

UNLOCKING THE POTENTIAL OF FINANCIAL INNOVATION

for sub-Saharan Africa

July 9-10, 2018 | Botswana

12:00
FinTech



BANK OF CANADA
BANQUE DU CANADA

Introduction

New banking and financial services operating in the Fintech space promise to promote financial development and inclusion by reducing the costs of financial services and greatly improving competition and access. They may, nevertheless, disrupt banks and other established providers of financial services by chipping away at traditional revenue streams. Banks will need to reconsider innovative ways to acquire, transact, and engage with customers. Similarly, increasing cost of compliance to strengthen anti-money laundering and countering terrorist funding regulation urges banks to consider withdrawing from small-denomination remittance business, which would have significant negative implications to economies reliant on such remittances.

Inclusion is the next growth frontier in banking and finance in sub-Saharan Africa. The internet companies, telecoms and start-ups were the first to seize the opportunity to innovate and provide banking and financial services to the un-banked. Starting with payments, they have moved into other financial services like savings, loans, micro insurance, and investments. The African continent is a world leader in mobile payments, which represents an opportunity to improve significantly financial inclusion through the provision of financial services using mobile platforms.

Virtual currencies and their underlying technologies can provide faster and cheaper financial services, and become a powerful tool for fostering financial inclusion in low-income countries. The ability to carry out transactions securely without central oversight, known as blockchain technology, can reduce costs of international transfers, shorten transaction times, and enable smart contracts. The challenge will be how to reap the benefits while preventing illegal uses and preserving financial stability.

Workshop Objectives

- Provide better understanding of the role of digital technology in achieving financial innovation in SSA, including smart accounting and contracts, crowd-sourcing, and funding.
- Explore the growing use of blockchain technologies that allow faster, more flexible and secure payments systems, sharing experiences and expertise among peers in SSA.
- Explore the scope for digital technology to promote financial development and inclusion.
- Discuss appropriate regulatory and public policy responses to Fintech, including correspondent banking relationships.

Monday, July 9, 2018

- 8:00–8:15 am** **Registration**
- 8:15–8:25 am** **Welcome Speech**
Moses Dinekere Pelaelo, Governor, Bank of Botswana
- 8:25–8:40 am** **Opening Remarks**
Onkokame Kitso Mokaila, Minister of Transport and Communications, Botswana
- 8:40–8:50 am** **FinTech in SSA: What are the new issues for policymakers?**
Opening remarks and presentation by **Anne-Marie Gulde-Wolf**, Deputy Director, African Department, IMF

(Photo Session; all participants)

SESSION I. **CAN FINTECH TRANSFORM SSA?**

Moderator: **Kealeboga Masalila**, Deputy Governor, BoB

- 9:10–10:10 am** **FinTech and The Transformation of Financial Systems**
Scott Hendry, Special Director for FinTech, BoC
Technological innovation in financial services could transform the financial system in SSA but realizing the benefits of fintech, while guarding against the risks it could create, requires strong collaboration among actors and peers in the financial system
- 10:10–10:30 am** **Tea Break**
Moderator: **Ewetse Rakhudu**, General Counsel, BoB
- 10:30–11:00 am** **The Payment System and Fintech Developments in Ghana**
Eric Yaw Kumi and Grace Badger, Payment Systems Department, Bank of Ghana
- 11:00–11:30 am** **FinTech and Mobile Payments Developments in Mauritius**
Vikram Punchoo, Second Deputy Governor of the Bank of Mauritius
- 11:30–12:00 pm** **Tea Break**
- 12:00–13:00 pm** **Kenya's Digital Transformation**
Mohammed Nyaoga, Chairman, Central Bank of Kenya, Board of Directors

13:00–14:45 pm

Lunch

Keynote Speech: FinTech and Cross-Border Payments

Dong He, Deputy Director, Monetary and Capital Markets Department, IMF

SESSION II.

DISTRIBUTED LEDGER TECHNOLOGIES (DLT) AND WHOLESALE PAYMENT SYSTEMS

Moderator: Rodolfo Maino, IMF

14:45–15:45 pm

Can Project Jasper Be Replicated in SSA?

Dinesh Shah, e-Money & Financial Technology Research Program Manager at BoC

Payments Canada, the Bank of Canada, major Canadian banks and technology consortium R3 began an ambitious project—code-named Jasper. Its goal was to build and test an experimental wholesale interbank payment system, using Distributed Ledger Technologies.

15:45–16:00 pm

Coffee Break

16:00–16:45 pm

Distributed Ledger Technology in Payment, Clearing, and Settlement

Arif Ismail, Head of the Fintech Executive Management Department at the Reserve Bank of South Africa and member of the Committee on Payments and Market Infrastructures and the Markets Committee (BIS).

Analytical framework to review and analyze DLT arrangements to identify opportunities and risks, and support trust. A key public policy objective for payment, clearing and settlement arrangements is to identify, monitor and manage material risks that may arise from their use.

16:45–17:45 pm

Fintech, Inclusive Growth, and Cyber Risks: What can be learnt from the Middle East and North Africa Regions

Inutu Lukonga, IMF

18:00–19:30 pm

Dinner Cocktail

Tuesday, July 10, 2018

SESSION III. FINTECH, DLT, AND FINANCIAL INCLUSION

Moderator: **Scott Hendry**, Special Director for FinTech, BoC

8:00–8:30 am **Impediments to FinTech's Growth Potential in SSA**

Rodolfo Maino, IMF

8:30–9:00 am **Digitally Delivered Financial Services in Tanzania**

Emmanuel M. Mung'ong'o, Manager Micro-Surveillance, Financial Stability Directorate, Bank of Tanzania

9:00–9:45 am **Blockchain in Development: Regulatory Challenges**

Mary Mwangata, East Africa Legal and Compliance Specialist, BitPesa

9:45–10:00 am **Tea Break**

SESSION IV. FINTECH AND CENTRAL BANKING

Moderator: **Oabile Mabusa**, Chief Executive Officer, Bankers Association of Botswana

10:00–10:30 am **The Mechanics of DLT**

Dinesh Shah, e-Money & Financial Technology Research Program Manager at BoC

10:30–11:15 am **The Possible Need for Regulating the Crypto Ecosystem**

Ms. Kirsten van Driel, De Nederlandsche Bank

While crypto's and tokens could be a new means of payment and a possible new way of market finance, there are risks regarding financial and economic crime that should be addressed. There is a need to regulate the different market players that comprise the crypto ecosystem to mitigate risks associated with crypto's and tokens.

- 11:15–11:30 am** **Tea Break**
- 11:30–12:30 pm** **Potential Effects of Fintech on Banking**
Francisco Rivadaneira, Research Advisor, BoC
- 12:30–14:00 pm** **Lunch**
Keynote Speech by Moses Dinekere Pelaelo, Governor, BoB

SESSION V. PAYMENTS AND CENTRAL BANK DIGITAL CURRENCIES

- Moderator: Dong He**, Deputy Director, Monetary and Capital Markets Department, IMF
- 14:00–14:45 pm** **E-money and Payments Policy**
Francisco Rivadaneira, Research Advisor, BoC
Discussing the responsibilities of central banks in the areas of payments systems, monetary policy, and financial stability and the trade-offs faced by central banks in the decision to issue new forms of e-money
- 14:45–16:00 pm** **Central Bank Digital Currencies**
Arif Ismail, Head of the Fintech Executive Management Department at the Reserve Bank of South Africa and member of the Committee on Payments and Market Infrastructures and the Markets Committee (BIS)
A high-level overview of the implications of central bank digital currencies for payments, monetary policy and financial stability.
- 16:00–16:15 pm** **Wrap Up and Closing**
Anne-Marie Gulde-Wolf, Deputy Director African Department, IMF

Speaker Biographies



Mr. Pelaelo was appointed Governor of the Bank of Botswana effective October 21, 2016, after, in total, over 25 years as a central banker. Governor Pelaelo joined the Bank of Botswana in 1990 as Senior Bank Examiner in the Banking Supervision Department following a six-year lectureship in accounting and management studies at the Botswana Institute of Administration and Commerce and University of Botswana. He rose to various senior positions in the Bank and, in 1996, was appointed Director of Banking Supervision Department. In the Banking Supervision Department he was instrumental in establishing the institutional framework for banking supervision post the abolition of exchange controls in Botswana. He formulated a number of prudential regulations and policies, including work on banking soundness and macroeconomic stability issues. In 2003, Mr. Pelaelo took a three-year sabbatical leave and joined the Financial Stability Institute (FSI) at the Bank for International Settlements (BIS) in Basel (Switzerland), where he continued to expand and deepen his knowledge of banking regulation, supervision and financial stability. As part of his work at the BIS, he coordinated a number of international conferences and presented on a wide range of topics for banking supervisors across the world, including in Africa, Middle East, South East Asia, South and Central America, the Caribbean Islands, Eastern Europe, Transcaucasia and Central Asia. Before his appointment as Governor, Mr. Pelaelo had been Deputy Governor since 2006 with overarching responsibility for banking regulation and supervision, payment infrastructure and oversight, banking & currency, accounting, security and other support services. Governor Pelaelo is the current MEFMI Board Chairman, and also co-chairs the Financial Stability Board (FSB) Regional Consultative Group (RCG) for Sub-Saharan Africa with Governor Kganyago of the South African Reserve Bank.



Honourable Onkokame Kitso Mokaila is Botswana's Minister of Transport and Communications, the post he has held since October 2016. The Ministry is responsible for the formulation, direction, co-ordination and implementation of national policies and programs for the transport and communications sectors. Honourable Mokaila has a Bachelor of Science Degree in Mechanical Engineering from the Military College of Electronic and Mechanical Engineering in India. Honourable Mokaila was the Minister of Minerals, Energy and Water Resources from October 2012 up to September 2016. Prior to that, Honourable Mokaila was the Minister of Environment, Wildlife and Tourism from November 2004 to September 2012. He started his career with the Botswana Defence Force from 1980-1988. He then became the Managing Director of International Computer Limited Botswana (PTY) Ltd from 1988-1996. He joined Hyundai Motor Distributors (PTY) Ltd-Botswana, in 1997-2000 as the General Manager. He became the Managing Director of Unisys Botswana Pty Ltd (IT Company) from 2000-2002. In 2003, he established his own company, Systems Consultancy and Services (PTY) Ltd trading as Unisystems, where he held the position of the Managing Director until he was elected to Parliament in 2004.



Anne-Marie Gulde-Wolf, a German National, is a Deputy Director of the IMF's African Department (AFR). She is directly overseeing the Department's work and policy priorities on a number of Southern and Central African countries, including Zimbabwe, South Africa, Botswana, Namibia, Lesotho, Swaziland, Cameroon, Equatorial Guinea, Gabon, Republic of Congo, and the CEMAC, as well as the department's work on financial sector issues. Before re-joining the African Department in 2012 she was Deputy Director in the European Department, and earlier a division chief in the Monetary and Capital Markets Departments, and advisor in AFR. Ms. Gulde studied Economics, Political Science and History in Tuebingen, (Germany), St. Louis (USA), and Kiel (Germany) and holds a PhD in international economics from the Graduate Institute of International Studies in Geneva (Switzerland). She has published widely on different topics in international economics, with a focus on exchange rate regimes, currency boards, and financial stability and development issues.



Dr. Kealeboga S. Masalila is a Deputy Governor at the Bank of Botswana, appointed in December 2016, and oversees the Research and Financial Stability, Banking Supervision, Finance and Planning, Payments and Settlement, as well as corporate and legal affairs functions. Prior to appointment as Deputy Governor, he had been Director of the Research and Financial Stability Department from 2010, an area where he spent most of the over 30 years he worked at the Bank of Botswana. He has also worked in the Banking Supervision Department of the Bank and under the Special Appointee Program at the International Monetary Fund, as well as the Ministry of Trade and Industry. Dr. Masalila has a special interest in monetary and exchange rate policies and financial sector regulation and reform, and has contributed research and policy papers in this regard. He graduated with a Bachelor of Commerce degree from the University of Botswana and subsequently studied in the UK and obtained an MPhil in Monetary Economics from Glasgow University and a PhD in Economics from the University of Manchester.



Scott Hendry was appointed Senior Special Director, Financial Technology (FinTech) in the Funds Management and Banking Department (FBD) in June 2016. In this role, he oversees the Bank's efforts to monitor and research developments and implications of new technologies affecting the financial sector. He previously held the role of Director of Research for FBD and, before that, for the Financial Markets Department (FMD). His personal research has focused on electronic money, price discovery in the Canadian government bond market, and central bank communication. He has a PhD in Economics from the University of Western Ontario.



Ewetse T. Rakhudu is General Counsel (General Manager) at the Bank of Botswana (Bank), appointed in October 2016. As General Counsel she oversees Legal Affairs, Secretariat, and Communications and Information Services Divisions. Prior to appointment as General Counsel, she had been Director of Human Resources and Director of Banking, Payments and Settlement. In the latter role she was instrumental in ensuring that the country maintains a safe, secure and reliable national payments system, driving the Bank's agenda to modernise and improve the payments system and participation in regional payments system integration activities. Until March 2018, Ms. Rakhudu also served, as Country Leader in the SADC Regional Payments Integration Sub-Committee under the auspices of the SADC Committee of Central Bank Governors and as Chairman of the Botswana SWIFT National User Group. In the early years of her professional career (before joining the Bank), Ms. Rakhudu performed in different capacities relating to the practice of law, including as State Counsel, private legal practitioner and as Senior Judicial Officer in the Magistrates Courts. Other professional activities include membership of the Boards of the Botswana Medical Aid Society and the Botswana Power Corporation. Ms. Rakhudu possesses Bachelor of Laws (LLB) and Master of Business Administration (MBA) degrees. She qualified and worked as a lawyer from 1984 and joined the Bank in 1991.



Mr. Eric Kumi has ten-year experience in the Ghanaian financial sector. He has been a former examiner and worked at other Financial Institutions Supervision Department (Bank of Ghana). Currently, he is working with the Payment Systems Department (Bank of Ghana). Mr. Kumi graduated from the Association of Chartered Certified Accountants (United Kingdom), holds a master in Finance from KNUST Business School (MSc).



Vikram Punchoo was appointed Second Deputy Governor of the Bank of Mauritius in December 2014. He is a member of the Board of Directors and of the Monetary Policy Committee of the Bank of Mauritius. He joined the Bank in 1989 as a Research Officer in the Research Department. Prior to his appointment as Deputy Governor, he was the Head of the Economic Analysis and Statistics Divisions. He graduated from University Aix-Marseille and University of London.



Dong He is Deputy Director of the Monetary and Capital Markets Department (MCM) of the International Monetary Fund. As a member of the MCM's senior management team, he is responsible for providing leadership for MCM's work on central banking, fintech, and global financial stability analysis (including the production of the Global Financial Stability Report); and for assisting the Director in the management and supervision of the work of the department. Prior to joining the IMF in October 2014, Dong He was Executive Director at the Hong Kong Monetary Authority, responsible for managing the Research Department and for directing research and policy advice on issues relating to the maintenance of monetary and financial stability and the development of financial markets. He was also Director of the Hong Kong Institute for Monetary Research, responsible for leading the Institute's research activities. He joined the World Bank through the Young Professionals Program in 1993 and was a staff member of the IMF during 1998-2004. Dong He holds a doctorate in economics from the University of Cambridge. He has published extensively on monetary policy and financial market issues. His current research interests include the transmission of global liquidity, interactions between monetary policy and financial regulation, the implications of Fintech for central banking, monetary and financial cooperation in the Asia-Pacific region, the framework and conduct of monetary policy in China, and the Chinese approach to capital account liberalization and renminbi internationalization.



Rodolfo Maino is a Senior Economist at the African Department of the IMF and also worked at its Monetary and Capital Markets Department. Prior to joining the IMF, Rodolfo worked in the private sector (Phillip Morris Co.), the Central Bank of Argentina and at different universities, teaching econometrics. Mr. Maino holds a Master in Mathematical Statistics and a PhD in Economics from the University of Utah.



As Program Manager E-money and Fintech Research **Dinesh** leads the technology aspect of the Bank of Canada's research agenda in those areas. The research agenda encompasses the analysis of emerging and potentially disruptive technologies with wide applications to financial market infrastructure and the financial system. This analysis supports economic and financial system research into the implications of such technologies to the core mandates of the Bank of Canada. Prior to his current role, Dinesh was Technical Researcher in the area of electronic payments and electronic money. His research focused on understanding and communicating the workings and impact of new technologies in finance, such as distributed ledger technology, and research into conceptual architectures for central bank issued e-money. Dinesh first joined the Bank of Canada in 2009 as an Enterprise Architect. Before joining the Bank Dinesh has been a co-founder and architect at various start-ups. He spent 8 years as a developer of various fixed-income trading and risk management systems at financial institutions in London. In addition he provided expertise on the application of leading edge technologies to securities trading and clearing firms. Dinesh holds a BSc (hons) in Physics with Computing from The University of Kent in the U.K.



Arif Ismail is the Head of Fintech at the South African Reserve Bank. He currently co-chairs the Intergovernmental Fintech Working Group leading the charge to revised policy stances on Fintech. He was Head of Oversight: Payment Systems from 2015 to 2017. Arif was responsible for setting and implementing the South African national payment systems strategy at the Payments Association of South African since 2008. He is a member of the BIS Working Group on Digital Innovations and member of the FSB Financial Innovation Network. His passion revolves around education, critical systems thinking and ending poverty. He is committed to progressing development in South Africa on emerging topics such as central bank issued digital currency, distributed ledgers, and machine learning. Arif holds a BSc in mathematics and physics, an MBA through GIBS, and a DBA on strategic leadership and transformation. His area of interest spans the change domain, and includes a focus on complex adaptive systems, social cognition and leadership theory.



Ms. Inutu Lukonga is currently working as the financial sector expert in the Regional Studies Division of the Middle East and Central Asia (MCD) department of the International Monetary Fund (IMF). She started her career as a macro-financial economist at the Central Bank of Zambia in 1981 and served in various capacities, including as Deputy Director of the Economic Research Department. She joined the IMF in 1993 and served as a macroeconomist in missions to Africa (AFR), Asia Pacific (APD), Europe (EUR), and the Caribbean (WHD). In 2000 she took up an assignment at the Financial Services Authority in UK (UK/FSA) where she supervised banks, securities firms and pension funds. Thereafter, she assumed various financial sector portfolios at the IMF, including as BCP and IOSCO assessor in FSAPs, led FSAP and TA missions, the latter covering risk-based supervision, bank restructuring and crisis management, stress testing, payment systems, monetary and foreign exchange operations, systemic liquidity management and deposit insurance. Since joining MCD in 2013, she has led several financial sector policy projects, including in Islamic Finance, Financial Inclusion, Fintech, and Cyber risks. Ms. Lukonga holds a Bachelor of Arts (BA) degree in Economics (Honors) from the University of Zambia, a Master of Arts (MA) degree in International Economics from the University of Sussex (UK) and was a PHD candidate in Development Economics, also at the University of Sussex.



Dr. Emmanuel Mwanambali Mung'ong'o has been Manager Micro-Surveillance at Directorate of Financial Stability, Bank of Tanzania since January 2013. His role includes monitoring of financial intermediaries, financial markets and financial system infrastructure from macro-prudential oversight and policy perspective. Prior to assuming this position, he worked as bank examiner for 10 years. His current position, includes membership to Tanzania National Financial Inclusion Technical Team, which coordinates country's financial inclusion initiatives, focusing on promotion of innovative financial products such as digital financial services combined with setting up financial consumer protection systems to mitigate consumer risks in the rapidly changing financial sector landscape. He is a member East African Community Macroprudential Analysis and Stress Testing Working Group which steers the development and harmonization of macro-prudential analysis and policy tools in the region. He is also chairman of Responsible Lending Sub-group of the Alliance of Financial Inclusion (AFI) focusing on financial consumer protection issues relating to Digitally delivered Credit.



Mary Mwangata is a legal practitioner with over ten years of active legal risk and compliance practice. Mary is passionate about new technologies and the best way to engage stakeholders. She has held multiple senior management positions in Pan-African financial institutions such as Equity Bank Group and STANLIB. Mary is now an East Africa Legal and Compliance Specialist in BitPesa.



Mohammed Nyaoga is the Senior Partner at Mohammed Muigai Advocates. He was called to the Bar in 1985. He holds LLB and LLM degrees from the University of Nairobi and Diploma in law from the Kenya School of Law. He is a Certified Public Secretary (CPS); holds certificates in Corporate Governance from Commonwealth Association of Corporate Governance and American Securities and Exchange Commission; a Certified Company Director and a Member of the Institute of Directors of Kenya. He specializes in corporate finance, civil, commercial, litigation and corporate governance. In addition to the practice of Law, he has been Vice-Chairman of the Law Reform Commission, Chairman of its Business Laws Committee and Chairman of the Mining Licences Task Force. He has also been a Director of Capital Markets Authority, Chairman of International Commission of Jurists, Council member of Law Society of Kenya, Special Board Corporate Governance Advisor and Chairman of EcoBank Kenya. He has also been Chairman at the Commission of Inquiry into the suspension of the County Government of Makeni. He is currently the Chairman of the Board of Directors of Central Bank of Kenya. In addition he is a certified training consultant in corporate governance with the Centre for Corporate Governance for over 13 years where he has trained over 10,000 directors in Kenya and in Africa at large. He has also been a consultant and Trainer for State University of New York on procurement (SUNNY Kenya) and a Lecturer (LLM Programme) University of Nairobi, School of Law (Business Law Department) on Public Procurement and accounting law. He is currently a regular Trainer/Speaker at Central Banking Publications (UK) Governance Training Series at Windsor, Cambridge and Oxford and also one of authors and editors of Central Banking Publications.



Mr. Oabile Mabusa is the Chief Executive Officer of the Bankers' Association of Botswana, a lobbying and advocacy organization for private commercial banks in Botswana. Previous to joining the Bankers' Association, Mr. Mabusa worked for Bank of Botswana where he held several positions in Banking Supervision, Banking and Currency, Management Systems and Human Resources. He retired from Bank of Botswana in 2011 at the position of General Manager. Mr. Mabusa served on the Board of Botswana Telecommunications Corporation for 9 years, during which period he was involved in the transformation of BTC and also chaired the corporation's Finance and Audit Committee. He was also a member of the founding Board of the Public Enterprise Evaluation and Privatization Agency (PEEPA) for which he also chaired the Finance and Audit Committee. In more recent times, Mr. Mabusa has served on the Governing Council of Business Botswana (formerly Botswana Confederation of Commerce, Industry and Manpower), an active private sector lobbying organization. Mr. Mabusa currently serve on the Board of Botswana's Special Economic Zones Authority (SEZA). He graduated from the University of Botswana with a Bachelors degree in Sociology and Public Administration in 1982 and holds a Masters Degree in Public Policy, a Post-graduate Diploma in Policy Analysis and Management and a Post Graduate Diploma in Information Systems and all obtained from the University of Southern California in the United States of America.



Kirsten van Driel is a policy adviser at De Nederlandsche Bank (DNB), Retail Payments Policy Department. Her area of research and knowledge is policy issues regarding technical and digital innovations in payments, with an emphasis on blockchain and crypto's. In her 15-year career at DNB, she has covered a broad spectrum of IT as well. She holds a master's degree in Political Science from the University of Amsterdam.



Francisco Rivadeneyra is a Research Advisor in the Funds Management and Banking Department at the Bank of Canada. His research is broadly divided into financial economics and payments research. He is interested in how agent heterogeneity and payments infrastructure affect asset prices and welfare. His recent academic research focuses on the implications of technological innovations, for example electronic money and distributed ledger technologies, for the mandates of central banks. His recent policy work has been to develop computational tools to measure the risk and efficiency of payments systems. Earlier work focused on the management of domestic debt and foreign reserves portfolios. Mr. Rivadeneyra holds a PhD in Economics from the University of Chicago.

