

CENTRAL BANK OF THE FUTURE

2019 CONFERENCE PROGRAM



WELCOME.

We are thrilled to welcome you to the 2019 Central Bank of the Future Conference, hosted by the University of Michigan's Center on Finance, Law & Policy.

In partnership with the Bill & Melinda Gates Foundation, our team has spent almost a year researching how central banks around the world can implement new policies and technologies which promote greater financial inclusion. As technology rapidly transforms financial services, our team strives to reimagine how central banks can capitalize on these advancements to more effectively serve our world's underbanked and underserved populations.

Over the next two days, we will hear distinguished policymakers, fintech executives, and experts from a wide range of disciplines explore the future of central banks and their role in expanding access to financial services. We look forward to a lively dialogue that advances financial inclusion and inspires leaders across the globe to better connect the world's most vulnerable populations to their country's financial systems.

To read the working papers we have released so far, please visit our website at <u>financelawpolicy.umich.edu/central-bank-research</u>. Join the conversation by following us on Twitter @MichiganCFLP or visit our LinkedIn page.

We appreciate your attendance, and we look forward to a productive discussion.

Sincerely,

Michael S. Barr

Joan and Sanford Weill Dean and Frank Murphy Professor of Public Policy, Gerald R. Ford School of Public Policy; Roy F. and Jean Humphrey Proffitt Professor of Law; and Faculty Director, Center on Finance, Law & Policy, University of Michigan

Adrienne A. Harris

Gates Senior Research Fellow, Center on Finance, Law & Policy; Professor of Practice, Gerald R. Ford School of Public Policy

Wednesday, October 2, 2019 at Palmer Commons

WELCOME AND INTRODUCTIONS by

Michael Barr Joan and Sanford Weill Dean, Ford School of Public Policy, University of Michigan **Adrienne A. Harris** Professor of Practice, Ford School of Public Policy, University of Michigan





Great Lakes Room - 4:00-4:10 p.m.



OPENING KEYNOTE ADDRESS by **Mary Ellen Iskenderian** *President and CEO, Women's World Banking*

Great Lakes Room - 4:10-5:00 p.m

Opening Reception for All Attendees - Atrium - 5:00-6:00 p.m

Thursday, October 3, 2019 at Palmer Commons

Breakfast for All Attendees - Atrium - 8:15-9:00 a.m.

WELCOME AND INTRODUCTIONS by Michael Barr & Adrienne A. Harris Auditorium - 9:00-9:10 a.m.



OPENING KEYNOTE ADDRESS by Jennifer Tescher

President and CEO, Financial Health Network

Auditorium - 9:10-10:00 a.m.

Coffee Break - Atrium - 10:00-10:10 a.m.

PANEL NO. 1 – CENTRAL BANK APPROACHES TO FINANCIAL INCLUSION

Moderated by **Greta Bull**, CEO, Consultative Group to Assist the Poor (CGAP) with panelists:

- Lobna Helal, Deputy Governor, Central Bank of Egypt
- **Sofie Maddens**, Head of the Regulatory and Market Environment Division, International Telecommunications Union (ITU)
- Ajay Shah, Professor, National Institute of Public Finance and Policy
- Michael Wiegand, Director of the Financial Services for the Poor, Bill & Melinda Gates Foundation

Auditorium - 10:10-11:40 a.m.

Attendees move to Great Lakes Room for buffet lunch - 11:45 a.m. - Noon

PANEL NO. 2 (LUNCH) - INNOVATION & CENTRAL BANKING

Moderated by **Chris Calabia**, *Senior Advisor, Supervisory & Regulatory Policy Financial Services for the Poor, Bill & Melinda Gates Foundation* with panelists:

- Aishah Ahmad, Deputy Governor, Central Bank of Nigeria
- Leonardo Gambacorta, Head of Innovation & Digital Economy Unit, BIS

Great Lakes Room - Noon-12:50 p.m

Thursday, October 3, 2019 at Palmer Commons

Attendees transition back to Auditorium - 12:50 p.m. - 1:00 p.m.

PANEL NO.3 – DIGITAL CURRENCIES, DISTRIBUTED LEDGER TECHNOLOGY, AND CROSS-BORDER PAYMENTS

Moderated by **Adrienne A. Harris**, *Professor of Practice, Gerald R. Ford School of Public Policy, University of Michigan* with panelists:

- Abdel Banda, Co-founder and CEO, Banyan Infrastructure
- Stefan Ingves, Governor, Sveriges Riksbank
- Njuguna Ndung'u, Executive Director, African Economic Research Consortium (AERC)

Auditorium - 1:00-2:30 p.m

Coffee Break - Atrium - 2:30-2:45 p.m.

PANEL NO.4 – ANTI-MONEY LAUNDERING AND FINANCIAL INCLUSION

Moderated by Jo Ann Barefoot, CEO, Barefoot Innovation Group and Hummingbird with panelists:

- Jennifer Shasky Calvery, Global Head of Financial Crime Threat Mitigation and Group General Manager, HSBC
- **Aaron Klein**, Economic Studies Fellow; policy director of Center on Regulation and Markets, Brookings Institution
- Auditorium -2:45-4:00 p.m

CLOSING CONVERSATION:

Michael Barr Joan and Sanford Weill Dean, Ford School of Public Policy, University of Michigan in conversation with





Stefan Ingves, Governor, Sveriges Riksbank

Njuguna Ndung'u - Executive Director, African Economic Research Consortium, AERC & former Governor, Central Bank of Kenya

Auditorium - 4:00-5:00 p.m.

CLOSING REMARKS by **Michael Barr** - Auditorium - **5:10-5:15 p.m.**

KEYNOTE SPEAKERS

Stefan Ingves

Stefan Ingves is Governor of Sveriges Riksbank and Chairman of the Executive Board.

Mr. Ingves is a Member of the Board of Directors of



Mr. Ingves has previously been Chairman of the Basel Committee on Banking Supervision, Director of the Monetary and Financial Systems Department at

the IMF, Deputy Governor of the Riksbank and General Director of the Swedish Bank Support Authority. Prior to that he was Under-Secretary and Head of the Financial Markets Department at the Ministry of Finance. Stefan Ingves holds a PhD in economics.



Mary Ellen Iskenderian

Mary Ellen Iskenderian is President and CEO of Women's World Banking, the global nonprofit devoted to giving more low-income women access to the financial tools and resources they require to achieve security and prosperity.

Ms. Iskenderian joined Women's World Banking in 2006

and leads the Women's World Banking global team, based in New York and also serves as a member of the Investment Committee of its \$50 million impact investment fund.

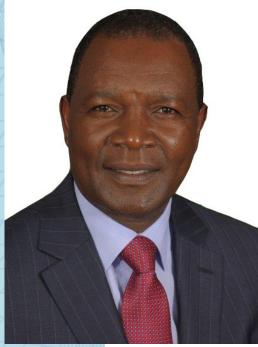
Prior to Women's World Banking, Ms. Iskenderian worked for 17 years at International Finance the Corporation, an arm of the World Bank, Before, she worked for the investment bank Lehman Brothers, Ms. Iskenderian is a member of the Council on Foreign Relations. as well as a member of the Women's Forum of New York and the Business and Sustainable Development Commission.



Ms. Iskenderian holds an MBA from the Yale School of Management and a Bachelor of Science in International Economics from Georgetown University's School of Foreign Service.

Njuguna Ndung'u

Njuguna Ndung'u is the Executive Director of the African Economic Research Consortium (AERC), a Pan African premier capacity building network. He is an associate professor of economics at the University of Nairobi, Kenya (on leave of absence). He is the immediate former Governor of the Central Bank of Kenya, where he served for two 4-year terms as required by law, from 2007 to 2015. He has been a member of Global Advisory Council (GAC) of the World Economic Forum and a



Visiting Fellow of Practice at the Blavatnik School of Government, Oxford University, 2015/2016.

Prior to his appointment as Governor, he was the Director of Training at the African Economic Research Consortium. (AERC). He also worked at the International Development Research Centre of Canada, as a Regional Programme Specialist for the Eastern and Southern Africa Regional Office, in 2001 and the Kenya Institute for Public Policy Research and Analysis, KIPPRA in 1999, as a principal economist. He holds a PhD in economics from the University of Gothenburg, Sweden.

He has lectured in advanced economic theory and econometrics at the University of Nairobi and published widely in international journals as well as chapters in various books on economic policy issues. Currently he is a Member of the Brookings Africa Growth Initiative (AGI) Distinguished Advisory Group, a Member of the Advisory Committee of the Alliance for Financial Inclusion, AFI, that coordinates financial inclusion policies in Africa, Asia and Latin America, and a Senior Advisor for the UNCDF-based Better Than Cash Alliance.

Jennifer Tescher

Jennifer Tescher is President & CEO of the Financial Health Network, the nation's authority on consumer financial health. Tescher founded the Financial Health Network in 2004 and has since achieved notable success in championing increased access to high-quality financial products and services for underserved consumers as an objective for the industry. Through its Compass Principles and a lineup of proprietary

research, insights and events, the Financial Health Network connects members of its network to build a more robust financial services marketplace.

Tescher is a nationally known thought leader on the topic of consumer financial health, contributing often to American Banker, and frequently quoted in high level consumer and financial press. She is a frequent speaker across a broad spectrum of industry and policy convenings, including everything from Money 20/20 to the Department of the Treasury.

Tescher also launched the

Financial Health Network's annual conference "Emerge: The Financial Health Forum," which presents cutting-edge thought leadership and showcases innovators, executives, and emerging companies in the financial services industry.

Tescher received Crain's Chicago Business "40 Under 40" Award in 2006 and is currently an advisory council member of Accion's Center for Financial Inclusion. She received undergraduate and graduate degrees in journalism from Northwestern University and a public policy degree from the University of Chicago.



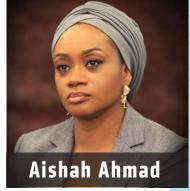
SPEAKERS

Aishah Ahmad is the Deputy Governor, Financial System Stability, at the Central Bank of Nigeria (CBN). She is a member of the Monetary Policy Committee and Committee of Governors, with specific responsibility for financial policy and regulation of the Nigerian banking and payments system; licensing and supervision of banks, non-bank financial institutions and consumer protection. She

is Chairman, Nigeria Inter-bank Settlement System, Plc, the country's central switch. She also chairs the Financial Inclusion Technical Committee, which drives attainment of Nigeria's Financial Inclusion targets.

Prior to joining CBN, Aishah was Executive Director at Diamond Bank Plc and a seasoned financial expert with over twenty years of experience. An Honorary Fellow of the Chartered Institute of Bankers of Nigeria, she has held leadership positions across private wealth, investment management, and retail banking in major financial institutions.

Aishah holds the Chartered Financial Analyst (CFA) and



Chartered Alternative Investment Analyst (CAIA) designations. She received a bachelor's degree in accounting from the University of Abuja in 1996, an MBA (Finance) from the University of Lagos in 2001 and an MSc. in Finance and Management from Cranfield University, UK in 2007.

Abdel Banda is Founder and CEO of Banyan Infrastructure. Founded in 2017, Banyan Infrastructure utilizes Machine Learning Algorithms and Distributed Ledger Technology to encode natural language financial contracts into Smart Contracts; to provide lenders with an integrated SaaS solution for autonomous tracking and reporting of contractual requirements contained in credit agreements used to finance distributed infrastructure systems and transportation assets.

As CEO of Banyan, Abdel is responsible for the company's strategic, corporate, and market development. Abdel also serves as Director- Africa at Edison Chouest Offshore, the leading US Ship builder and marine contractor to the offshore energy industry. At Chouest, Abdel supports the company's strategic finance initiatives and previously led the company's corporate and business development efforts in Africa. Abdel formerly worked as an analyst at Sandler O'Neill +Partners, a full-size investment banking firm and broker dealer focused on the financial services sector. Abdel is a Co-Founder & Trustee of Students Bridging the Information Gap 501c3, a



US non-profit celebrating its 10th anniversary building computer labs and libraries for Ghanaian Orphanages and Schools. Abdel holds a BA – Finance from the University of Notre Dame. At Notre Dame, Abdel played linebacker on the esteemed Notre Dame Football team.

Jo Ann Barefoot is CEO of Barefoot Innovation Group, Cofounder of Hummingbird Regtech, Senior Advisor to the Omidyar Network, and host of the podcast show Barefoot Innovation. A noted advocate of "regulation innovation," Jo Ann is Senior Fellow Emerita at the Harvard Kennedy School Center for Business & Government and is writing a book on financial innovation and regulation.



She has been Deputy Comptroller of the Currency, partner at KPMG, Co-Chairman of Treliant Risk Advisors, and staff member at the U.S. Senate Banking Committee. She's an angel investor, serves on the board of Oportun, and advises financial companies and governments worldwide. She serves on the fintech advisory committee for FINRA, is an Executive Board Member of the International RegTech Association (IRTA), and a member of the Milken Institute U.S. FinTech Advisory Committee.

Jo Ann chairs the boards of the Financial Health Network and FinRegLab and previously served on the CFPB's Consumer

Advisory Board. Jo Ann has published nearly 200 articles and is a popular keynote speaker, addressing thousands of people annually throughout the world.

Greta Bull is the CEO of CGAP and a director at the World Bank Group. Ms. Bull has 18 years of experience in development finance, primarily focused on small and medium enterprise finance, microfinance, and digital financial services. She has worked with both financial services providers



and policy makers in Latin America, Central and Eastern Europe, Sub-Saharan Africa, and South Asia. Her clients have included banks, microfinance institutions, mobile network operators, and FinTechs.

Before joining CGAP, Ms. Bull was a manager for Financial Institutions Advisory Services at the International Finance Corporation. Other career highlights include serving as director of the Finance, Banking and Enterprise Division at DAI Europe and holding senior-level positions at the Eurasia Foundation.

Ms. Bull has a Master's degree in Public Policy from Harvard

University's John F. Kennedy School of Government and an undergraduate degree in International Studies from the University of Washington.

F. Christopher Calabia is Senior Advisor for Supervisory & Regulatory Policy and a Senior Program Officer at the Bill & Melinda Gates Foundation. Chris leads the Foundation's global efforts to promote a regulatory framework that enables digital financial inclusion. He also oversees grants that may help central banks and supervisors to promote financial inclusion, stability, integrity, and consumer

protection in emerging and developing market economies.

Chris joined the Foundation after a career as a banking supervisor at the Federal Reserve Bank of New York. Most recently, Chris was Senior Vice President and head of the Regional, Community, and Foreign Institutions Supervision and Consumer Compliance Function, a division that regulates over 200 U.S. and foreign banking organizations. He previously served as the senior supervisor for one of the largest U.S. systemically important financial institutions from 2009-2011; he then served as deputy head of the function that supervises global systemically important firms from 2011-2013.



Externally, Chris co-led the International Monetary Fund's 2016 evaluation of the United Kingdom's approach to banking supervision. Previously, he was seconded to the Secretariat of the Basel Committee on Banking Supervision in Switzerland from 2003-05, where he assisted in the revision of the global capital framework for banks.

Jennifer Calvery is a Group General Manager and the Global Head of Financial Crime Threat Mitigation at HSBC in London. In this role, she runs a unified, global capability that leverages analytics and technology to identify, analyse and investigate financial crime risks to the HSBC Group in more than 60 countries.

Jennifer previously served as the Director of the Financial Crime Enforcement Network (FinCEN),

the financial intelligence unit and anti-money laundering regulatory agency for the U.S. Government, which is part of the U.S. Department of the Treasury. As FinCEN Director, Jennifer strengthened the organizational design of the function to break down information silos and make the bureau more nimble given the dynamism of the financial services industry; she exercised FinCEN's use of regulatory and enforcement authorities to protect the U.S. financial system from significant money laundering threats and AML program inadequacies; and she introduced the first global regulatory AML framework defining the obligations of virtual currency service providers.



Prior to FinCEN, Jennifer spent 15 years at the U.S. Department of Justice (Justice) combating money laundering, corruption, fraud and organized crime in a variety of executive and staff roles. As Chief of the Asset Forfeiture and Money Laundering Section, she was responsible for enforcement actions brought against several large global financial institutions.

Leonardo Gambacorta is the Head of the Innovation and the Digital Economy unit at the BIS.

Before taking up his current position, Leonardo was Research Adviser (2014-2018) and Head of Monetary Policy (2010-12) in the Monetary and Economic Department. He was also Head of the



Money and Credit Unit (2007–09) and Head of the Banking Sector Unit (2004–06) of the Research Department of the Bank of Italy. He was a visiting scholar at the National Bureau of Economic Research (2002–03).

He holds an MSc in Economics from the University of Warwick and a PhD in Economics from the University of Pavia. His main interests include the monetary transmission mechanisms, the effectiveness of macroprudential policies on systemic risk, and the effects of technological innovation on financial intermediation. He is a research fellow of the Centre for Economic Policy Research.

Lobna Helal is Deputy Governor of the Central Bank of Egypt. She started her career in banking. She joined the Central Bank of Egypt in 2004. In 2011, she became the first female in the Bank's history to assume the position of Deputy Governor responsible for Monetary Stability.

In March 2013, Mrs. Helal was appointed as the Chairman and Managing Director of the Egyptian Mortgage Refinance Company (EMRC). In June 2015, she was elected as the first Head of the Egyptian Mortgage Finance Union.



As the Deputy Governor of the Central Bank of Egypt, Mrs. Helal is responsible for Monetary Stability, supervising Monetary Policy, Reserve Management & Markets, External Relations, Research, Information Technology, Banking Operation and Banking Reform.

In 2016, under the leadership of Mr. Tarek Amer Governor of the Central Bank of Egypt, Mrs. Helal spearheaded the efforts of constructing the comprehensive, ambitious Homegrown Economic Reform program which was endorsed by the IMF.

Mrs. Helal also holds the position of the Vice Chair of the Gender and Women Financial Inclusion Committee and

represents the Central Bank of Egypt in its capacity as Vice Chair of the Board of Directors at the Alliance for Financial Inclusion (AFI). Mrs. Helal holds a Master of Economics from the American University in Cairo.

Aaron Klein is a fellow in Economic Studies at the Brookings Institution, where he also serves as policy director of the Center on Regulation and Markets. He focuses on financial regulation and technology, payments, macroeconomics, and infrastructure finance and policy. His work on the costs of financial regulation led to a greater focus on anti-money laundering and cannabis banking.

Previously, Klein directed the Bipartisan Policy Center's Financial Regulatory Reform Initiative and

helped the BPC launch its Executive Council on Infrastructure.

Before that, Klein served as Deputy Assistant Secretary for Economic Policy at the U.S. Treasury Department from 2009-2012. At Treasury he worked on financial regulatory reform, housing finance reform, transportation and infrastructure policy, and Native American issues.

Prior to his appointment at Treasury, he served as Chief Economist of the Senate Banking, Housing and Urban Affairs Committee for Chairmen Chris Dodd (D-CT) and Paul Sarbanes (D-MD). While working in the Senate Klein played a key role in a series of major legislation including, the Economic



Emergency Stabilization Act of 2008 (better known as TARP), the Housing and Economic Recovery Act of 2008, the SAFETEA Act of 2005, the Check Truncation Act of 2003, the Terrorism Risk Insurance Act of 2002, and the Sarbanes-Oxley Act of 2002.

Sofie Maddens is the Head of the Regulatory and Market Environment Division of the ITU BDT. A lawyer by training, Sofie Maddens has worked as Regulatory and Policy Expert in the telecommunications/

ICT sector in international and multi-cultural environments, including in Asia and the Middle East, as well as in the Americas, Europe and Africa.

Maddens has managed complex private sector, government, and regional and international projects and grants for national governments and their National Regulatory Authorities, the European Commission, the World Bank, the Telecommunications Development Bureau of the ITU as well as for a wide variety of private telecommunications, consulting and financial sector clients. Her scope of expertise has focused in particular on the information and



communications sectors, the postal sector as well as the information society (including Internet policy and governance, e-commerce, privacy, cybercrime and cyber security).

Ajay Shah has a Ph.D. in Economics from the University of Southern California, Los Angeles and a B.Tech. in Aeronautical Engineering from IIT, Mumbai. He has held positions at the Centre for Monitoring Indian Economy (Mumbai), Indira Gandhi Institute for Development Research (Mumbai) and the Ministry of Finance, and now co-leads the Macro/Finance Group as a Professor at National

Institute of Public Finance and Policy, New Delhi.



Dr. Shah is engaged in academic and policy-oriented research in the fields of Indian economic growth, open economy macroeconomics, public finance, financial economics and pensions. In the past decade, he was extensively involved in the policy process in the reforms of the equity market and the New Pension System. His work can be accessed on his home page (http://www.mayin.org/ajayshah) and on his blog (http://ajayshahblog.blogspot.com).

Michael Wiegand, Director of the Financial Service for the Poor initiative, leads the foundation's effort to make high quality financial services widely accessible to poor people throughout the developing world. The FSP team works with a wide range of public and private sector partners to foster the development of digital payment systems—such as mobile money—that can reach hundreds of millions



of people with the financial tools they need to mitigate risks and capture opportunities to move out of poverty.

Before joining the foundation in 2016, Michael spent 10 years with Standard Chartered Bank. He was most recently the Global Head of Retail Deposit Products, prior to which he managed the bank's retail banking business across Southern Africa and was the CEO of Standard Chartered Bank Botswana. He also spent more than six years with McKinsey & Company serving leading financial institutions in the U.S., Australia, Eastern Europe and the Middle East.

Michael holds a PhD in Economics from Northwestern and a Master of Science degree in Public Management and Policy and a Bachelor of Science degree in Economics from Carnegie Mellon.

THANK YOU

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Bill & Melinda Gates Foundation
Gerald R. Ford School of Public Policy
Michigan Ross' Business+Impact
The Ford School's Domestic Policy Corps
Michigan FinTech

The 2019-20 Research Assistants for the Center on Finance, Law & Policy:

Nick Adkins, Malika Begum, Jay Campbell, Jennifer Chasseur, Alexis Crochran, Sam Dilthey, Elizabeth Feldbruegge, Callie Furmaniuk, Matt Garry, Julia Lauer, Pedro Magana Saenz, Cole Magoon, Aditya Mannari, Lucas Misera, Aaron Ngo, Chand Rajendra-Nicolucci, Daniel Park, David Sernick, Ashton Smith, Karin Thrasher, Mikaela Uddfolk, Ben Westphal, Lydia Wileden, and Michael Xu

WORKING PAPER SERIES

This conference is a small part of a larger research project and a series of working papers. To read the papers that have been released so far, please visit

financelawpolicy.umich.edu/central-bank-research

To find out about new papers as they are released, please join the email list for the U-M Center on Finance, Law & Policy, follow us on Twitter @MIchiganCFLP, or join the discussion on our LinkedIn page.

CALL FOR PAPERS

Interested in presenting at next year's conference?
Submit your paper for consideration by emailing it to centralbankpapers@umich.edu.
Full details are listed at financelawpolicy.umich.edu/central-bank-research



Take on the world's biggest challenges with purpose.

2019-2020 Focus Area:

FINANCIAL INCLUSION

Innovation in Action is an interdisciplinary U-M student competition. Team up and get the resources you need to turn your ideas into solutions.

To learn more about Innovation in Action, visit innovationinaction.umich.edu or email us at innovation.in.action@umich.edu

DESIGN JAM

LEARN & PRACTICE THE DESIGN PROCESS

CHALLENGE: Take the best components of bank, credit union, payday lenders, lending circles, etc. to create a universally easy and affordable short-term loan product.

THE PARTNER: MassMutual Foundation

FRIDAY, OCTOBER 18, 1:30PM-5:30PM R0320 Ross School of Business

Register for this & other design jams at: http://myumi.ch/r8XyE



+Impact Studio: Translating Research into Practice

Work in an interdisciplinary graduate student team to use scholarly intellectual capital, business acumen, and design methodologies to address a wicked problem Wicked problems are issues with societal import that are difficult to understand and are embedded within complex systems.

The Winter 2020 projects are:

- How can we use scholarly research and FinTech to support financial inclusion?
- How can we address clean water and failing infrastructure needs?

New & Innovative Graduate Course!

Learn tools for ideation, prototyping, and business model design for impact.

COURSE CODE: BA 670

HOURS: 4.5 hours

TYPE: Elective

OFFERED: Winter '20

PROFESSOR: Jeffrey Sanchez-

Burks

For questions and to register, visit myumi.ch/gj0zg

BUSINESS+IMPACT

MICHIGAN ROSS

Conference Notes





financelawpolicy.umich.edu

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