, Bugolobi, Bukedea, Bweyale, City Branch, Entebbe, Fort Portal, Forest Mall, Gulu Hoima, Iganga, Jinja, Kabale, Bishop Stuart, Kakiri, Kampala Rd, Kamwenge, Kanungu, Kapchorwa, Kasese, Kayunga, Kitgum, Kotido, Kyazanga, Lacor, Lira, Makerere, Masaka, Masindi, Mbale, Mbarara, Moroto, Mubende, Mukono, Nakasongola, Ndeeba, Ntungamo, Pakwach, Soroti, Usafi, Wandegaya, Wiliam Street, Yumbe, Kagadi, Butogota, Kamdin, Rushere, Ishaka, Kihhi and Manafwa.*

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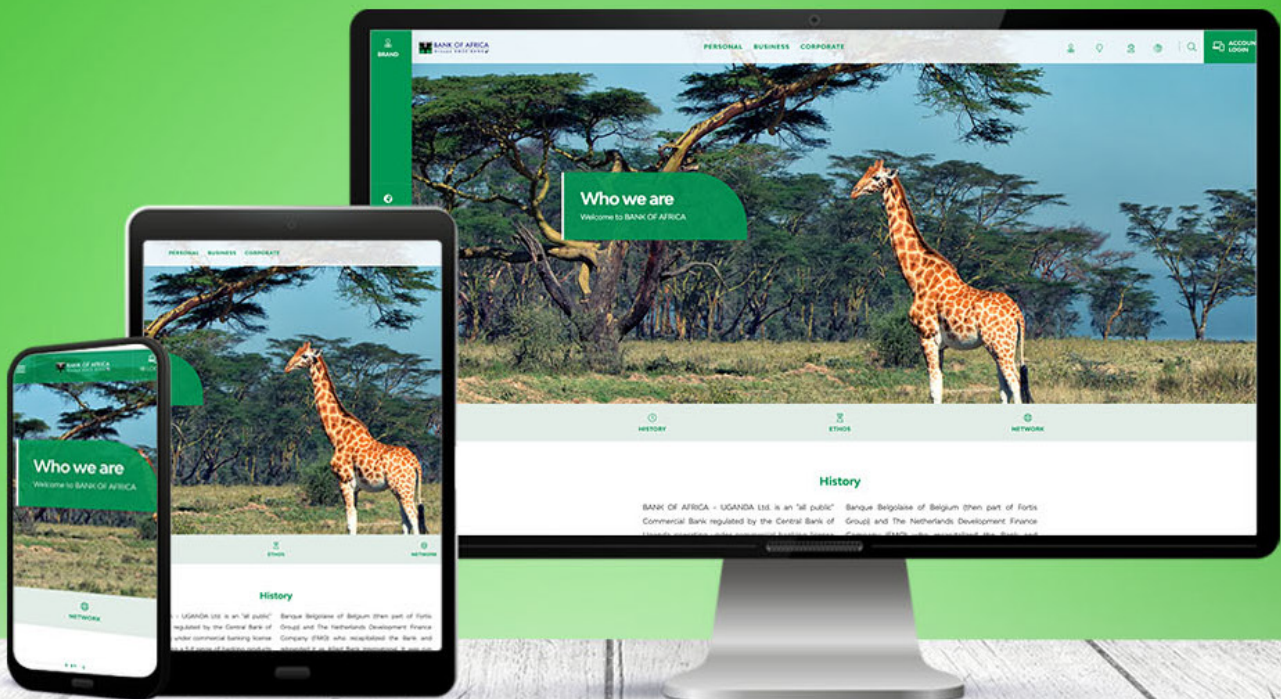
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Legal and Regulatory Considerations for E-Money Issuers Under the Ugandan National Payment Systems Framework : Lessons from Kenya and South Africa

By Silver Kayondo

Introduction

Uganda enacted the National Payment Systems Act, 2020 (the NPS Act), which among other objectives, seeks to

regulate the payment systems; provide for safety and efficiency of payment systems; provide for the functions of the central bank in relation to payment systems; regulate issuance of electronic money and other related matters.

Sections 48 and 49 of the NPS Act mandate payment service providers who are not entities solely established to issue electronic money (e-money), financial institutions or microfinance deposit taking institutions to establish a subsidiary legal entity if they intend to issue e-money. This means that entities such as telecoms must create independent subsidiaries for purposes of e-money business. The subsidiary entities must then apply to the central bank for a license to issue e-money and obtain regulatory approval from the central bank to open a trust account in a financial institution or a microfinance deposit taking institution to facilitate issuance of e-money and safeguarding customer funds. These accounts must be managed by independent trustees approved in writing by the central bank.

However, there is no bar to supervised financial institutions or microfinance deposit taking institutions establishing e-money and/or fintech subsidiaries as part of their strategy and business approach.

Financial Institution and Microfinance Deposit Taking E-money Issuers.

The NPS Act mandates payment service providers who are financial institutions or microfinance deposit taking institutions intending to issue electronic money (e-money) to open and maintain special accounts in their books of accounts after obtaining central bank approval.

Payment service providers (PSPs) are categorized as entities licensed to provide payment services such as enabling cash deposits and withdrawals, execution of payment transactions, issuance and acquisition of payment instruments, or any other service incidental to the transfer of funds.

A supervised financial institution (SFI) intending to issue e-money must obtain the central bank's approval to open and maintain a special

account to hold deposits from customers who purchase e-money and to facilitate the issuance of e-money.

Electronic money is defined as monetary value represented by a claim on the issuer. Such value must be;

- (a) stored on an electronic device;
- (b) issued upon receipt of funds in an amount not less than the value of the monetary value received,
- (c) accepted as a means of payment by undertakings other than the issuer; and
- (d) pre-paid or redeemable in cash.

It is noteworthy that according to section 52 of the NPS Act, the balances on the special account are protected from attachment, assignment, or transfer for the purposes of satisfying any debt or claim.

Duties of e-money issuers

The NPS Act imposes general duties on e-money issuers, whether they are supervised financial institutions or other entities (subsidiaries) operating in this business space. Section 53 of the Act provides that e-money issuers must undertake the following safeguards;

- (a) Mitigate concentration risk by placing the funds in different financial institutions or microfinance deposit taking institutions as may be prescribed by the central bank.
- (b) Ensure that any interest accrued on the special account is effected directly to the benefit of the customer or used for other purpose relevant to the payment system ecosystem as may be prescribed by the central bank.
- (c) Not commingle special account funds with any other funds;
- (d) Publish audited financial statements;
- (e) Submit a report on the operations of the special account monthly or such other interval as the central bank may prescribe.
- (f) Honour cash withdrawals or fund transfers from the special account on demand.
- (g) Monitor e-money creation to verify that the e-money created is backed up by funds deposited in the special account.
- (h) Reconcile the e-money value in the special account with the e-money issued.

Reporting obligations to the central bank

An e-money issuer must within ten working days from the last day of every month submit to the central bank information regarding the number and activities of registered and active agent locations; volumes and values of all platform activities including cash-in, cash-out, fund transfers and other payment services; volume and value of points of sale including interbank transactions where applicable; incidents of fraud, theft or robbery if any; number and type of service interruptions and significant security breaches; suspicious transactions reported; gender data of customers; and complaints received and remedial actions taken.

In addition to the above information, e-money issuers must submit sum total of outstanding e-money balances; interest earned on special accounts; volume and value of cross-border transactions; volume and values on interoperability; dormant accounts; and e-value held in the special account expressed as a percentage of the total e-value of the e-money issuer. The central bank may request for further information and/or particulars.

An e-money issuer must notify the central bank in writing within twenty-four hours in case of any suspected or confirmed fraud, security breach, material service interruption, loss of confidential data, and any other occurrence for which the central bank may request for information.

There are other real-time, daily, and weekly reporting obligations imposed on licensees. For instance, e-money issuers are required to submit a reconciliation statement between the e-money account and the special account to the central bank daily. E-money issuers are required to submit a report of the breakdown of the balances in the special accounts in liquid assets weekly. Licensees are required to keep one hundred per cent of the e-money held in a special account in unencumbered liquid assets (cash or treasury bills and bonds).

E-money issuers are further required to replicate in real time the data and records of the e-money account to the central bank as

directed. Failure to comply with these reporting provisions attracts a civil fine of Uganda Shillings **Four Million only (UGX 4,000,000/-)** per day of default.

Permissible transactions and dormancy

Section 54 of the NPS Act generally permits e-money to be used for domestic payments; domestic money transfers; bulk transactions including payments of salaries, benefits, and pensions; cash-in and cash-out transactions; merchants or utilities payments; cross-border payments or transfers; savings products or services; insurance products; or any other transaction approved by the central bank.

The dormancy rules are defined under section 57 of the NPS Act, which is to the effect that an e-money account that does not register a transaction for nine consecutive months must be considered as dormant. An e-money issuer must give the customer at least one month's notice at the eighth month specifying that the e-money account in question will be suspended unless there is a transaction on the account. After expiry of one month's notice to the customer, the e-money issuer must block the account until reactivated by the customer.

Furthermore, upon blocking the account, the e-money issuer must give notice to the customer that the account is blocked and provide instructions on the process of account reactivation within five working days. Where the account is not reactivated within six months, the e-money issuer must close it. Upon closure of the account, the trustee must transfer the balance on that account and identifying information to the central bank for further management.

Treatment of interest on funds held on special accounts.

The NPS Act and Regulations provide specific requirements on treatment of accrued interest from special accounts. Such interest shall not be subjected to any charges. The interest earned on the special account must be accrued on a daily basis and paid to the customer at the end of every quarter.

The trustees are also required to transfer to the central bank the interest accruing on a

dormant account at the end of every quarter. The central bank must transfer the monies from the dormant accounts to the consolidated fund within thirty days from the date of receipt of those funds.

An e-money issuer who fails to comply with these requirements is liable to pay a civil penalty of Uganda Shillings Four Million only (UGX. 4,000,000/-) to the central bank for each day of contravention. The central bank may also issue a cease-and-desist directive against the offending e-money issuer.

Comparative aspects from Kenya and South Africa

In terms of comparative analysis, Kenya and South Africa offer some interesting perspectives. These two case studies have been selected on the basis that Kenya is a regional peer, and South Africa has relatively longer experience in payments regulation, having enacted their National Payment System Act in 1998.

The Kenyan perspective

The Kenyan National Payment System Act, 2011 and National Payment Regulations, 2014 constitute the legal and regulatory framework for the payments system and payments service providers.

Specifically, e-money is defined as monetary value represented by a claim on its issuer, which is electronically or magnetically stored; issued against receipt of currency of Kenya or any other currency authorised by the Bank; and accepted as a means of payment by persons other than the issuer. This definition is in tandem with the Ugandan one and thus offers an adequate comparative framework on the subject.

However, the Kenyan model further recognizes electronic retail providers and small e-money issuers. Only entities that issue e-money on a limited scale qualify as small e-money issuers. They are not permitted to issue e-money accounts with an individual transaction limit that exceeds twenty thousand Kenyan shillings (KShs 20,000/-) and must not have total liabilities exceeding one hundred million shillings (KShs

100,000,000/-) with respect to issuing e-money.

Furthermore, there are trading restrictions on non-bank e-money issuers. For instance, e-money issuers that are not supervised financial institutions (non-SFIs) must not engage in any lending or investment activity other than that required under the Regulations.

By and large, the Ugandan NPS framework borrows a lot of comparative aspects from the Kenyan model. It is anticipated that the Ugandan regulatory practice and interpretation of the NPS Act, 2020 and Regulations thereunder will also be heavily influenced by the Kenyan regulatory approach, with slight deviation in terms of local nuance and context where circumstances are peculiar. Cross-border operators are advised to regularly appraise themselves on any circulars, regulatory guidance and public notices issued by the regulators to best anticipate any potential regulatory risks and adequately plan and implement the most appropriate mitigation measures.

The South African approach

The Central Bank of South Africa is the South African Reserve Bank (SARB), and it regulates the payment system industry under the National Payment System Act, 1998 (hereinafter called "the South African NPS Act). The SARB has mandated the Payment Association of South Africa (PASA) to oversee the participation of banks and non-bank players in the payment system. A payment system management body (PSMB) organises, manages, and regulates the participation of its members in the payment system. The South African NPS Act gives the SARB the authority to recognise a payment system management body. The Payments Association of South Africa (PASA) is the management body currently recognised by the SARB.

Just like under the Ugandan framework, non-bank payment entities are recognized as system operators. System operators can provide technology and technical infrastructure for payment transactions, but only South African-registered banks can issue cash and e-money. However, non-banks can enter into

arrangements/agreements with licensed banks so that they can offer payment-related services such as e-money.

In 2009, the SARB issued a position paper on e-money reaffirming that only South African registered banks may issue e-money it is considered as a supplement to physical notes and coins in the long term, from a SARB perspective. In terms of comparative analysis, similar obligations in terms of consumer protection, interoperability, information security and financial intelligence are imposed on South African e-money issuers just like it is in the case of Uganda and Kenya as highlighted above.

In a nutshell, the South African e-money framework is still bank-led. However, in 2016, an Intergovernmental FinTech Working Group (IFWG) was established comprising of officials from the SARB, the National Treasury, the Financial Sector Conduct Authority (FSCA), the Financial Intelligence Centre (FIC) and the South African Revenue Services (SARS) with the purpose of developing a common regulatory understanding among regulators and policymakers of financial technology developments and their implications for the financial sector and economy. In 2020, the IFWG launched an Innovation Hub to respond to changes in the financial sector driven by financial technology (fintech) and to promote responsible innovation in the sector.

Recommendations

Supervised financial institutions may opt to directly operate as e-money issuers by opening special accounts with the central bank's approval or establish subsidiary legal entities to operate as e-money issuers. Irrespective of the business strategy adopted, licensees must appraise themselves on the above legal and regulatory requirements pertaining to e-money issuers. Since the NPS is a new framework, we anticipate further regulatory guidance on key aspects such as daily and real-time reporting requirements by way of administrative circulars.

In terms of lessons from comparative systems, the South African framework has some innovative approaches that could strengthen the Ugandan regulatory framework. These

include;

(a) The Standing Committee for the Review of the National Payment System Act, which was established under section 15 of the South African NPS Act. This committee is a decision-making body responsible for recommending required/appropriate amendments to the Act. It comprises regulatory authorities and other relevant departments within the SARB as well as external regulators such as the Financial Sector Conduct Authority, the National Credit Regulator (NCR), the Financial Intelligence Centre and the National Treasury. Industry experts are co-opted in their personal/individual capacity to provide the committee with advice and a working group is responsible for providing technical, research and drafting support. This is aimed at keeping the NPS Act up-to-date and relevant to the times through periodic review and amendments.

(b) The Payments Council, which was established in April 2019 to replace the National Payment System Strategy Body acts as an advisory body to the SARB. It provides an inclusive and centralised forum for stakeholder engagement and collaboration on payment system-related strategy matters in the interest of financial stability and ensures that the interests of all stakeholders within the national payment system are considered in while developing and executing financial sector business and regulatory strategies.

(c) The Policy and Regulatory Forum was established in July 2019 by the National Payment System Department of the SARB to consult with the broader payments industry on policy and regulatory matters and developments.

Conclusion

In a nutshell, the Ugandan NPS framework supports several approaches and some of the above interventions can be benchmarked for effective regulation of e-money service providers and the national payments systems as a while. It is noteworthy that section 71 of the Ugandan NPS Act, 2020 creates an avenue for cooperation between regulators and government agencies whose functions

are relevant to payment systems. It is also further anticipated that the nascent payments legal and regulatory framework in Uganda will be influenced by cross-border/international developments in terms of both interpretation and enforcement given that Uganda is a member of the East African Payment System (EAPS).

Mr. Silver Kayondo is a fintech and e-commerce lawyer and regulatory advisor at Ortus Advocates, Kampala. He holds a Master of Laws from the University of Pretoria, South Africa.

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Bank of Uganda takes over regulation, control of Mobile Money & Airtel Money

By Logose Sarah Annet. Ideas House (U) Ltd



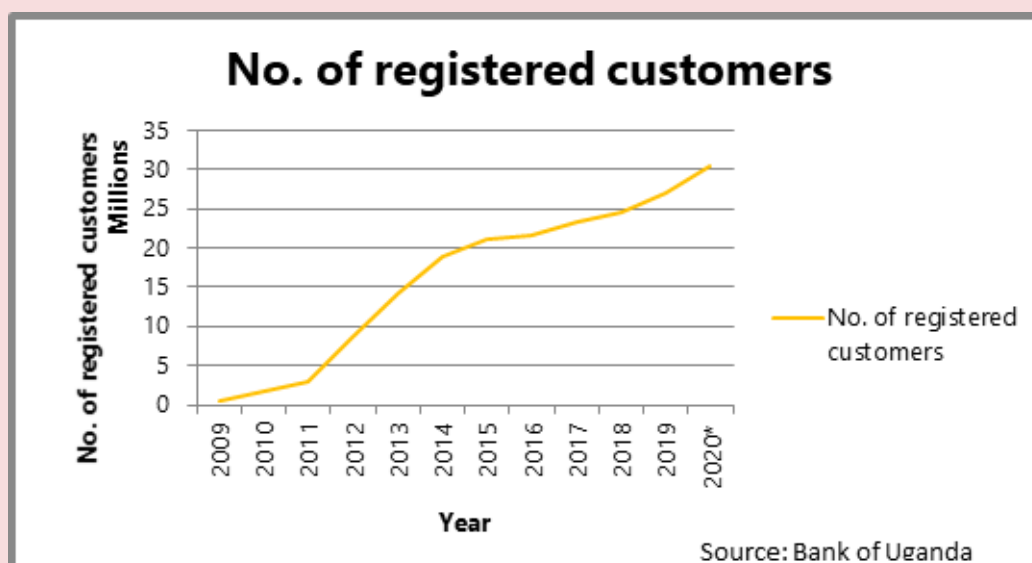
Mobile money was introduced in Uganda in 2009. The business model involves a partnership between the mobile money operator and a commercial bank. The services offered at the time were restricted to domestic remittances, basic rental payments and money storage services. In 2013, Bank of Uganda issued mobile money guidelines which stipulate the approval process for the mobile money services as well as the roles and

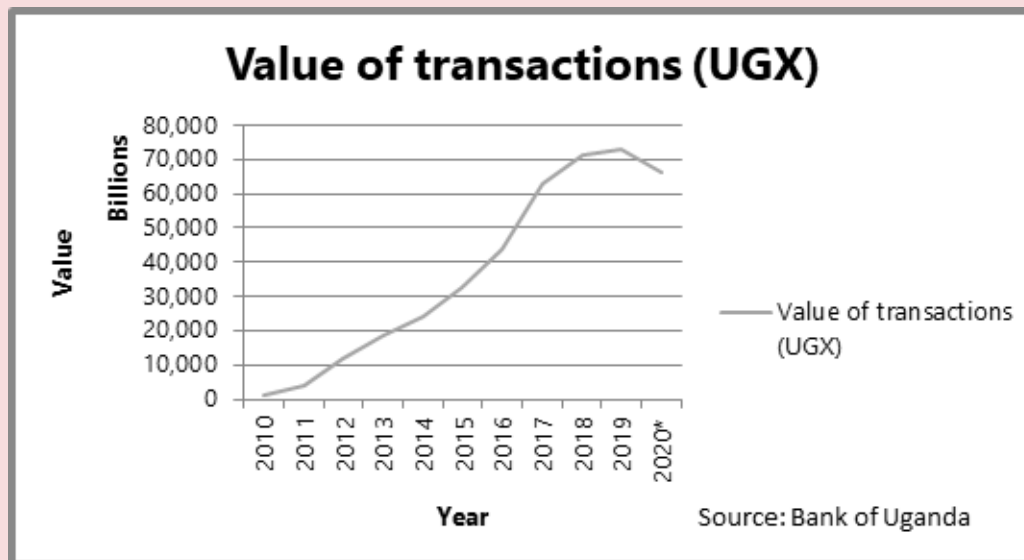
responsibilities of all parties involved.

The growth in mobile money banking has been phenomenal and as of December 2014 there were over 18 million registered mobile money customers. From 2015 onwards, the number of people with a mobile money accounts in the country increased year by year. Moreover, in the third quarter of 2019, the value of Mobile Money transactions in Uganda corresponded to USD

5.2 billion (by Mariam Saleh, Nov 27, 2020). The number has escalated to customers 30,374,502 as per 2020 statistical data collected, as indicted by Bank of Uganda of which 19.8 million customers are active.

The Transaction Value of Mobile Money Services grew from Ugx. 73Tn in 2019 to Ugx. 93.7Tn in 2020, a 28.8% increase.





Mobile financial services are one of the most promising mobile applications in the developing world. Mobile money has become a platform that transforms entire economies, as it is adopted across banking, commerce, health care, agriculture, education, utilities and services and many other sectors.

The growth of mobile is attributed to more penetration and reach of telecom networks, ease of acquiring phone and registration of the mobile numbers etc and the proximity/ convenience of agent locations coupled with a significant increase in awareness and use of mobile money services. Commercial banks have partnered or entered joint ventures with mobile money operators. With such partnerships, banks have had effective models to expand their physical reach to poor and rural areas, without the location of physical premises. This arrangement has delivered the required level of proximity and low transaction costs, which are essential in increasing client deposits, a source of liquidity and ultimately financial inclusion. Commercial banks compliment this with other products like credit facilities and bancassurance services as well.

Mobile Money is often linked to financial inclusion, and it is important to understand how and under what conditions mobile money applications can extend financial services to the poor. Support for mobile money initiatives from governments, nongovernmental organizations, and the international development community needs to be justified by assessing the impact on development goals such as financial inclusion, poverty reduction, increased productivity, and

risk management. Although the mobile money industry has achieved significant scale in only a handful of countries, a growing number of studies are establishing its impact in a variety of areas. Its potential advantages include benefits arising from the inherent characteristics of the services; benefits arising organically from widespread usage and network effects; and benefits arising from purposeful and innovative applications, either made by developers or created by use cases.



Regulation: National Payment Systems Act 2020

The National Payment Systems Act 2020, among others, seeks to separate telecom services from financial operations that are largely regulated by Bank of Uganda. The Act also requires telecom to register new subsidiaries under

Bank of Uganda takes over regulation, control of Mobile Money & Airtel Money

which mobile money services will be operated.

A payment system is defined under National Payment Systems Act (NPSA) as a system used to effect a transaction through the transfer of monetary value, and includes the institutions, payment instructions, person, rules, procedures, standards, technologies that make the transfer possible”.

A country's National Payment System (NPS) therefore consists of the institutions (banks, financial institutions, and non-financial institutions), the procedures and technology that is used to facilitate the circulation of money within the country and internationally.

In Uganda, the other accompanying legislations relevant to the regulation of payment systems include The Bank of Uganda Act, The Financial Institutions Act (2016), The Electronic Transactions Act (2011) which governs the use, security, facilitation and regulation of electronic communications

and transactions, Computer Misuse Act (2011) which makes provision for the safety and security of electronic transactions and information systems to prevent unlawful access, abuse, or misuse, The Contracts Act (2010) and The Electronic Signatures Act (2011) and • Anti-Money Laundering Act (2013).

The Objectives of National Payment Systems Act 2020 include the following:

- To provide for the safety and efficiency of payment systems
- To prescribe the framework to govern the oversight and protection of payment systems.
- To provide for financial collateral arrangements
- To regulate operators of payment systems
- To regulate payment service providers
- To regulate insurance of electronic money, and
- To provide for the oversight of payment instruments

Application of the Act

- Current operators with approval from Bank of Uganda including all mobile money companies.
- Other operators of payment systems including payment service providers, issuers of payment instruments, money issuers and aggregators.
- Users of payment systems including retail stores, service centres, point of sale outlets, clearing houses and the banks whose technologies and infrastructure make the payments possible.

Licenses are issued by the National Payment Systems department at Bank of Uganda, to ensure overall effectiveness and integrity of payment systems in the country, including mobile money.

Peter Kawumi, the Financial Technology Service Providers Association of Uganda chairman, says mobile money operations will now be properly regulated under the





Central Bank. He added that, the licensing of payment systems will now open investment opportunities and partnerships within and beyond Uganda and a clear growth trail since it had been difficult to regulate mobile money due to the absence of an enabling law.

Bank of Uganda Governor Emmanuel Tumusiime Mutebile said that Central Bank had commenced licensing of payment system operators, payment service providers and issuers of payment instruments, which is provided for under the National Payment System Act 2020 and guided by the National Payment System Implementing Regulations that was gazetted on March 5, 2021. Mobile money will be separated as a distinct business which, going forward, will be regulated by Bank of Uganda as a financial service. This will effectively have mobile money services distinct from telecom service operations, regulated by Uganda Communications Commission.

The above has now been implemented with the issuance of financial services operator licenses to Airtel Money, which will trade as Airtel Mobile Commerce Uganda and MTN, which has placed its mobile money business under MTN Mobile Money Uganda. As part of the split, whereas mobile money services will be regulated by Bank of Uganda, the telecom operations will continue to be regulated by Uganda Communications Commission.

Officials from telecommunication giants, Airtel Uganda have welcomed the latest move to split as standalone businesses that is the mobile money operations vs telecom operations and indicated that the company's wide network of retail outlets throughout the country will be anchored to provide more services.

Airtel Uganda Legal and Regulatory Director

Dennis Kakonge said the move is a blessing for the telecom company. "We welcome it and look forward to providing more services to our customers,"

The Airtel Uganda Managing Director noted that in a bid to continue improving its services, the company has in the past two years constructed over 400 base stations, adding that they plan to add more than 300 in the next one year whereas they plan to grow their towers from 2116 to 2539 by 2022.

In conclusion

An enabling policy and regulatory framework will create an open and level playing field that fosters competition and innovation, attracts investments, and allows providers to focus on refining operations and promoting customer adoption. To develop these services, businesses, governments, and other institutions must innovate actively on top of the payment services that are being deployed by mobile money operators.



Airtel Uganda Managing Director Manoj Murali



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passport, Birth
certificate
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Account Features

UGX

50k> 10M	3.5% Pa
10M> 50M	4% Pa
50M> 100M	5% Pa
> 100M	5.5% Pa

USD

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365 Treasury Bill rate (on average deposits) for an account with no withdrawals in a full year

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Incase of loss of job (3 months' instalments based on 6 Months average deposits) to be credited on the child's account. Upper limit Ugx 5,000,000

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Collateral Spot Finance

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Statements

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Funeral Cover

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Regulatory Developments in Payment Systems in Uganda

BOU National Payment Systems Department

1. Introduction

After nearly 10 years of indirect regulation, Uganda's payment systems are now premised on an enabling legal framework, with Bank of Uganda as the main regulator. Payment systems refer to, all arrangements including instruments, infrastructure, rules, procedures, laws and systems used to transfer money and securities for the settlement of payment obligations. It involves two or more Payment Service Providers (PSPs) like banks and e-money issues, Payment Systems Operators (PSOs) like payment switches, integrators, or aggregators and customers. Customers may include Government, Business enterprises, utility companies and individuals. The orderly and efficient functioning of the Payment Systems contributes to:

- a. Financial and economic stability.
- b. Effective and efficient transmission of monetary policy.
- c. Efficient and cost-effective discharge of claims and liabilities arising out of economic

transactions, and hence promotes economic growth.

2. Background of Payment Systems Law in Uganda

Due to the importance of the payment system to the economy, a sound legal and regulatory framework is essential to ensure safety, and efficiency of the National Payment System (NPS).

In this regard, Bank of Uganda (BoU) worked with Ministry of Justice and Constitutional Affairs and the Ministry of Finance Planning and Economic Development (MoFPED) to draft the National Payment Systems Bill which became a law in September 2020 and the implementing regulations were gazetted in March 2021.

3. Regulations & Enabling Laws

The NPS Act, 2020 grants Bank of Uganda the legal mandate to:

- a. License and regulate PSOs and PSPs

(including electronic money issuers) and Issuers of Payment Instruments.

- b. Provide oversight over payment systems.
- c. Prescribe the rules governing the oversight and protection of the payment systems.

In addition, the law provides for promotion of innovations in the payment space through the use of the Regulatory Sandbox Framework.

“Payment systems refer to, all arrangements including instruments, infrastructure, rules, procedures, laws and systems used to transfer money and securities for the settlement of payment obligations”

4. Regulatory Sandbox Framework

Pursuant to Section 16 of the National Payment Systems Act, 2020 and the National Payment Systems (Sandbox) Regulations, 2021, BoU launched a Regulatory Sandbox Framework.

A Regulatory Sandbox is a set of rules and requirements that allows innovative financial solutions, for example fintech start-ups, to be tested in a live controlled environment for a specified period of time under BoU's oversight and subject to the necessary safeguards.

So far, M/s Wave Transfer Limited received approval to test Quick Response (QR) technology under the Sandbox arrangement for six months effective April 12, 2021.

Bank of Uganda invites more firms to develop and test financial innovations under the Regulatory Sandbox. The framework for the sandbox is available at: www.bou.or.ug and more details can be obtained by sending an e-mail to: fintechoffice@bou.or.ug

The Regulatory Sandbox Framework will:

- a. Promote financial services innovation.
- b. Attract capital and funding for fintech firms.
- c. Provide shared learning opportunities for the innovators and regulators.
- d. Promote uptake of electronic payments, digital financial services and financial inclusion in general.

5. Roles of BoU in the Payment Systems

The main role of BoU in the payment systems space is to; regulate, supervise, and oversee the operations of payment systems in Uganda in order to ensure safety and efficiency.

In the process of executing the above, BoU is required to:

- a. Regulate and supervise PSPs & PSOs – license, monitor, assess & induce change.
- b. Publish the laws and regulations, ensure disclosures and cooperative oversight.
- c. Monitor cross border payments.
- d. Provide settlement services.
- e. Coordinate payment system activities with relevant stakeholders.
- f. Issue directives/guidelines to regulate payment system operations.
- g. Approve rules & arrangements for payment systems.
- h. Implement the NPS Act.

6. Issuance of Licences

Following the enactment of the NPS Act, 2020 on 4th September, 2020 and the gazetting of the NPS Implementing Regulations on 5th March, 2021, BoU commenced licensing of PSPs and PSOs.

Pursuant to Section 9 of the National Payment Systems Act, 2020 and Regulation 3 of the National Payment Systems Regulations, 2021, BoU has so far issued licences to the following entities:



- a. MTN Mobile Money Uganda Limited,
- b. Airtel Mobile Commerce Uganda Limited,
- c. MicroPay Uganda Limited and
- d. Mcash Uganda Limited.

7. Oversight Framework for Payment Systems and Payment Services

BoU has a statutory responsibility for Uganda's National Payment System. This responsibility is enshrined in the National Payment Systems Act, 2020, which empowers BoU to regulate, supervise and oversee the operations of payment systems to ensure their safety and efficiency.

As indicated above the regulatory ambit extends to PSOs, PSPs and Issuers of Payment Instruments.

To enable effective oversight, the Bank has developed an oversight framework which lays out the Bank's oversight objectives, methodology and overall approach to the oversight function. The detailed document is available at the BoU website; www.bou.or.ug.

Bank of Uganda's oversight responsibility is intended to:

- a. Promote safety and efficiency of Uganda's payment systems.
- b. Identify potential risks posed by the payment systems or financial market infrastructure, take steps to minimize the risks and where necessary induce change.

8. Emerging trends in the Payment systems

Emerging trends point to increased emergence of Fintech or Financial Technology Innovators. These are firms that leverage the use of technology in Financial Services to automate, improve, disrupt, or change the way business is done as follows:

- a. New systems, processes, products, business models.
- b. Compete with and complement traditional financial services.
- c. Aim to reduce operational costs and improve efficiency.

With the world currently recovering from a major pandemic, the underlying technology that has driven Fintech, including Blockchain and open banking will continue to drive future innovations.

Fintechs can be utilised to close gaps, given their potential for a wider reach at reduced costs as follows:

- a. Provide access to Financial Services for the unbanked population e.g. savings, loans, payments.
- b. Provide access to Healthcare and Insurance via Tech.
- c. Support Financing of Agriculture especially small holder farmers.
- d. Offer fairer and competitive pricing of products.





To enable effective oversight, the Bank has developed an oversight framework which lays out the Bank's oversight objectives, methodology and overall approach to the oversight function

However, with the advancement in technology in the payment systems space, players, especially regulators have to be mindful of the following shortcomings:

- a) Increased overlaps due to scope, scale and dynamism.
- b) Increased risk around data security, privacy, money laundering, cybercrime and consumer protection.
- c) Need for controls to keep pace with change.

9. Uganda's Payment Systems Outlook

There is no doubt that payment systems hold the promise to deliver financial services to both merchants and customers, more especially in this unprecedented and uncertain times of the Covid-19 pandemic. The BoU will scale up efforts in four strategic areas to support development of the payments ecosystem:

- a. Ensure adequate legal, regulatory and oversight framework.
- b. Promote infrastructure development and interoperability of payment systems.
- c. Foster innovations, competition, consumer protection and digital financial literacy.
- d. Strengthen collaborative arrangements with stakeholders.

10. Conclusion

The Bank of Uganda will continue to support the development of a vibrant and resilient payments eco-system, by safeguarding the stability and integrity of the financial sector to promote economic growth.



Mackay Aomu

Director, National Payment Systems
Department - Bank of Uganda



The Communications Market & relation to payments space



The Communications sector has over the last 20 years undergone a number of changes globally and in Uganda in terms of technology, market definition & players, scope of services, consumer demands, utilization & regulations.

Following the inaugural Uganda Communications Act of 1997, a number of measures have been established in the sector Establishment of a Universal Access Fund, the RCDF-2003.

The Communications Regulations 2005, covered areas of interconnection, pricing, numbering and radio resources, competition among others. The Uganda Communication Act of 2013-principally merged mandates of the UCC and Broadcasting Council. Communications Regulations-2019. Technology and service neutral licensing regime.

Developments in the industry include integration of different functions & services into a single device or solution cocktail of services-finance & banking, e-commerce, and e-government services on the mobile phone.

Change in consumer demands
Personalized experiences- services, media & entertainment
Convenience- available/accessibility anywhere & anytime, digital lifestyle, connected household.
Service, reliable, and efficient services-e-services(public & private)
Social and economic opportunities-inclusion, personal development, health & well being etc.

Technology

Advancement in technologies e.g. 4IR seeks to transform production and productivity using systems that integrate sensing, computation, control and networking into physical objects and infrastructure to connect them to internet and each other. Cloud computing, artificial intelligence (AI), distributed ledger technologies (Block chain), internet of Things (IoT), Big Data analytics, Augmented Reality (AR) and quantum mechanics.

The Digital Transformation Program of NDP3 seeks to facilitate the achievement of increased household incomes and improvement quality of life. Digital Uganda Vision is also being developed.

Fintech in Uganda :

Probably the highlight of the last 10 years was entry of technology firms into the provision of digital financial services. What commenced as initially as means to transfer value (airtime) between individuals has in the last 10 years grown into a big changer of both communications and financial sector in Uganda.

The DFS has grown to such significance that the quality and availability of Mobile Financial Services has in the last five years emerged as a key of mobile network provider choice by customers.

The mobile –led payment and remittance ecosystem has grown to include a suit of new sectors that include;

The Mobile Network operators- in-charge of last mile signal network, onboarding and primary registration and identity management, agent network management, licensing and Licensed FI partnership.

Aggregators and integrators- Beyonic, Yo Uganda, Pegasus, Dmark, have from initial SMS and USSD mass messaging solution to providers to integrators between banks, MNOs and retail

Large scale
Financial Agent
Networks

Crypto- Fiat
Exchanges-
Binance Uganda,
Bit Pesa

Over the top
wallets; Eversend,
Chipper Cash,
Whatsapp pay,
Safe Boda

Over the top
lenders, Jumo,
CBA among
others

customers

Regulatory Challenges arising from the growth in service and reach of digital financial services

a. Being the traditional definition of markets- challenging regulation and transcending administrative boundaries domestically and internationally.

“ Advancement in technologies e.g. 4IR seeks to transform production and productivity using systems that integrate sensing, computation, control and networking into physical objects and infrastructure to connect them to internet and each other.”

b. Consumer protection- new efforts needed to consumer education, safe guarding of deposits, transparency, excessive pricing (case of digital lenders)

c. New protocols for KYC and Digital Identity Management.

d. New threats in abuse of digital payment infrastructure for money laundering and terrorism.

e. Competition- new types of monopolies amidst strong incumbent(MNOs, Banks) advantages while the OTTs like GAFAs – Google, Amazon, Facebook and Apple.

f. Disputes resolution and redress management in multi-sector context (Banking/Telco)

g. Compliance to the new cross jurisdictional standards and protocols like the GDPR

h. Safeguarding the integrity of national payment systems amidst integration with sometimes opaque settlement systems like crypto wallets.

i. Easing market entry bottlenecks and costs (amidst various requirement across government)

How do we then protect the consumer while promoting overall ecosystem development

- Collaboration among the different sector regulators e.g. BoU, URA, NITA, FIA etc.

- Collaboration with industry towards consultation led regulatory interventions.

- Regulatory sand boxes and research in new areas like Big Data & Artificial Intelligence, Blockchain, Internet of Things among others.

Driving Innovation, Affordability and Financial Inclusion through Partnerships with Fintechs

By Peter Kawumi

About Financial Technology Service Providers Association (FITSPA) Uganda

- FITSPA – member-owned national fintech association which represents local and global Fintech companies operating in Uganda.

- Operations centered on 3 core values;

1. **Community:** We bring together the diverse parts of the community to encourage open dialogue, collaboration and co-creation

2. **Innovation:** We Learn from one another to address pain points faced by the African Communities in which we operate.

3. **Advocacy:** Create a unified voice for the Uganda FinTech ecosystem to engage varied stakeholders on policy, regulation and other issues.

- Founding member of the Africa Fintech

Network (AFN)

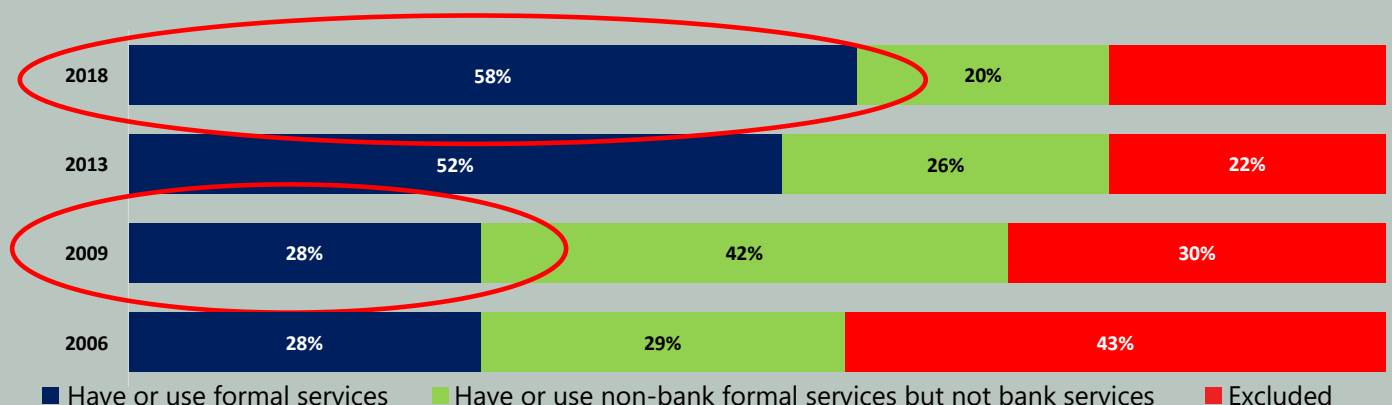
- Formal MOUs in place with BOU, UCC, NITA-U, UBA, UIBFS, etc
- Partnership and collaboration with FSDU, UNCDF, ITC, etc

Focus

- Impact of Fintech on Financial Inclusion in Uganda
- Uganda's Fintech Evolution
- Implications for SFIs
- 5 Avenues for Fintech Partnerships

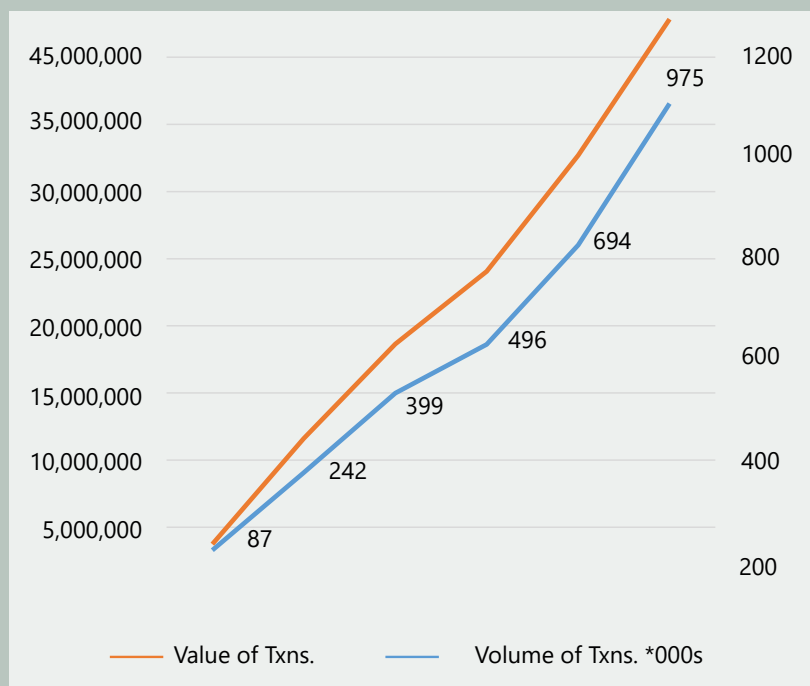


Financial Inclusion Trends Uganda



What Is Fintech And Why Does It Matter?

43.83 Trillion UGX, or \$12 Billion (2016)



30% Increase in Financial Inclusion largely attributed to mobile money

- Fintech, refers to the broad subset of financial innovations that apply new technologies to a financial service or product.
- Innovations in financial technology have long existed. The past two decades have witnessed an exponential growth of new tech-enabled new ideas, business models, products and solutions with a very direct impact on society.
- Mobile money launched in 2009 and within less than a decade the circulating value via the mobile money systems reached 49% of GDP in 2016.
- Direct impact of mobile money was that it enabled nearly 4 Million Ugandans between 2009 to 2018 to become part of the formal financial system.
- Trend will continue into the near future, and will be driven by non-traditional financial services providers

Uganda's Fintech Landscape is Undergoing Dynamic Evolution

	2005 - 2013	2013 - 2018	2019 - ...
	FinTech 1.0	FinTech 2.0	FinTech 3.0
Key Players			
Core Focus	<ul style="list-style-type: none"> • B2B Services enabling Banks and other SFIs mainly in payments • Mobile money intro 	<ul style="list-style-type: none"> • Prominence of mobile (money) payments • Emergence of B2C players focused on specific niches 	<ul style="list-style-type: none"> • Ecosystem players offering full array of financial and non-financial services eg lifestyle, health, ride hailing, music, etc.
Enablers	Regulation	<ul style="list-style-type: none"> • MM Guidelines • NFIS • Agency banking regulations 	<ul style="list-style-type: none"> • NPS Act & Regulations • DPPA
	Infrastructure	<ul style="list-style-type: none"> • ATM Switching • MNO Rails 	<ul style="list-style-type: none"> • National (24x7) Switch??

Fintechs Developing Innovative Value Propositions Across the Financial Services Value Chain

130+ Fintechs in Uganda.

3.5mn+ transactions / day



\$220Mn funding in last 3 years

70% YoY Growth



Top Sectors by No of Players



49% Payments



25% Lending



5% Savings

Multiplier effect



Unlock new business models



Fuel business digitization



Drive job creation

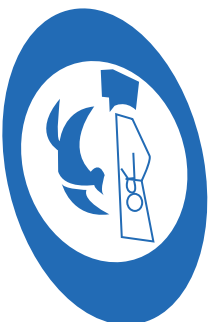


Traditional Players (even in UG) Are Responding



5 Avenues To Industry Partnership with the Ugandan Fintech Ecosystem

Fintech Focus	Support compliance to the emerging regulatory framework	Create pull for (digital) identity to spur innovation in the financial sector	Build centralized credit infrastructure	Accelerate rollout of digital infrastructure	Grow talent pipeline
Partnership Triggers	<ul style="list-style-type: none"> FITSPA – UIBFS MOU now in place to support compliance, risk mgmt. FITSPA Code of Conduct accreditation for SFIs (and Fintechs seeking SFI partnerships) Tiered licenses proportionate to scale of activities 	<ul style="list-style-type: none"> Standardization of KYC rules across SFIs and Fintechs (EMIs). Extend emerging National ID linkage for banks to Fintechs (new customer acquisition channel) Industrywide Open Banking initiative (API Standardization) 	<ul style="list-style-type: none"> Create alternative credit scoring system that leverages a combination of txn and other customer data Develop central loan collection infrastructure that enables customers to set direct debits on accounts/wallets for loan repayment 	<ul style="list-style-type: none"> Fast track National Switch initiative to achieve real-time transactions Local switching for local transactions (ATM, Merchant pymts) Outsource agent/ merchant recruitment / mgmt 	<ul style="list-style-type: none"> National digital training program to scale up tech talent Linkages with tech hubs (TIV, Outbox) to allow for apprenticeships SFI talent development – UIBFS partnership to build skills (data mining, product dvpt)
FI Impact	<ul style="list-style-type: none"> Increased consumer protection / trust 20%-30% growth in customer numbers for licensed Fintechs (escrows) 	<ul style="list-style-type: none"> Rapid development / rollout of market-responsive products Account opening hurdles addressed 	<ul style="list-style-type: none"> Up to 30% boost to retail lending (value + numbers) Reduction in NPLs/dormancy 	<ul style="list-style-type: none"> > 50% dip in transaction costs – more customers / txns 200k SMEs accepting digital payments 	<ul style="list-style-type: none"> Local pool of talent to support industry growth Rapid adoption of new tech; industry cost savings



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- Agriculture Loans,

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- Institutional Savings Account
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- GroupSave Account

Other services

UGAFODE Mobile banking, MTN/Airtel Mobile Money, Western Union, MoneyGram, Express Money, RTGS/EFT

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Nakivale Refugee Settlement | Nansana

Achieving Financial resilience and sustainability for REFUGEES at UGAFODE



Jean Kambale in a meeting with Branch Manager at Nakivale

I am Jean Kambale from Nakivale refugee settlement, I was working as a district chairperson for all drivers in Goma DRC where I was the former leader. I fled to Uganda because I was wanted dead by my former colleagues that had wedged war against me and some unidentified people that wanted to kill me, and that's how I fled to Uganda as a refugee in 2012.

I was a rich man but left everything I had there and only sold my mini bus that gave me the only money I came with. When I reached Nakivale, I started an electronics shop and a small hardware business to sustain my family till today, five years later I generated some income and started a "bitengi" business for my wife that she is still operating now.

However, rising enough capital has been a challenge as a refugee but thanks to UGAFODE that turned my dream to reality. Through their Nakivale settlement branch I started saving and later acquired a loan of Ugx 10M which turned my business around. I have grown financially with the several loans I have acquired and I now have rentals in Kampala, my businesses have grown and I have actually applied for another loan of Ugx 30M which I believe will strengthen and expand my business more better cause I want to expand and have some businesses in Mbarara with support from UGAFODE.



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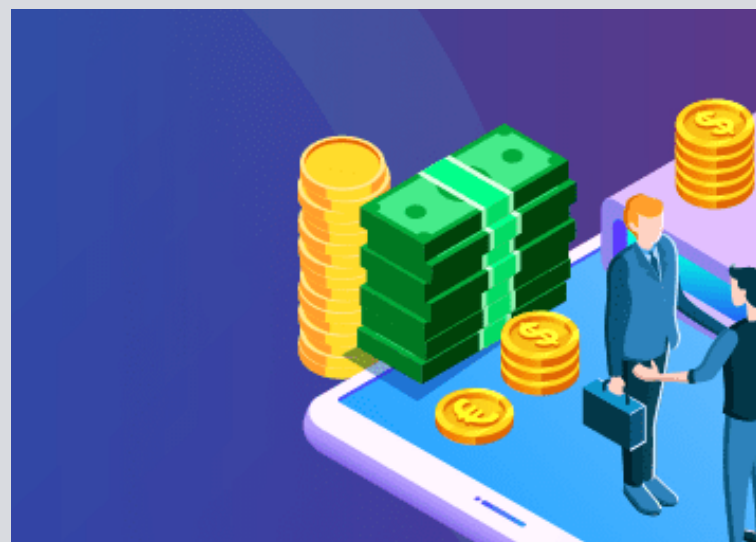
Strengthening collaboration with the banking & financial services sector to enhance payment systems through ICT and accelerate financial inclusion

Vision and goal – Uganda

We envision

“a Ugandan inclusive digital economy that leaves no one behind”

Our 2024 goal is to directly enable at least 1 Million rural people in Uganda to lead productive and healthy lives, by expanding access and usage of digital services (including finance) that contribute to achieving the Sustainable Development Goals.



How? “... a market systems development approach”

Empowerment of youth, women, migrants, refugees, and micro-, small- and medium-sized enterprises (MSMEs), these customer segments often face barriers to accessing digital innovation and technology.

The six categories of digital services cover the following sectors:





Country Priorities 2020-2024

To accelerate the development of Uganda's Inclusive Digital Economy while reducing the digital divide.

To support policymakers to implement policies and regulations that foster inclusive innovation and an open digital payments ecosystems

To create opportunities and partnerships for digitization and digital innovation to drive value addition and inclusion in key growth sectors in Uganda (agriculture, health, education, energy)

Key Activities 2020-2024



Enabling Policy and Regulation

Increase access to and usage of digital services by:

- Supporting policymakers and regulators to mainstream digitization into implementation of the national development plan (NDP3)
- Working with Gov't Ministries to Implement the National Policies that Promote Inclusive Digital Economies



Open Digital Payment Ecosystem

Support actors in the digital payments' ecosystem to

- Open-up their platforms to third-party actors building new use-cases that attract population segments otherwise in danger of exclusion
- Extend their reach and coverage into rural areas and different under-served communities



Inclusive Innovation

Support the piloting and scaling of digital service offerings and innovations that create opportunities and partnerships for value addition and inclusion in key growth sectors in Uganda (agriculture, health, education, energy) as prioritized in the National Development Plan (NDPIII)



Empowered Customers

Support the piloting and scaling of innovative solutions to build digital skills of under-served population segments in order to build their capacity to use digital solutions to improve their productivity and well-being

UNCDF: A Partner to Build an Inclusive Digital Economy





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Leveraging the government e-payment gateway to enhance digital payments

National Information Technology Authority (NITA)



Background

Infrastructure

- ❖ National Backbone Fiber
- ❖ Wireless Coverage
- ❖ Data Centre & Disaster Recovery Site
- ❖ Transmission Sites

Enabling Environment

- ❖ Laws & Regulations
- ❖ Guidelines & Standards
- ❖ Policies
- ❖ Compliance & Certification



Capacity Building

- ❖ Information Access Centre
- ❖ Project management
- ❖ Training and awareness
- ❖ IT Advisory Services
- ❖ Business Process Outsourcing

Automation

- ❖ Business/Systems Analysis
- ❖ Gov't Applications / Systems
- ❖ Online E-Services
- ❖ Web Portals developed
- ❖ Research & Development

Information Security

- ❖ Information security framework
- ❖ Audits and Compliance
- ❖ Monitoring and Incident Management
- ❖ National security coordination
- ❖ Digital Forensics

Enabling infrastructure : nbi Infrastrcutre & Connectivity



4,000 Km Optic Fiber laid
3 uplink connections across 3 countries



49 towns connected
609 MDA/LG sites connected



27 transmission sites
24*7 Network Operations Centre



Tier III Data Centre & Disaster Recovery Site
140 Applications hosted



287 MYUG Wi-Fi hotspots across Kampala and Entebbe



Comprehensive in-country coverage and three internet uplink connections, NITA-U guarantees service reliability. Partnerships with BCS, Seacom & SAT3, that go through Kenya and Tanzania via Rwanda ensure continuity of internet services at all times.

Enabling Environment

NITA-U has developed several laws and regulations which support; e-commerce, e-services, digital payments and the use of online transactions.

- National Data Protection & Privacy Act 2019
- NITA-U Act, 2009
- The Electronic Transactions Act, 2011,
- The Electronic Signatures Act, 2011
- Cyber Laws
- The Computer Misuse Act, 2011
- E-Transactions Regulations, 2013
- E- Signatures Regulations, 2013
- National IT Standards

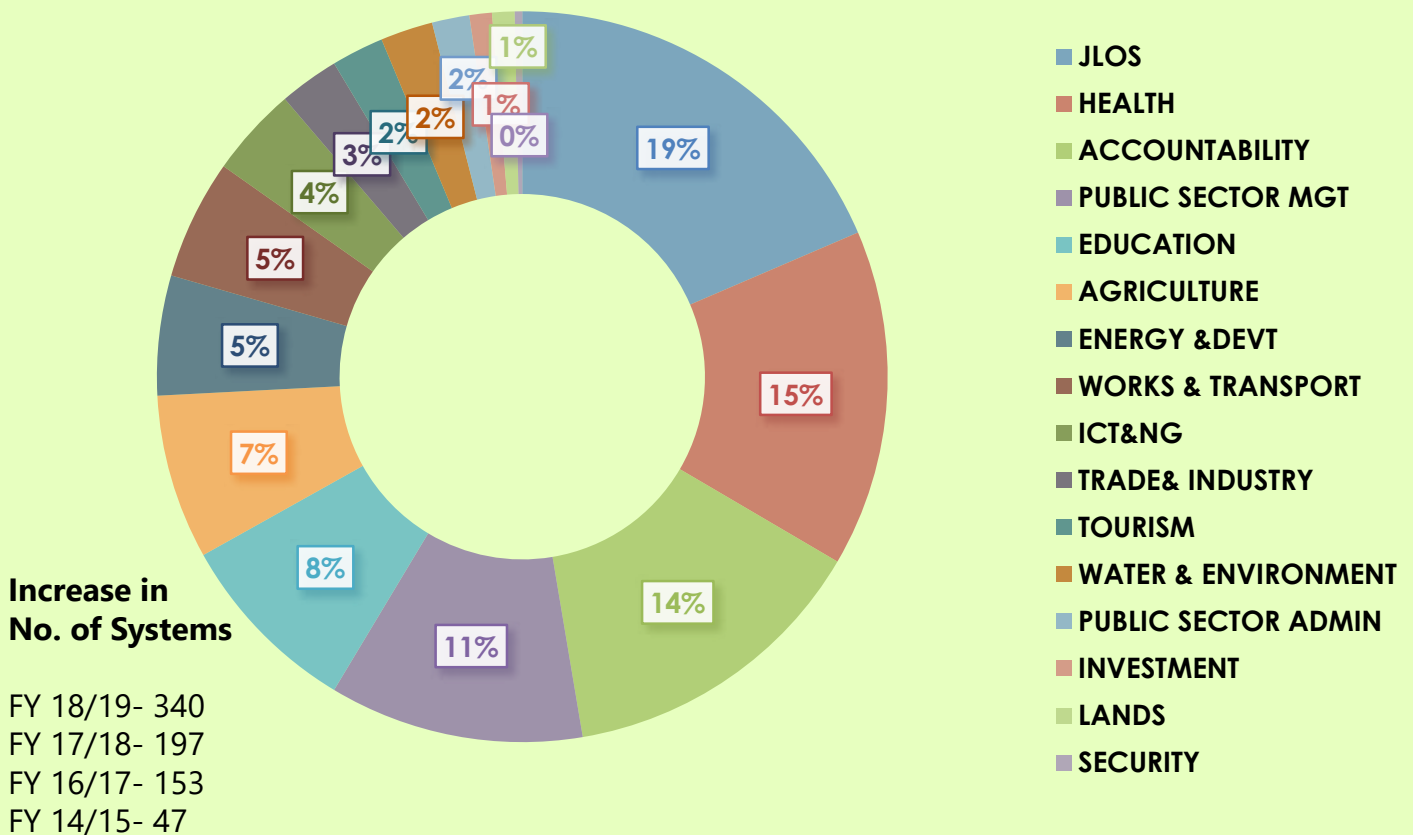
Other supporting laws;

National Payments Systems Act 2020
Uganda Communications Commission Act, 2013
Access to Information Act, 2005



Levels of Automation in Government

There are approximately 340 known ICT systems across Government entities. From a sector perspective, 5 sectors appear to have achieved the highest levels of automation; the Justice Law and Order sector, Health, Accountability and public sector management.



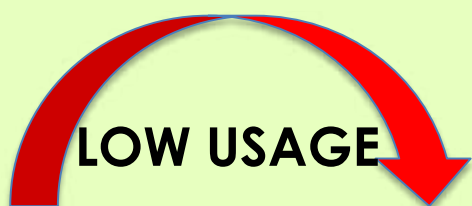
Existing challenges: citizens perspective

- Lack of a seamless payment process
- Lack of a consolidated system for reporting, planning and timely decision making by govt.
- Isolated data protection, user authentication and security solutions for MDAs and citizens
- Inadequate service delivery due to excessive use of paper based systems
- Long queues and delays in receiving services.
- Wastage of citizen resources to receive public services





Existing challenges: Government perspective



Use of Electronic Payments for Public Services: The usage of electronic payments for Government services is very low with only 1.2% of individuals utilizing the existing channels for public services.



Existing Payment Systems in Government entities: Currently, over 13% of Government MDAs are using disparate payment solutions. From the current analysis, Government of Uganda has spent approximately USD. 1,029,472 million in purchase of payment solutions.



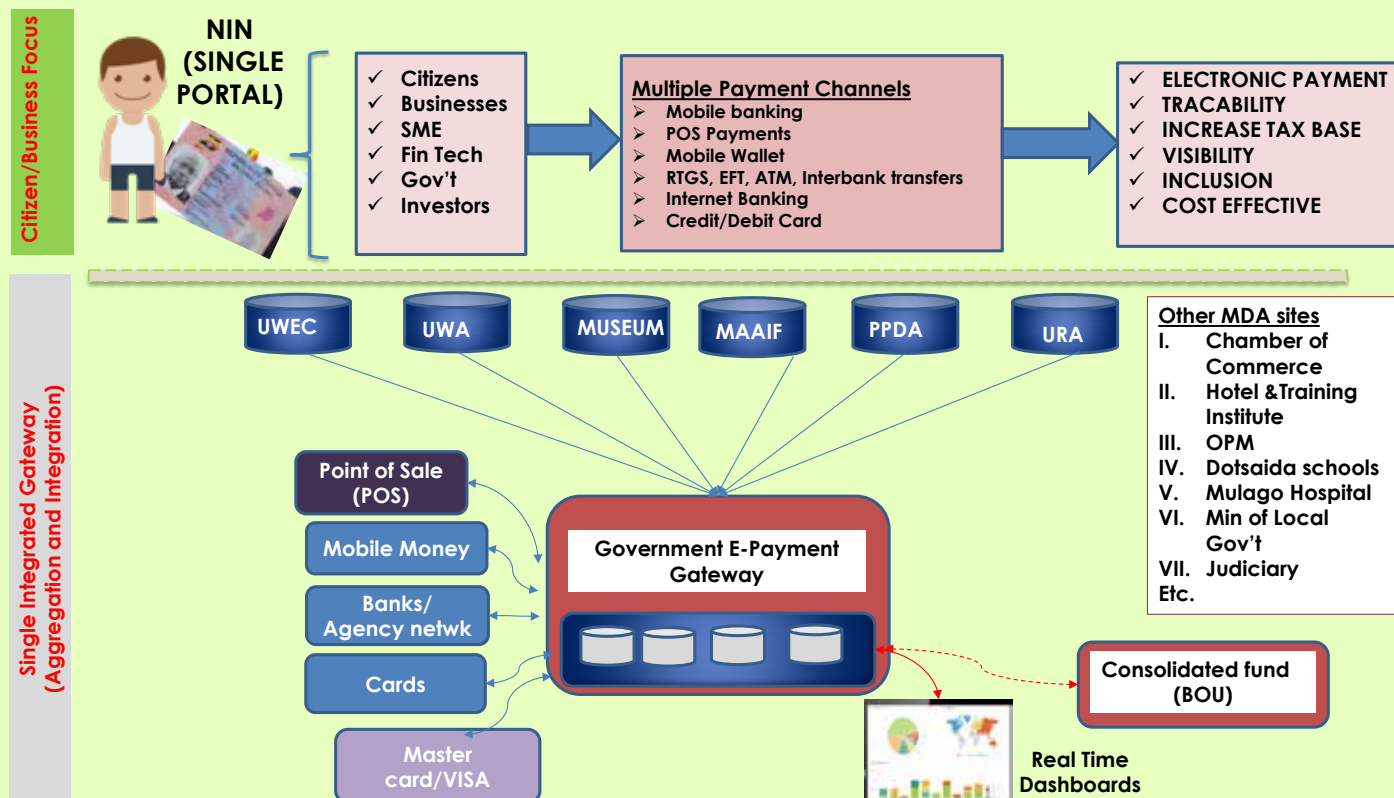
ICT staff capabilities: ICT personnel in the MDAs account for only 1.9% of the total work force in Government. Furthermore, 33.3% of these MDA staff cited lack of knowledge or training as a hindrance to the use of internet in their organizations.

The Government e-Payment gateway has been developed to facilitate electronic payments for Government services in a bid to make service delivery more efficient and responsive to the needs of the citizens.

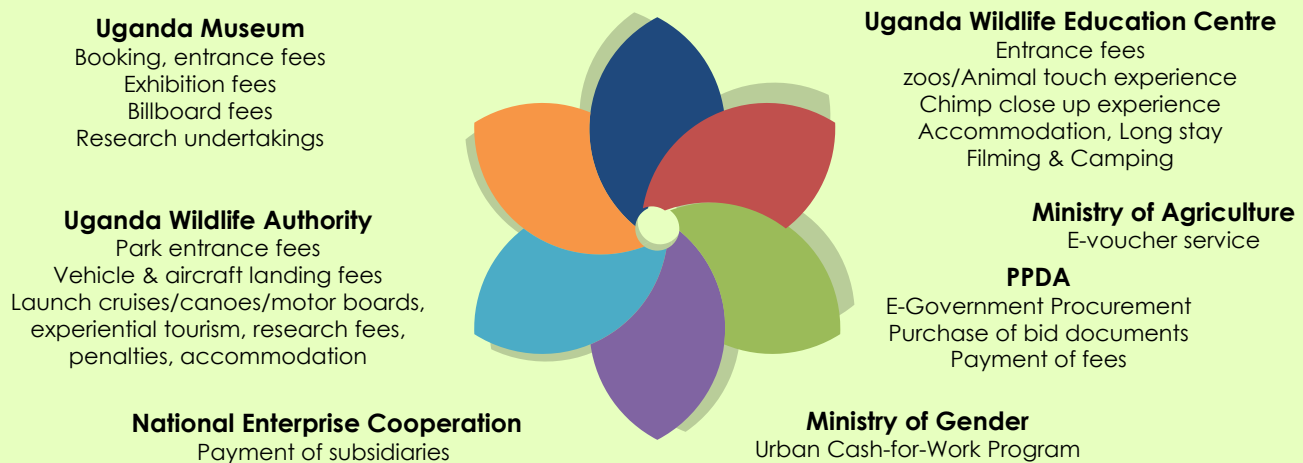


- 01 Promote **electronic commerce** thus expanding the market for Uganda's products
- 02 Facilitate **financial inclusion** through enhanced use of mobile payments especially among the financially underserved communities.
- 03 **Increase uptake of public e-Services** by putting in place a convenient, secure and seamless payment platform.
- 04 **Reduce time and monetary costs** involved in development, implementation and operation of payment platforms by different Government entities.
- 05 Create **transparency in all payments** to and/or from Government.

PAYMENT GATEWAY: Seamless Integrated Service on Citizen's Portal



E-Payment gateway has been implemented with 51 e-services in production



The bigger picture: integration of government systems

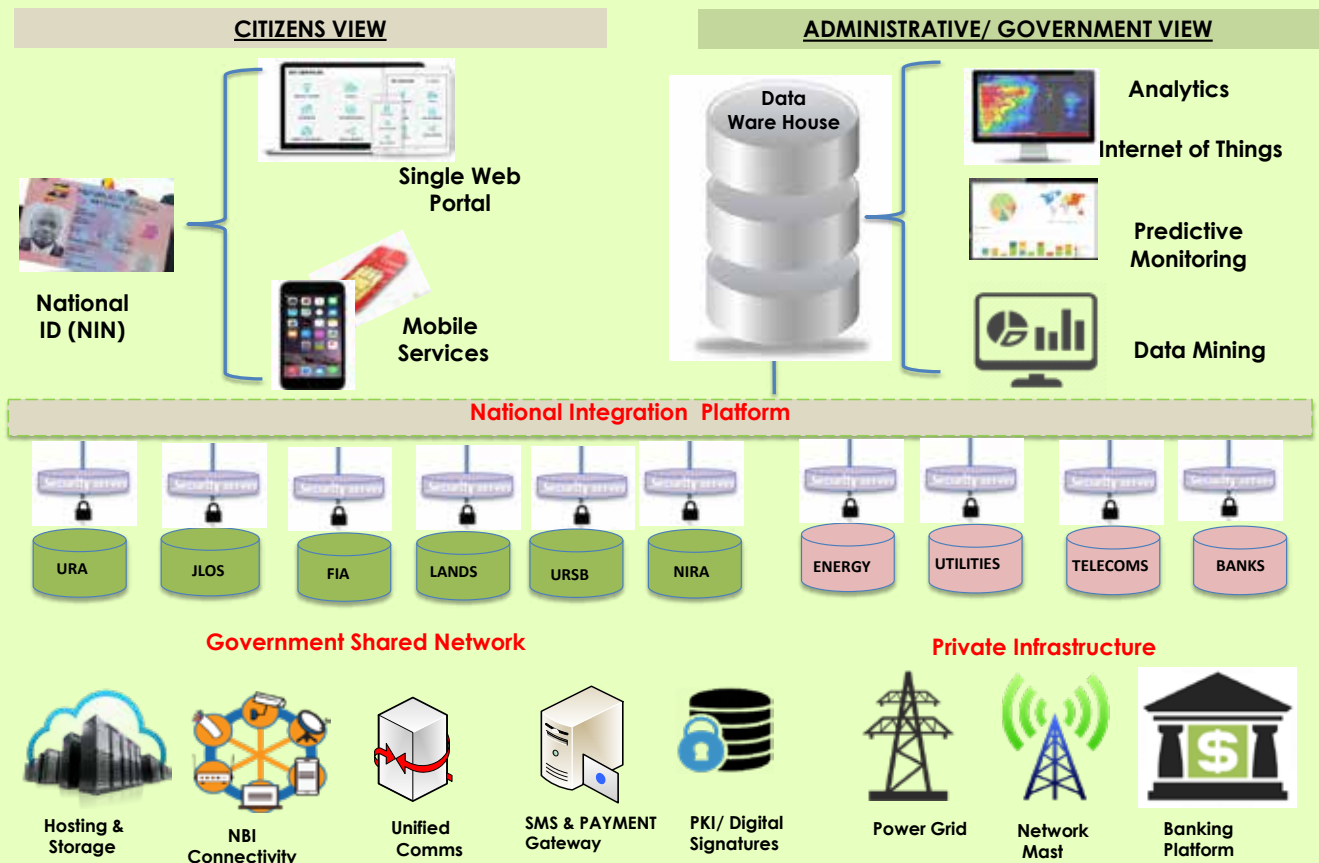
NITA-U Plans to integrate all Government systems to obtain the following benefits;



- **Simplicity**
 - ✓ Single citizens Portal
 - ✓ Single user id (NIN)
 - ✓ Mobile Applications
 - ✓ Seamless Payments
- **Efficiency**
 - ✓ Transparency for Gov't
 - ✓ Seamless data sharing
 - ✓ Digitized processes
- **Security**
 - ✓ Authentication gateway
 - ✓ Personal data privacy & protection Digital Signatures
 - ✓ Certification and cryptography

Sixty five (65) additional e-services are being enabled for integration and E-Pay will be rolled out to seventy (70) Government entities within the current contract





How can e-pay and the integration platform be used to leverage digital payments





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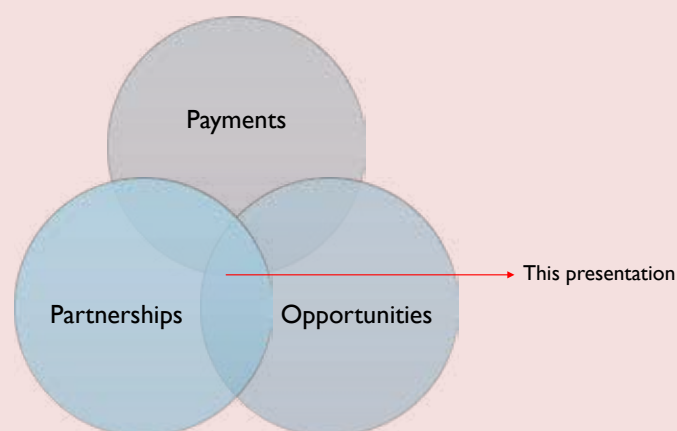
Developments in payments Ecosystem in Uganda and how key players can partner for maximum Leverage

About Financial Sector Deepening (FSD) Uganda

FSD Uganda is Uganda's leading institution on financial inclusion, and inclusive financial market development.

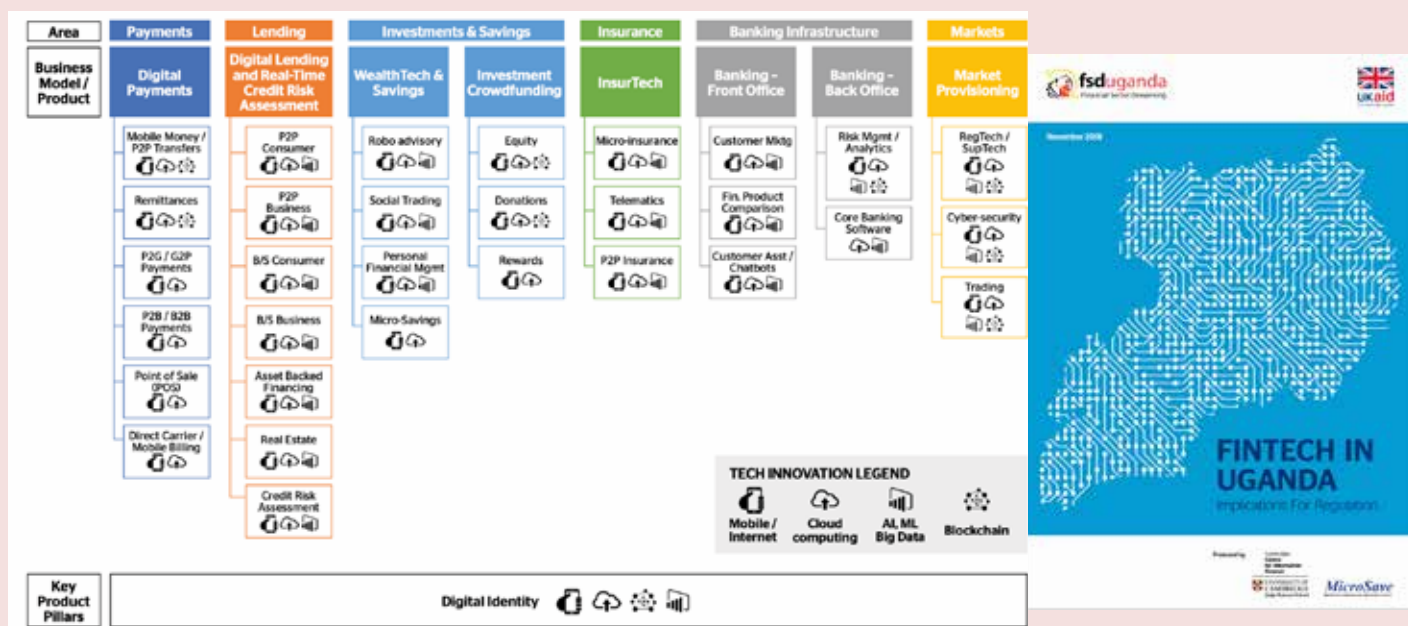
FSD Uganda provides technical assistance and catalytic grants to enable innovation and scale. This is achieved through research, policy analysis that enables evidence-based decisioning, private sector support through de-risking and experimental grants that push the frontiers of thinking on how the financial sector can serve the real economy, especially the most vulnerable. We have a particular focus on women, refugees, youth, and small holder farmers.

Focus of this presentation

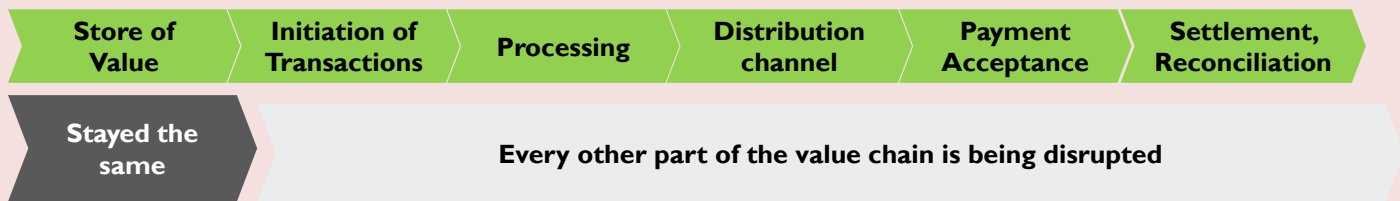


Why Payments?

Disruption of the financial services value chain



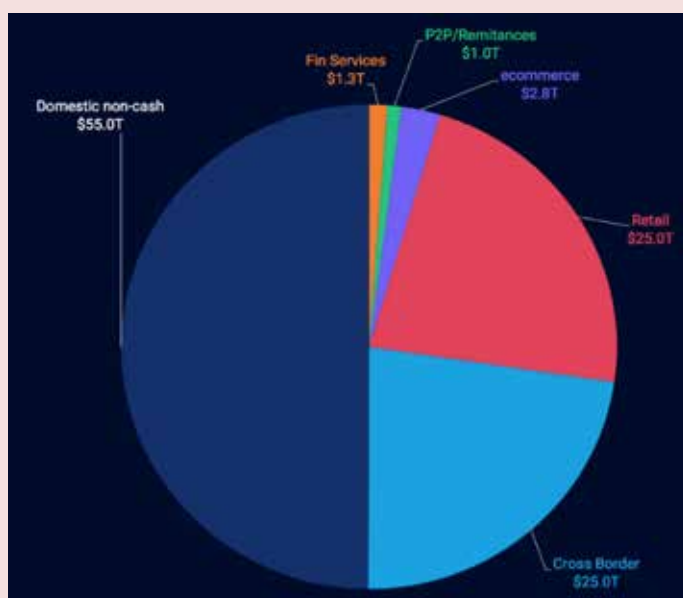
Disaggregation: breaking up of century old value chain



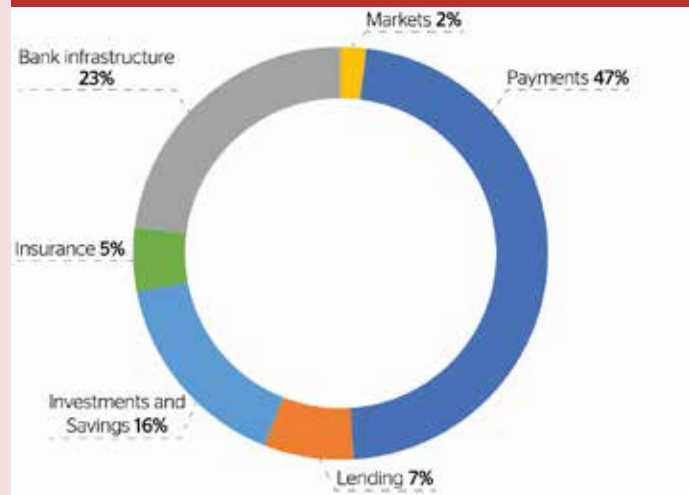
- Payments have become the gateway to financial inclusion.
- Leapfrogged the financial service industry into digital financial services. Mobile money in less than a decade had 49% GDP as circulating value through their systems – propelling financial inclusion gains (nearly 58% financially included).
- They deepened customer value and delivered financial services next door to the customer.
- Fintechs / Mobile Money, and Tech Fins (GAAFA) – Google, Amazon, Apple, Facebook and Alibaba are disrupting every part of the financial services value chain beginning with payments.
- But most of these firms don't want the regulatory oversight, compliance and supervision that come with being a deposit taking entity.
- Ride on the rails of banks. **It is a deliberate and emergent strategy and opportunity for partnership.**

\$110 Trillion global dollar payments industry was the first to disrupt.

Mobile payments, and P2P payments – like Venmo, m-pesa / mobile money, WeChat, PayTM being a few of those examples world over.



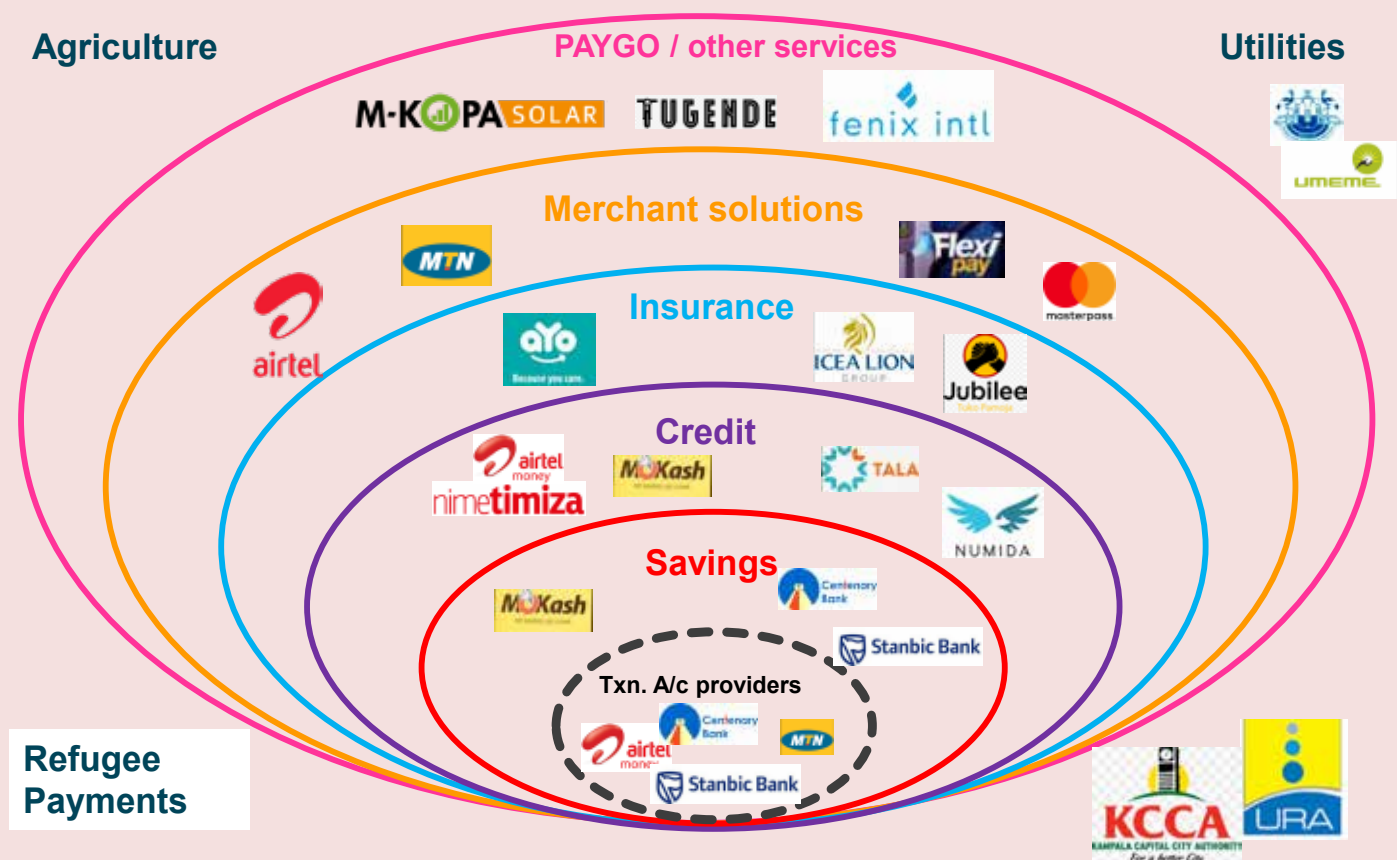
UGANDA MIRRORS GLOBAL TRENDS



- 100 Fintechs in the country.
 - Dominated by the payments industry, 47% of
 - Fintechs are payments companies.
- Volume of payments: USD 16 million in 2017
- Growth rate of 35%



Vibrant digital payments ecosystem



And can help grow active usage of store of value accounts

How should we think about payments?

Money movement in an economy

	Government (G)	Business (B)	Person (P)
	G2G	G2B	G2P
Government (G)	From one government body to the other	Government ministries and other bodies making payments to suppliers, vendors, and other service providers. Industry subsidies. (e.g., IT services or security services)	Payments by government to individual recipients (e.g., salary payments for government employees, welfare payments)
Business (B)	B2G	B2B	B2P
	Mandatory payments like taxes, government service payments like business licenses)	Payments between businesses (e.g., suppliers, wholesalers, and retailers)	Payments from businesses to individuals (e.g., salary payments, reimbursements)
Person (P)	P2G	P2B	P2P
	mandatory payments like taxes, government service payments	Merchant Payments	Domestic remittances



Money movement in an economy

	G	B	P
G	G2G	G2B	G2P
B	B2G	B2B	B2P
P	P2G	P2B	P2P

- Domestic and Cross-border payments.
- Merchant Payments.
- Largest volume of payments.
- Can be a huge revenue and partnership opportunity.
- Two side market development.
- Requires innovative thinking and incentives to shift behavior.

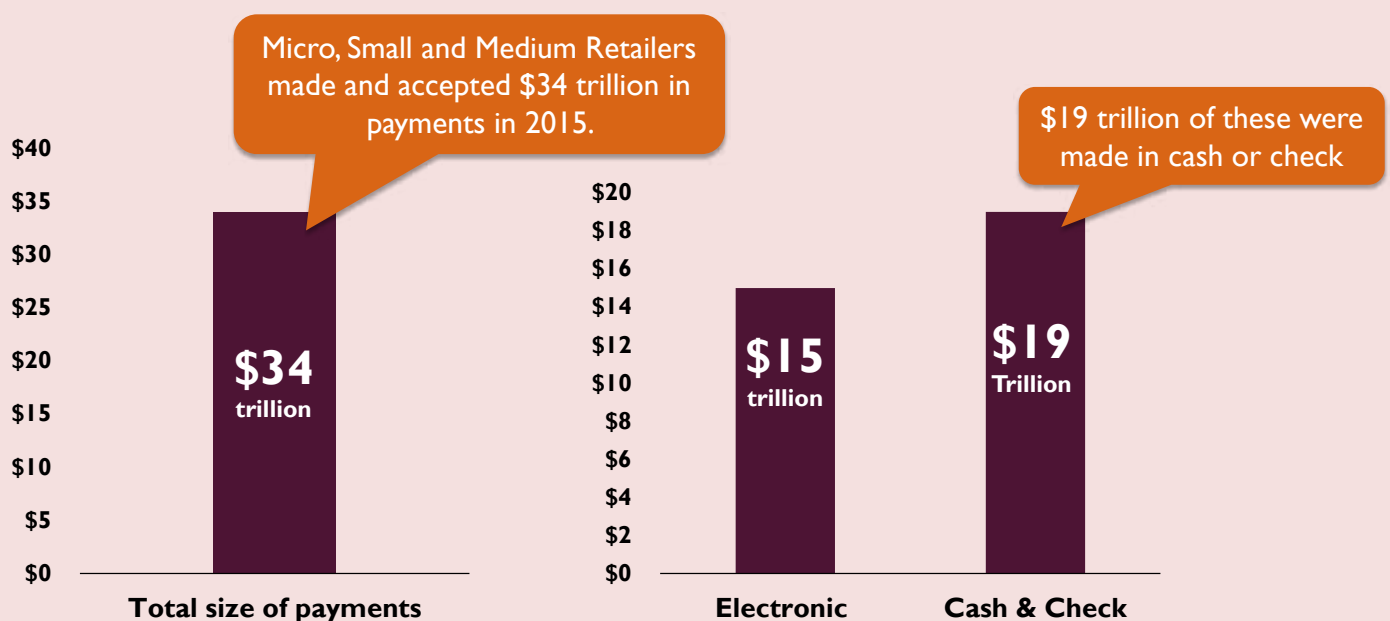
	G	B	P
G	G2G	G2B	G2P
B	B2G	B2B	B2P
P	P2G	P2B	P2P

- Earn digitally.

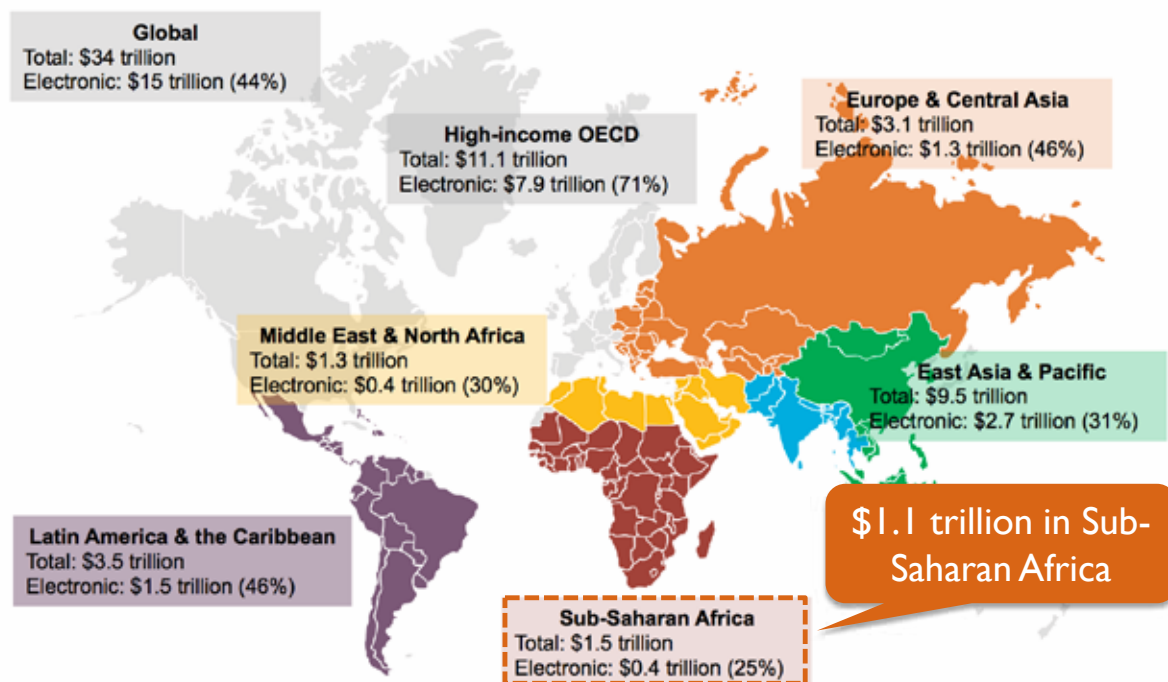
Mostly digitized

Largely cash based

Volume of global payments made in cash is massive



The majority of these cash payments are made in low- and middle-income economies



SOURCE: IFC | B2B payments include only those from the retailers to immediate suppliers

Markets that don't have a high prevalence of cards, hence could leapfrog directly to mobile payments

What types of partnerships to consider and why?

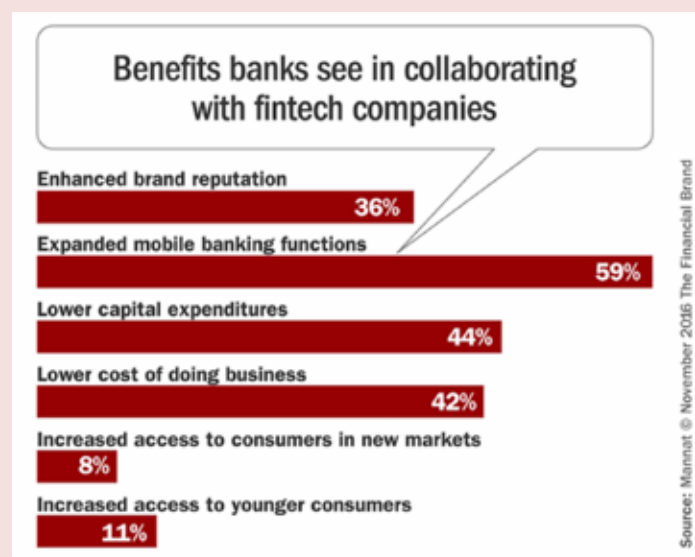
1. Bank-Fintech partnerships: leveraging strengths

COMMERCIAL BANK	FINTECH STARTUP
<ul style="list-style-type: none"> • Large customer base • Sticky client relationships • Great financial resources • Comprehensive product portfolio • Robust infrastructure • Deposit insurance • High credit-underwriting capabilities • Risk management experience • Access to investment capital 	<ul style="list-style-type: none"> • Agility and speed to market • Risk taking • Disruptive mindset • Innovative solutions • Lean set-up • Absence of legacy systems • Customer data analytics • Focus on limited product set • Less regulatory pressure

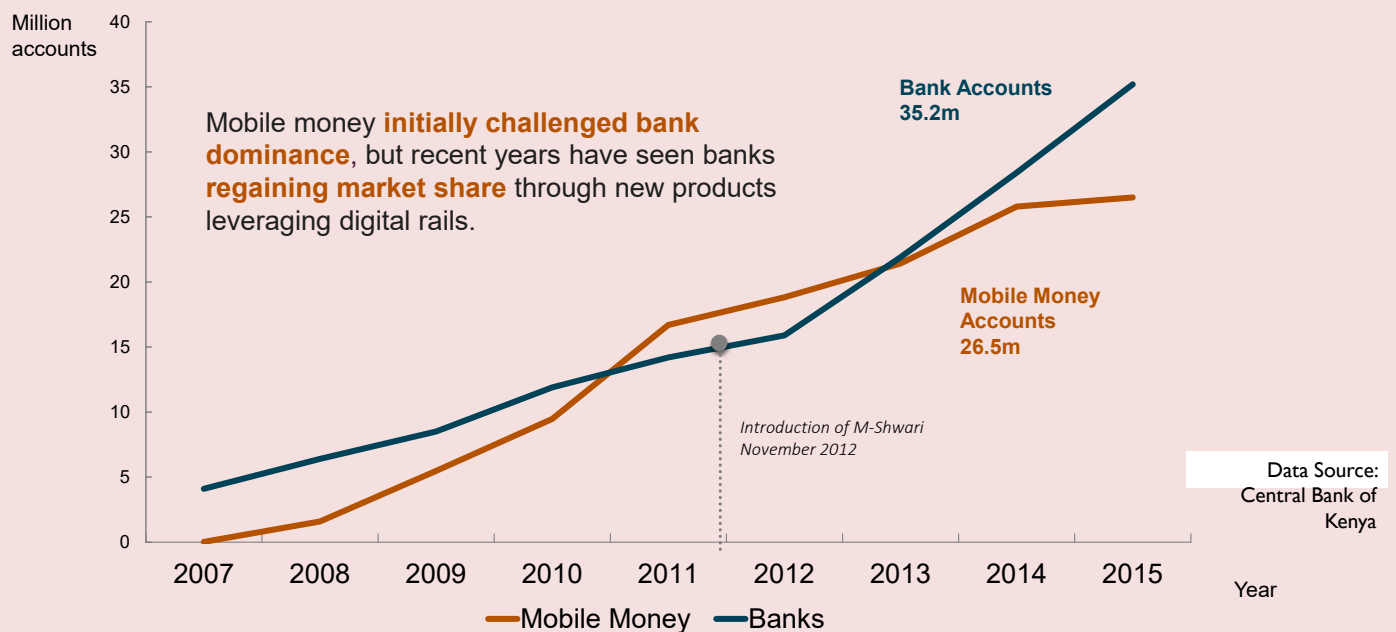
- The majority of these cash
- Payments are made in low & middle income economies—including markets where MM wallets are becoming the dominant form of financial account
- Over \$1 trillion is in SSA
- These markets have very low card penetration.
- But high and rising uptake of mobile wallets
- So they could leapfrog past cards altogether



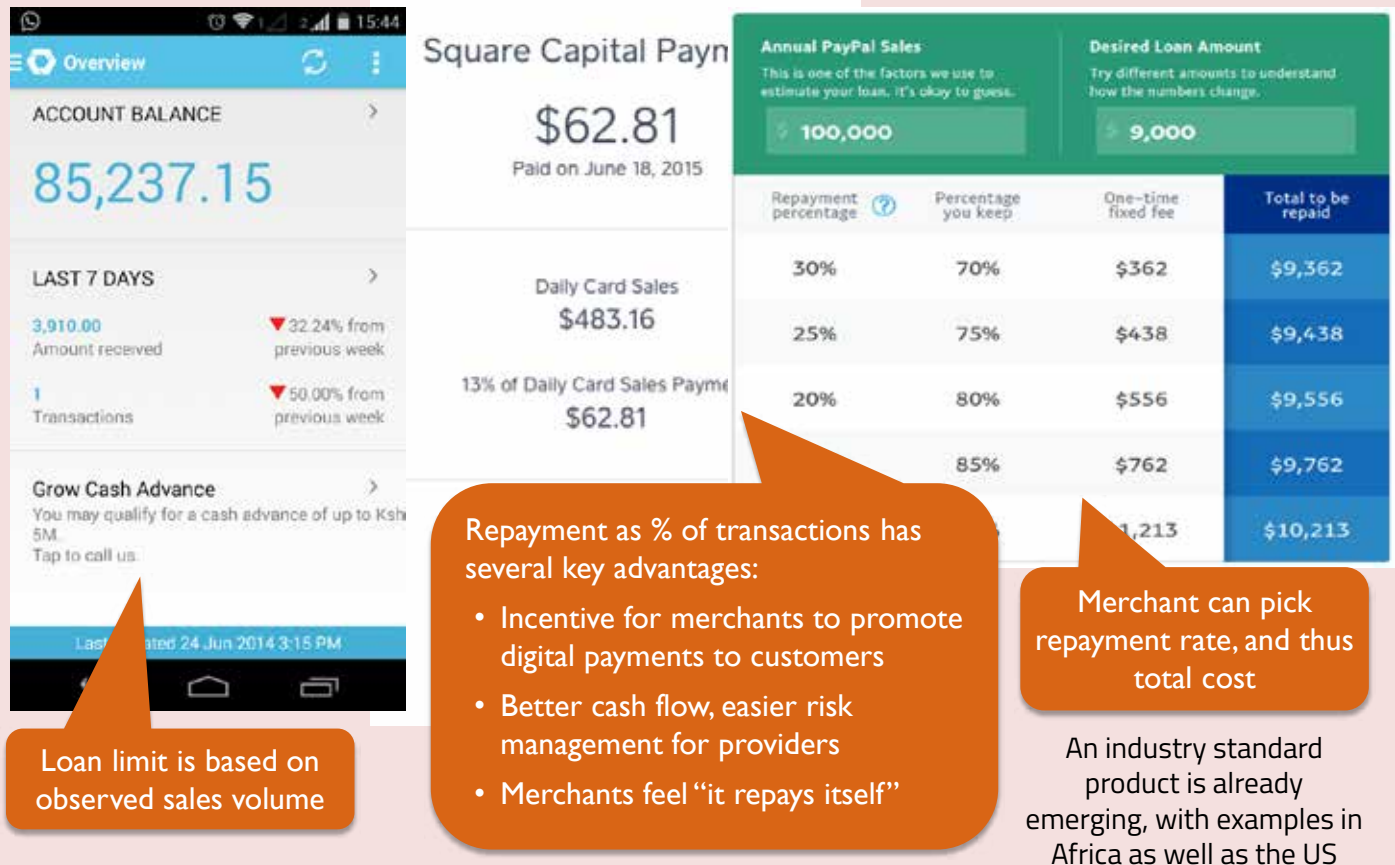
Attributes of bank-fintech partnerships



Example 1: Strategic cooptation based on context



Example 2: working capital (MSME Credit) with tech providers



2. Using tech for customer education and customization (front end)



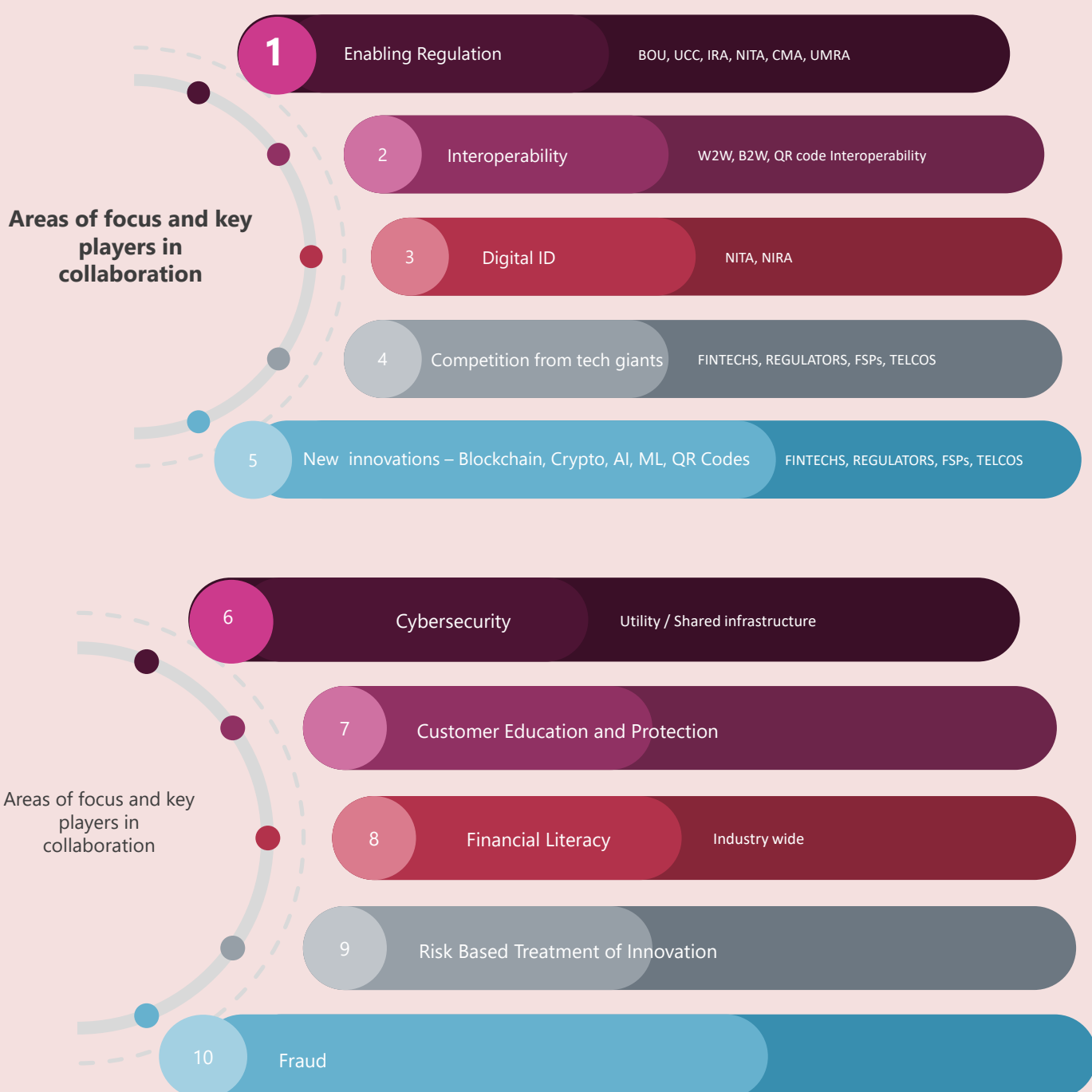
Vs



- Wealth Management: Betterment and Wealthfront: personalized investment portfolios with customized asset allocations based on an individual's risk score and account tax status, have grown to manage 3 and 2 billion respectively in just three years.
- Both are powered by Robo Advisors. Moving from human financial planners to personalized algorithm-based planners. Lowering management fees, which is good for the customer.



3. INDUSTRY WIDE PARTNERSHIPS





Unusual Bed-Fellows: Goliath and Goliath

Payments might be the beginning.. The future is fast changing

Tech, fintech, bank?

A Bank:

Lends \$1 BN to small businesses in 12 months

US \$150 Billion in corporate Bonds

Runs the world's largest money market fund

Provides cash advances for merchants



It's not a bank, it's a technology company.
Now a bank.

So where does this leave us?

The future of traditional banks : might be nothing but more than asset managers or custodian of deposits.

Large Customer, and Capital Base – to coopt, and collaborate.

The rise of platforms- GAFAA – Google, Amazon, Facebook (Libra), Apple – and more importantly Alibaba.

Last year Alibaba and WeChat together processed \$15 Trillion in mobile payments, 55% of which came from Alibaba.

Current Alibaba systems can handle 125,000 transactions per second / Visa can do 2000 in comparison.

It used to be David vs. Goliath.

With Technology companies – just 5 monopolies entering the fintech, payment and DFS space worldwide –

its now Goliath vs. Goliath.

Except these Goliaths can move at an amazing speed!

NEWS PAPER PUBLISHED ARTICLES

Telecoms, Bank Collaborations Sees Growth in Digital Payments

26N Friday, July 9, 2021 **BUSINESS**

By Ali Twaha

Using digital payment channels in Uganda has significantly increased over the last 18 months following the outbreak of the deadly coronavirus (COVID-19).

More deals were signed between telecommunication companies and financial institutions over the period. The sector has also seen global payment innovations and technologies, such as Visa, Mastercard and UnionPay partner with local banks to ease digital payments, as well as the cost of doing business.

Absa Bank, in partnership with MTN, is the latest to announce the introduction of the mobile money payment (MoMoPay) functionality at point-of-sale (POS) terminals.

The service, which seeks to further deepen the use of digital payment channels in the economy, enables clients without an Absa bank account to make payments at the POS terminals.

As many Ugandans shopped for supplies amid the coronavirus outbreak, concerns emerged on whether handling of cash could contribute to the spread of the virus.

Centenary Bank has issued more than one million Visa cards to its customers in an effort to promote cashless payments.

On the other hand, Stanbic launched a contact-less Visa card that allowed customers to simply tap at a POS terminal to complete a low-value payment transactions.

Airtel and Mastercard also introduced virtual (non-plastic) cards that allow Airtel Money customers, even those without a bank account, to make payments to local and global online marketplace. MTN and Visa have a similar partnership.

CHANGE IN PREFERENCE

Digital payments continued to grow strongly last year, a move that partly informed the closure of nearly 14 commercial bank branches countrywide as clients' tastes and preferences changed in the period.

The total number of bank branches decreased from 580 in 2019 to 566

last year, according to the latest Bank of Uganda (BOU) supervision report.

BOU attributed the branch closures to increased preference of digital channels, such as Internet banking, mobile banking, mobile money and agent banking, which were overserved during the year.

"Wherever there is an Absa POS machine in a supermarket, shops or pharmacy, among others, you can easily pay for goods and services directly using MTN MoMoPay at no extra cost," Mumba Kalifungwa, Absa's managing director, said.

The restrictions on movements and contacts during the lockdown and correspondent downward revision or zero rating of e-payment-related tariffs by financial institutions and non-merchant surcharge campaigns also drive utilisation of digital channels.

According to data from the Uganda Communications Commission, as at December last year, the penetration of mobile connections in Uganda

grew by 31.2% to 2.9 million and the value grew by 24.9% to sh24.9b by the end of December last year.

"Cashless transactions are the future, given the trends and increased mobile phone coverage in the country. Factors such as a youthful tech-savvy population, coupled with MTN Mobile Money's digitisation agenda, will continue to propel the adoption of digital services, such as MTN MoMo and MTN MoMoPay," Wim Vanhelleputte, the MTN chief executive officer, said.

LESS CASH, MORE DIGITAL PAYMENTS

Speaking during a webinar last year, Fredrick Olwit, the Africa Store Manager at Game Store, said the increased use of digital payments had helped reduce the amount of cash on their premises, thereby reducing the likelihood of pilferage, while at the same time mitigating the costs and risks of transporting cash.

"We have witnessed a reduction in cash variances and counterfeits in cash payments in the store. Improvement in customer service in the store as the cashier spends less time counting cash and easily swipes the cards quickly, reducing on the long queues, cashier fatigue and errors," he said.

Statistics from the Uganda Communications Commission also show that there was growth in the number of mobile money-accepting businesses to 32,000 last year from 26,000 in September last year.

Under the national financial inclusion strategy (2017-2022), BOU has set out to achieve a cashless economy by 2022, which involves building digital infrastructure, implementing the strategy for financial literacy and making payment services affordable.

TELECOMS, BANK COLLABORATIONS SEES GROWTH IN DIGITAL PAYMENTS



A customer pays for goods and services using a POS terminal at a supermarket. This mode of payment has been on the increase

BETWEEN THE LINES

• The active number of mobile banking users increased by 20.1% from 1.1 million in December 2019 to 1.3 million in December last year.

was equivalent to 67% of the total population.

Financial inclusion indicators by BOU indicate that whereas only 43% of Uganda's adult population own a bank account, 77% have active mobile money accounts.

The active number of mobile banking users increased by 20.1%, from 1.1 million in December 2019 to 1.3 million in December last year.

The volume of mobile banking payments dropped year-on-year by 18.6% to 1.6 million, whilst the value increased by 135.2% to sh9 trillion as at end December last year.

The volume of POS transactions

NEWS PAPER PUBLISHED ARTICLES

We can do more in regard to digital transformation

DAILY MONITOR FRIDAY, JULY 9, 2021

www.monitor.co.ug

We can do more in regard to digital transformation

On June 10, newly appointed Minister of State for Planning Amos Lugolobi, delivered the National Budget for the Financial Year 2021/2022. Just minutes after updates about the impact of the coronavirus pandemic on the economy, he highlighted key strides made in public spending thanks to digital solutions. Among them was the reduction in travel abroad and inland as well as physical workshops. Also, several locally made e-commerce applications were adopted to facilitate transactions during lockdown periods.

It was confirmed that the government made digital transformation a priority and earmarked Shs134.9 billion to fast track its implementation. In the new financial year, we expect broadband infrastructure to be extended to sub-counties and for the government to facilitate the development of software in support of e-commerce, e-governance and e-payments.

I commend the government for this strategy. However, there is more we can achieve with digital solutions. Every student should be reached where they are and doctors can offer medical care remotely and patients can easily access drugs prescribed. Farmers can easily purchase genuine seeds and fertilizers while they receive guidance on best farming practices by experts. We can finally bridge the glaring divide between rural and urban communities as regards service delivery. The tourism industry will have the post-pandemic recovery it requires with solutions that facilitate travel. Manufacturers can adopt smarter solutions and produce safer products. Businesses, currently suffering the brunt of the lockdown can streamline their workflows, minimize manual processes and

...access to the digital economy is the new competitive landscape for businesses.



Japheth Kawanguzi
Digital transformation

instead of laying off workers, they would repurpose them to perform emerging tasks. But all these initiatives require us to increase the current resource envelope and use policy to make our digital entrepreneurs more attractive to investment.

At The Innovation Village, the evidence of these opportunities is in the multiple startups leading the charge of opportunities in the digital economy that demonstrate that there is more we can do if we make digital transformation inclusive.

For example, 21 million people in Uganda have access to the internet. The 12 per cent excise duty on data excluding that used for provision of medical and education services, in the long run, is bound to hold back the country's goals towards internet access and business goals.

The failure of Over The Top (OTT) tax gives the government a more effective way to collect tax revenue from telecommunication companies. However, this will give compa-

nies the liberty to increase their prices thus discourage internet use.

Despite the challenges presented, as a telecommunication company, there is an opportunity to compete on the market by providing competitive pricing options to customers by creatively reducing costs of service production.

On the other hand, businesses should look to maximize the advantages of economies of scale. By increasing the scale of business, a company holds the upper hand in negotiating the best data bundles a telecommunication company can offer.

In regards to agriculture, there are online platforms that have been put in place to mitigate challenges along the value chain from farmer to market. Agribusiness should look to leverage the Shs1.67 trillion set aside for agro-industrialization by collaborating with top tier manufacturers, Small and Medium Enterprises, and the farmer at the bottom of the pyramid through Savings and Credit Co-operative Organisations (SACCOs).

Under agro-industrialization, banks, insurance companies and Fintechs can offer a wider variety of financing options to farmers to enable them meet demand while maintaining low production costs. The new tech solutions by National Agricultural Research Organisation, National Animal Resources Centre and Databank (NACRC & DB) track transactions along the commodity value chain thus reducing the risk financial firms face from farmers. Now is also a good time to trust locally built digital platforms. They are the businesses of the day that will create jobs, widen the tax base and through growth solve pressing social challenges.

With the second wave of the pandemic in full rage, and a third wave rumoured, access to the digital economy is the new competitive landscape for businesses.

Mr Japheth Kawanguzi is the team lead at The Innovation Village

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