

ITU EVENTS

# Workshop on Standardizing Digital Fiat Currency

18 - 20 July 2018  
New York City, USA

#DigitalFinanceITU



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## Chairman



### **David Wen**

*Chairman, ITU-T FG DFC*

Dr David Wen is the Chairman of ITU-T Focus Group on Digital Currency including Digital Fiat Currency. He is also the co-founder and Chief Scientist of eCurrency. After obtaining his Ph.D from Oxford University, he has worked at NTT Communication Science Laboratory in Japan, before appointed the youngest Associate Professor in Tokyo Science University. When visiting Stanford University as a visiting professor, he decided to apply his research to build solution for challenging and impactful ventures in the real world. He started as a security architect at ActivCard (now HID Global) and was responsible for the design of the Identity Management Solution for the Department of Defense's Common Access Card (CAC) program. He went on to become the product manager, program manager and Chief Scientist at Fortune 500 companies such as Dell and SAIC, managing the deployment of US Federal Government's Personal Identification and Verification (PIV) program at NASA, DHS, FDA. He is one of the main contributors who enabled the most advanced Digital Identity Management solution for the entire US government by the 2008 deadline set by President George Bush in HSPD-12. In September 2011, he co-founded eCurrency Mint Ltd, applying his extensive experience building nation wide security program to the solution of a Central Bank Issued Digital Currency. He helped coin the term Digital Fiat Currency working as the US expert to ISO Technical Committee 68 (SC 2) for digital currency security, and led the establishment of the ITU-T Focus Group on Digital Fiat Currency, working with central banks and telecom regulators from the over 27 developing countries. He is also the founder of Digital Fiat Currency Institute.

## Vice Chairman



**Mandar Deshpande**  
*Ministry of Communications, India*  
Mr. Deshpande is working as Director (Licensing Finance Policy) in the Department of Telecom, Ministry of Communications, Government of India. He belongs to the Indian Postal and Telecom Accounts and Finance Service. He has also worked for the software major

Cognizant Technology Solutions. Mandar holds a Bachelor's degree in Electronics Engineering and a Diploma in Public Financial Management. He is passionate about teaching and has worked for 3 years in education sector.



**Njuguna N'dungu,**  
*Former Governor of Central Bank of Kenya*  
Professor Njuguna S. Ndung'u is a Kenyan economist, university professor and economic researcher. He is the former Governor of the Central Bank of Kenya, a position he occupied for two consecutive four-year terms from March 2007 until March

2015. Before his appointment as Governor of the Central Bank of Kenya, Ndung'u was the director of training at the African Economic Research Consortium. He has lectured in advanced economic theory and econometrics at the University of Nairobi, where he was an associate professor of economics.



**Yury Grin,**  
*Intervale, Russia*  
Dr. Yury G. Grin is Deputy to the Director and Chief, Administration & Operations Coordination Department of the Telecommunication Development Bureau (BDT) of the International Telecommunication Union (ITU) in Geneva,

Switzerland. He joined ITU in 2006. Prior to joining ITU, from 1994 to 2006, he worked in the International Cooperation Department of the Ministry for Information Technologies and Communications of the Russian Federation, first as Deputy Director and then as Director of the Department.



**Sami Tremech**  
*Director for International Development, Arab ICT Organization*

Mr Trimech is the strategic development director of AICTO in charge of strategic vision definition, action plan development, the creation of new regional and interregional project and programs other duties. He has confirmed experience in International organization, international client portfolio management, experience accessing new markets (in Africa and Middle East). He was the studies and business development director of ST2i Group STUDI, and the director of International cooperation and marketing of Center for Telecommunication Research and Studies. Previously he as also a program officer of International Telecommunication Union.



**Yao Qian**  
*Vice-Director General, Technology Department, Director, Institute of Digital Money, People's Bank of China*  
Dr. YAO Qian is Vice Director-General of the Technology Department of the People's Bank of China (PBC), Director-General of the Institute of Digital Money of PBC and the

current Secretary-General of China Financial Standardization Technical Committee. Holding a PhD in Engineering, he is a professorate senior engineer. Before joining the PBC in 2010, Dr. YAO had worked at the Information Statistics Department and the IT Service Center of the China Securities Regulatory Commission and the China Securities Depository and Clearing Corporation.



**Ahmed Said**  
*Head of Economic Affairs, National Telecom Regulatory Authority (NTRA)*

Ahmed Said is the Head of Economic Affairs at the National Telecom Regulatory Authority (NTRA) of Egypt. At present, he is carrying out all the economic related issues in the telecom sector and monitoring the performance of the telecom market and the progress in implementing the cost modeling process and the financial related issues. Mr. Said received his Master of Science in Business Information Technology from University of Middlesex in London, in the year 2001 and he obtained his Bachelor of Commerce in Accounting, from Cairo University in the year 1999.



# ITU DFC

## Workshop on Standardizing Digital Fiat Currency and its Applications

New York City, USA, 18-19 July 2018

### Introduction

The International Telecommunication Union (ITU) is organizing a Workshop on Standardizing Digital Fiat Currency (DFC) and its Applications from 18-19 July 2018 at Cornell Tech, 2 W Loop Road, New York City, NY 10044, United States. The event is being kindly hosted by Cornell Research Academy for Development, Law and Economics and the Jack Clarke Business Law Institute, Cornell School of Law. This workshop will take place during the second meeting of the Focus Group on Digital Currency including Digital Fiat Currency (FG DFC) from 18-20 July 2018 at the same venue.

### Objectives

The objectives of this workshop are to: Discuss the latest technology trends and innovations in the area of central bank issued digital currency; Create a platform for dialogue and knowledge sharing between the telecom and financial services regulators to discuss emerging issues and best practices for the policy and regulatory framework for digital fiat currency; Share best practices in areas of interest to the Focus Group Digital Currency including Digital Fiat Currency, such as security of digital fiat currency operations, interoperability, and architecture models for digital fiat currency; Showcase use cases of digital currency implementations from different countries. The outputs of the workshop will be submitted to the Focus Group Digital Currency including Digital Fiat Currency meeting for consideration.

### Organized by:

International Telecommunication Union (ITU)

### Hosted by:

Cornell Research Academy for Development, Law and Economics and the Jack Clarke Business Law Institute, Cornell School of Law

**Date:** 18-19 July 2018

### Venue:

Cornell Tech Campus, Bloomberg Center, 2 W Loop Road, Roosevelt Island, New York, NY 10044

Contact: [tsbevents@itu.int](mailto:tsbevents@itu.int)

# About ITU FG DFC

The Focus Group Digital Currency including Digital Fiat Currency (FG DFC) was established at the ITU-T TSAG meeting in Geneva in May 2017. Over the course of its 2-year duration, the Focus Group will build a common understanding of the foundations of digital fiat currency and its relationship with payment ecosystems, ICT infrastructure and the latest innovations in digital currency. The ITU-T FG DFC incorporates expertise and specialists from Central Banks, ICT regulatory authorities, financial institutions, financial service providers, security professional, other standard bodies such as Global Platform and ISO, and academics to address the governance, ICT infrastructure support, and security aspects of Digital Fiat currency and its implication to further the fruit of Financial Inclusion effort currently achieve through ICT projects and solutions.

## About DFCI

**(Digital Fiat Currency Institute)**

Established in 2017, the objective to the Digital Fiat Currency Institute (DFCI) is to promote the study, development, standardization, specification, promotion, and adoption of digital fiat currency (“DFC”) for the betterment of all people, regardless of their geo-socio-economic status, under the auspices and governance of a central bank, as an economically beneficial use and means of currency, without prejudice or discrimination. It will accomplish this by conducting research, fostering high-level exchange, documenting practical regulatory requirements and legal frameworks, and testing DFC implementations via our DFCI Lab. DFCI is a not for profit trade association of DFC ecosystem participants.



# Agenda

## Wednesday, July 18

08:30 – 09:00

### Registration

09:00 – 09:45

### Opening FG DFC Meetings & Workshop: Plenary Session

- Welcome remarks
  - Bilel Jamoussi, Chief Study Groups Department, ITU/TSB
  - Robert Hockett, Professor, Director of Cornell Program for Regulation of Financial Institutions and Financial Markets
  - David Wen, Chairman, ITU-T FG DFC
- Approval of Agenda
- Administrative Logistics
- Document Allocation
- Contributions

09:45 – 10:30

### Keynote Address

“New Ideas about Digital Cash”: David Chaum, Founder, DigiCash

10:30 – 10:45

### Coffee Break

10:45 – 11:30

### DFC Roundtable: Current Trends & the US Perspective

Remarks and discussion of the promise and potential implications of a Central Bank issued Digital Currency. We feature local experts from the United States to shed light on several US perspectives, complemented by global perspectives.

Remarks & Moderation:

Lawrence Ruffano, Executive Director, Advanced Financial Technology Lab, Stanford University  
Response & Discussion:

- Antoine Martin, Federal Reserve Bank of New York
- Ylva Sovik, Director of Financial Stability, Norges Bank
- Daniel Reiss, Central Bank of Brazil

11:30 – 12:15

### Case: The State of DFC Implementation in China

People's Bank of China (PBOC) has been a leader in thinking strategically about DFC deployments at a large scale with a mixture of heavy cash use and robust and growing use of mobile payments. This will highlight PBOC's efforts in meeting these challenges.

- Yao Qian, Vice-Director General, Technology Department, Director, Institute of Digital Money, People's Bank of China

12:15 – 13:15

## Lunch

13:15 – 13:55

### Case: Sweden's eKrona Project

Riksbank is leading the world in piloting DFC with the eKrona project. In this talk, they describe the fundamental requirements of a CBDC, which they articulated prior to piloting.

- Gabriela Guibourg, Head of Analysis and Policy Division, Payments Department Sveriges Riksbank

13:55 – 14:35

### Case: CBDB in Norway: A Case for Financial Stability

Based in their Whitepaper Central Bank Digital Currencies, Norwegian Central Bank authorities discuss DFC in the context of financial stability.

- Ylva Sovik, Director in Financial Stability, Norges Bank

14:35 – 15:05

### Case: Philippines: A Public Private Collaboration

Philippines is leading an innovative, commercial bank driven ePiso Project using DFC technology within the context of the BSP Sandbox Model. Representatives from both RCBC and BSP join to present their active deployment with real customers and commercial payment providers.

- Margarita B. Lopez, First Senior Vice President, Digital Banking Group and Operations, Rizal Commercial and Banking Corp (RCBC)
- Melchor T. Plabasan, Deputy Director, Core Information Technology Specialist Group, Bangko Sentral ng Pilipinas
- Joey Mendoza, Lead ePiso Project, eCurrency

15:05 – 15:20

## Coffee Break

15:20 – 16:00

### Case: Exploring the DFC Opportunity Egypt

Egypt is quickly advancing in digitizing its economy. In this session, Central Bank of Egypt describes a case of how they plan to leverage and advance this wave of digitization using DFC within its regulatory and legal frameworks.

- Mohamed Helmy, Senior Business, Security Officer Central Bank Egypt

16:00 – 16:40

### Case: Reserve Bank of India (RBI) TBD

India is leading the world in Digital Identity. Prime Minister Modi's Digital India Blueprint DFC is featured prominently as a key enabler. This whitepaper, currently in development describes India's plans for DFC implementation.

- Reserve Bank of India



16:40 – 17:20

### **Case: Central Bank of Brazil's DFC Vision**

Central Bank of Brazil has been studying global studies and is publishing a DFC taxonomy. In this session they present their taxonomy and vision for Brazil.

- Bruno Batavia, Coordinator, Central Bank Brazil

17:20 – 18:00

### **Closing Discussion: Digital Fiat Currencies: Cross Border Implications**

A discussion of how a Digital Fiat Currency instrument might function in cross border cases.

- Barry Eichengreen, Professor of Economics and Political Science, University of California Berkeley
- Klaus Loeber, Head of Oversight, European Central Bank, Innovations Working Group CPMI

18:00 – 19:30

### **Networking Cocktail**

## **Thursday, July 19**

08:30 – 09:00

### **Registration**

09:00 – 09:45

### **Thematic Panel: Banks, Central Banks, and Fintech**

The fintech revolution is prompting many observers to revisit the nature of money and banking. Some predict the end of banking as we know it. Others more breathlessly predict the end of central banking and even sovereign currencies themselves. This panel takes a sober look at these and more modest predictions with a view to what changes fintech is likely, and what changes it isn't likely, to bring. Special attention will be paid the promise that fintech offers of more effective central banking that is less reliant on the private banking sector for the conduct of monetary policy than it has been for most of the past century.

Remarks & Moderation: Sarah Bloom Raskin, formerly Board of Governors of the Federal Reserve System & United States Deputy Secretary of the Treasury

Panelists:

- Robert Hockett, Professor, Director of Cornell Program for Regulation of Financial Institutions and Financial Markets
- Rohan Grey, Founder, Modern Money Institute

09:45 – 10:30

### **Thematic Panel: DFC Regulatory Requirements & Economic Impact**

Building on the work of Working Group 1: Regulatory Requirements and Economic Impact, this panel examines the economic benefits and challenges from a shift to Digital Fiat Currencies. The panel also focuses on regulations in a DFC world, including on mobile money. While the popular press as well as the official sector have warned of the perils of cryptocurrencies, including concerns related to speculation, financial stability and illicit activities, this panel focuses on the real economy, regulatory and legal implications of a Central Bank-Issued Digital Fiat Currency. The conversation will inform ongoing activities and deliverables of the Working Group.

Moderator: Bejoy Das Gupta, Chief Economist, eCurrency

- Wimboh Santoso, Chairman, OJK, Indonesia
- Kaushik Basu, Professor of Economics, Cornell University
- Angela Walch, Professor at St. Mary's University School of Law
- Ahmed Said, Head of Economic Affairs, NTRA Egypt

10:30 – 10:45

### **Coffee Break**

10:45 – 11:30

### **Thematic Panel: Reference Architecture & Ecosystem**

Building on the Work of Working Group Two: Reference Architecture and Ecosystem, this panel looks at specific reference architectures for a DFC solution. The conversation will inform ongoing activities and deliverables of the Working Group.

Moderator: Yao Qian, Vice-Director General, Technology Department, Director, Institute of Digital Money, People's Bank of China

- Michael Li, Technical Director of Tencent Finance Platform, Tencent
- Thomas Kudrycki, CTO eCurrency
- Drummond Reed, Chief Trust Officer, Evernym
- Konstantin Peric, Deputy Director Global Payment, Bill & Melinda Gates Foundation

11:30 – 12:15

### **Thematic Panel: Security & Standards for DFC**

Building on the Work of Working Group Three: Security, this panel looks at Fiat Currency & Security Assurance. The conversation will inform ongoing activities and deliverables of the Working Group.

Moderator: Jacques Francoeur, Faculty Cyber Executive-in Residence, San Jose State University

- Mr Olivier Pfeiffer, Head of Financial and Critical Infrastructures Markets, ID Quantique, Switzerland
- (speaker tbc) Global Platform
- Alpha Wang, Senior FinTech Security Expert, Tencent
- Ed Scheidt, Convenor of ISO TC68 SC2 WG13 Ad Hoc Group 4

12:15 – 13:30

### **Lunch**

**13:30 – 14:00**

### **ITU FG DFC Working Groups: Parallel Working Sessions**

Working Groups will supply their own agenda for consideration by members.

Begin in Breakout Sessions: Reports of FG DFC Working Group Leads (Rapporteurs):

- WG 1: Regulatory Requirements & Economic Impact
- WG 2: Reference Architecture & Ecosystem
- WG 3: Security

**14:00 – 15:00**

### **Working Group Meetings (in Parallel)**

**15:00 – 15:15**

### **Coffee Break**

**15:15 – 18:00**

### **Working Group Meetings (in Parallel)**

## **Friday, July 20**

DAY 3: Meeting of ITU FG DFC Working Groups & Official Proceedings of the ITU FG DFC

**09:00 – 10:30**

### **Working Group Meetings (in Parallel)**

**10:30 – 10:45**

### **Coffee Break**

**10:45 – 12:15**

### **Closing Plenary**

- Reports from Working Group co-chairs on status of FG DFC Deliverables and work to do for next meeting

- Regulatory Requirements and Economic Impact WG
- Reference Architecture WG
- Security WG
- Outgoing liaison statements
- Closing Remarks

### **Close**

# 2018 ITU FG DFC

# SPEAKERS



## **Bilel Jamoussi**

*Chief of the Study Groups  
Department, Telecommunica-  
tion Standardization Bureau,  
ITU*

Tunisian born, Dr. Bilel Jamoussi is Chief of the Study Groups Department of ITU Standardization Bureau in Geneva Switzerland. Since 2010, he has been leading the bureau's standards making

activities into a new era characterized by rapid convergence and the need for increased collaboration with vertical sectors and partnership between developed and developing countries.

Prior to 2010, Jamoussi worked for a Telecommunication equipment and solutions provider for 15 years in Canada and then in the United States where he held several leadership positions and was granted 22 US patents in diverse areas including packet, optical, wireless, and quality of service. He holds a BSc, MSc and PhD degrees in Computer Engineering from the Pennsylvania State University, USA. He is fluent in Arabic, French, and English and speaks some Spanish and German.



## **Robert C. Hockett**

*Edward Cornell Professor of Law*

Robert Hockett joined the Cornell Law Faculty in 2004. His principal teaching, research, and writing interests lie in the fields of organizational, financial, and monetary law and economics in both their positive and normative, as well as their national and transnational, dimensions. His guiding concern in

these fields is with the legal and institutional prerequisites to a just, prosperous, and sustainable economic order.

A Fellow of the Century Foundation and regular commissioned author for the New America Foundation, Hockett also does regular consulting work for the Federal Reserve Bank of New York, the International Monetary Fund, Americans for Financial

Reform, the 'Occupy' Cooperative, and a number of federal and state legislators and local governments.

Prior to doing his doctoral work and entering academe, he worked for the International Monetary Fund and clerked for the Honorable Deanell Reece Tacha, Chief Judge of the U.S. Court of Appeals for the Tenth Circuit.



## **David Chaum**

*Founder, DigiCash*

Widely recognized as the inventor of digital cash, he is also known for other fundamental innovations in cryptography, including privacy technology and secure election systems. With a PhD in Computer Science from UC Berkeley, he taught at NYU Graduate School of Business and the University of California, led a number of breakthrough

projects as well as founded the International Association for Cryptologic Research, the cryptography group at the Center for Mathematics and Computer Science in Amsterdam, DigiCash, the Voting Systems Institute, and the Perspectiva Fund.



## **Antoine Martin**

*Senior Vice President of Money  
and Payments Studies  
Research & Statistics Group,  
The Federal Reserve Bank of  
New York*

Mr. Antoine Martin has been Senior Vice President of Money and Payments Studies for Research & Statistics Group at The Federal Reserve Bank of New York since January 28, 2016. Mr. Martin served

as Assistant Vice President of Research and Statistics Group at The Federal Reserve Bank of New York since June 2010. Mr. Martin served as Officer of Research and Statistics



**Lawrence Rufrano**

*Executive Director*

Lawrence Rufrano is the Executive Director of the AFTLab. He is a former investment banker and bank regulator with thirty years of experience in the banking industry. While working on Wall Street for major money center banks, he managed

over \$75 billion of capital markets transactions, including debt issuances, securitizations, credit derivatives, acquisitions and divestures for the benefit of banks. As a regulator, Lawrence worked for the Federal Reserve Board in Washington DC. His tenure lasted from 2006 to 2015. During that time, he worked on strategies with members of the Federal Reserve and the US Treasury to respond to the 2008 financial crisis. Subsequent to the financial crisis, Lawrence collaborated with banking regulators at the OCC, CFPB and FDIC as well as with Congressional and White House staff members to write new banking regulations under The Dodd-Frank Act. He focused primarily on the consumer sector as well securitizations, accounting issues and parts of the the Volker Rule. In his current role as an Executive Director, Lawrence focuses on deepening and expanding relationships with banks, investment firms and other financial institutions who are members or wish to become members of the AFT Lab. In addition he provides a regulatory and business perspective for students and researchers in the AFT Lab and its members.



**Gabriela Guibourg**

*Head of Analysis and Policy Division, Payments Department Sveriges Riksbank*

Gabriela Guibourg is an economist graduated from Stockholm University and has worked at the Riksbank since 1997. 1997-2006 she was employed at the Financial Infrastructure Division in the Financial Stability Department. The focus

of her work was the analysis of the retail payment market. She also contributed to develop a general methodology for the Riksbank’s oversight work with regard to financial infrastructure. During 2006 she worked with her PhD thesis Riksbank’s research division which also concerned payment related issues. In 2007 she switched to the Applied Research Division in the Monetary Policy Department where she worked with macroeconomic analysis and monetary policy related issues. In that capacity she contributed to develop the report for the evaluation of monetary policy that the Riksbank presents annually to the Swedish Parliament. In 2011 she became Head of the Applied Research

Division. In April 2017 she returned to the analysis of payment issues when she became Head of the Financial Infrastructure Division.



**Margarita B. Lopez**

*First Senior Vice President, Digital Banking Group and Operations, Rizal Commercial and Banking Corp (RCBC)*

Ms. Margarita B. Lopez has been First Senior Vice President at Rizal Commercial Banking Corporation since June 01, 2016 and serves as its Head of Digital Banking. Ms. Lopez served

as Head of Digital Banking & Operations and Senior Vice President at Rizal Commercial Banking Corporation. Ms. Lopez has been Chief Operating Officer and Senior Vice President of The Manufacturers Life Insurance Co. (Phils.), Inc. (formerly Manulife Philippines) since February 26, 2010. She served as Corporate Vice President and Asia Head of Digital of Manulife Financial from October 2014 to March 2016 and also it’s Chief Operations Officer from February 2010 to September 2014. She has over 28 years’ experience in account processes, product and technology management having had management positions and projects in the insurance, banking, brokering, manufacturing, distribution, airline and mining industries as well as telecommunications and utilities.



**Angela Walch**

*Professor at St. Mary’s University School of Law*

Angela Walch is an Associate Professor at St. Mary’s University School of Law in San Antonio, Texas, and a Research Fellow at the Centre for Blockchain Technologies at University College London. Her research

and the law, cryptocurrencies, blockchain technologies, and financial stability. Walch's work on cryptocurrencies and blockchain technologies is internationally recognized, and she speaks at events around the world. Walch has presented her research at Harvard Law School, Stanford University, University College London, and Columbia Law School, among others. Her work has appeared the NYU Journal of Legislation & Public Policy, the Review of Banking & Financial Law, and American Banker, and has been cited in reports by the Financial Stability Board, the OECD, and the European Commission. Walch has been quoted in The New York Times, The Wall Street Journal, TIME Magazine, Bloomberg, The Washington Post, The Guardian, and the Financial Times' FT Alphaville, along with other media outlets. Before entering academia,

Banking at United Coconut Planters Bank from 1996 to 2004. She also held consultancy roles from 1988 to 1996 and was the Analyst Programmer for Infolink assigned at CityTrust from 1987 to 1988. She is expertise in the areas of strategic planning, strategic product development, customer services, technology and support operations, project management, product implementation and support and staff development. She was a Member of the Board of Directors of Manulife Financial. Ms. Lopez graduated from the University of the Philippines with a degree of Bachelor of Computer Science in 1987 and finished her Masters in Technology Management, Business and Industry in 2001 from the same University.



**Melchor T. Plabasan**  
Deputy Director, Core Information  
Technology Specialist Group,  
Bangko Sentral ng Pilipinas

Mr. Melchor T. Plabasan is a Certified Public Accountant (CPA) and a Certified Information Systems Auditor (CISA). He is currently the Deputy Director and Group Head of the Core Information Techn-

ology Specialist Group (CITSG), the unit within the Bangko Sentral ng Pilipinas (BSP) in charge of providing IT supervision and payment systems oversight to banks and other BSP supervised financial institutions (BSFIs). In Mr. Plabasan's eleven (11) years in CITSG, he has gained broad experience and technical knowledge in IT offsite supervision and onsite examination of banks, including payment systems. Even before assuming his current position, Mr. Plabasan has already provided valuable contributions to the IT landscape of the Philippine financial sector.



**Joey Mendoza**  
Lead ePiso Project, eCurrency

Joey Mendoza, Joey Mendoza, General Manager for e-currency e-Currency Mint PLC Joey has more than 28 years of professional experience in the Telecommunications and Information Technology industries in Southeast Asia, South Asia, and North America. He has spent 17 years

working for various mobile telecommunications companies and has spent 11 years in Information Technology with IBM, Sun Microsystems, Oracle and Lucent. Joey has spent more than 14 years as an expatriate in various senior management responsibilities in countries such as Sri Lanka, Indonesia, Guam, Saipan, Northern Marianas

Islands and Afghanistan implementing mobile money solution and telecommunications projects, products, and services. Joey was the chief architect in the successful launch and implementation of G-Cash, the first card-less and cash-less mobile money solution in the world in 2004 with Globe Telecoms in the Philippines. This service won the Best Messaging Service in the World for 2004 which was awarded by the GSMA Conference in Cannes, France in 2005. Joey has worked as the chief advisor and technical consultant for the E-MITRA project of USAID in Indonesia.



**Jacques Francoeur**  
Faculty Cyber Executive-in  
Residence, San Jose State  
University

Jacques Francoeur has 30+ years of high tech experience and is currently the Founder and CEO of Spheric Security Solutions, a Silicon Valley-based organization focusing on developing security software solutions to

support the management and communication of security. Jacques is also the co-founder and Executive Director of SecurityGenomeProject.org, a not-for-profit community-based initiative developing a Security Control Syntax Language and Security ontology for the common good of the industry. Additionally, Jacques is the Cyber Executive-in-Residence at the Lucas College & Graduate School of Business at San Jose State University and is a member of the Dean's Global Leadership Council, and as the Senior Cybersecurity Scientist at the National Transportation Security Center, Mineta Transportation Institute, he focuses on surface transportation protection from cyber threats. Previously, Jacques was a member of Ernst & Young's Information Security Advisory team, Security Center-of-Excellence. Prior to E&Y, Jacques was Sr. Director at Science Application International Corporation (SAIC), where he provided thought leadership in the field of identity and information assurance. Jacques was the co-founder and former Executive Director of the Bay Area CISO Council; a Silicon Valley member-based nonprofit organization of Chief Information Security Officers. Jacques holds Bachelor-of-Applied-Science (B.A.Sc) and Masters-of-Applied-Science (M.A.Sc) degrees in Aerospace Engineering from the University-of-Toronto and the Institute for Aerospace Studies, respectively. He earned his MBA from Concordia University.



**Bruno Batavia**

*Coordinator,  
Central Bank Brazil*

Bruno Batavia holds a Bachelor of Laws (LL.B) from PUC-Rio and a Master's degree in Public Administration (MPA) from Columbia University. He is responsible for conducting research and formulation of public policies at the Central Bank of Brazil.

innovation in payments and digital currencies.



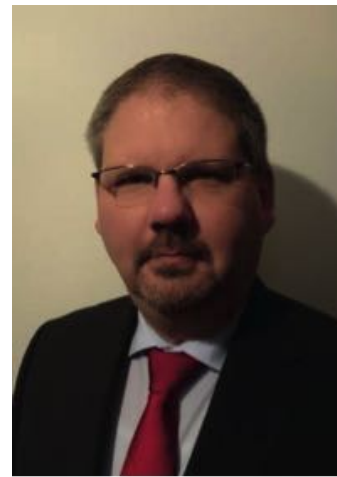
**Barry Eichengreen**

*University of California,  
Berkeley*

Barry Eichengreen is the George C. Pardee and Helen N. Pardee Professor of Economics and Professor of Political Science at the University of California, Berkeley, where he has taught since 1987. He is a Research Associate of

the National Bureau of Economic Research (Cambridge, Massachusetts) and Research Fellow of the Centre for Economic Policy Research (London, England). In 1997-98 he was Senior Policy Advisor at the International Monetary Fund. He is a fellow of the American Academy of Arts and Sciences (class of 1997). Professor Eichengreen is the convener of the Bellagio Group of academics and economic officials and chair of the Academic Advisory Committee of the Peterson Institute of International Economics. He has held Guggenheim and Fulbright Fellowships and has been a fellow of the Center for Advanced Study in the Behavioral Sciences (Palo Alto) and the Institute for Advanced Study (Berlin). He is a regular monthly columnist for Project Syndicate. His most recent books are *How Global Currencies Work: Past, Present, and Future* with Livia Chitu and Arnaud Mehl (November 2017), *The Korean Economy: From a Miraculous Past to a Sustainable Future* with Wonhyuk Lim, Yung Chul Park and Dwight H. Perkins (March 2015), *Renminbi Internationalization: Achievements, Prospects, and Challenges*, with Masahiro Kawai (February 2015), *Hall of Mirrors: The Great Depression, The Great Recession, and the Uses--and Misuses--of History* (January 2015), *From Miracle to Maturity: The Growth of the Korean Economy* with Dwight H. Perkins and Kwanho Shin (2012) and *Exorbitant Privilege: The Rise and Fall of the*

*Dollar and the Future of the International Monetary System* (2011) (shortlisted for the Financial Times and Goldman Sachs Business Book of the Year Award in 2011). Professor Eichengreen was awarded the Economic History Association's Jonathan R.T. Hughes Prize for Excellence in Teaching in 2002 and the University of California at Berkeley Social Science Division's Distinguished Teaching Award in 2004. He is the recipient of a doctor honoris causa from the American University in Paris, and the 2010 recipient of the Schumpeter Prize from the International Schumpeter Society. He was named one of Foreign Policy Magazine's 100 Leading Global Thinkers in 2011. He is a past president of the Economic History Association (2010-11 academic year).



**Klaus Loeber**

*Head of Oversight, European Central Bank, Innovations Working Group CPMI*

Klaus Martin Löber is Senior Adviser in the Directorate General Market Infrastructure and Payments of the European Central Bank. His areas of responsibility encompass the ECB's global regulatory policy activities with a focus on payments and

market infrastructures. More specifically, he is dealing with the ECB's fintech and digital innovations agenda and acts as chair of the CPMI working group and co-chair of the CPMI-IOSCO working group looking into these developments. Prior to his current position, Mr Löber was Head of the Secretariat of the Committee on Payments and Market Infrastructures (CPMI) hosted by the Bank for International Settlements in Basel, Switzerland, after being Head of the Oversight Division of the European Central Bank and Chair of the ESCB Working Group on Oversight. Earlier positions practice includes the European Commission, Deutsche Bundesbank and private practice. Mr Löber regularly publishes on financial markets legal, regulatory and infrastructure issues.



**Sarah Bloom Raskin**

*formerly Board of Governors of the Federal Reserve System & United States Deputy Secretary of the Treasury*

*Raskin worked as an associate at Arnold & Porter and as counsel for the U.S. Senate Banking Committee. Prior to serving as Commissioner,*

she was a Managing Director at the Promontory Financial Group. Raskin also served as chief financial regulator for Maryland. President Obama nominated Raskin to the Federal Reserve Board along with fellow nominees Dr. Janet Yellen, president of the Federal Reserve Bank of San Francisco, and Massachusetts Institute of Technology economics professor Peter A. Diamond.[4] Raskin and Yellen were unanimously confirmed as Federal Reserve Board governors by the United States Senate on September 30, 2010.[7] On October 4, 2010, both were sworn in by Fed Chairman Ben Bernanke. As a member of the Federal Reserve Board, Raskin gained a reputation as someone focused on consumer protection and income inequality. On July 31, 2013, President Barack Obama announced that he would nominate Raskin to the second-in-command position of Deputy Secretary at the United States Department of the Treasury. She was confirmed to the position on March 12, 2014 by a voice vote. Upon confirmation, Raskin became the highest-ranked woman in the history of the Treasury Department. Raskin was sworn in on March 19, 2014. Upon her confirmation as Deputy Secretary she resigned as a Member of the Board of Governors of the Federal Reserve System on March 13, 2014. During the 2017-18 academic year, Raskin is a Distinguished Visiting Professor at the University of Maryland Francis King Carey School of Law.

Raskin holds a J.D. degree from Harvard Law School and a B.A. in economics from Amherst College, where she wrote her undergraduate thesis on monetary policy. She is a 1979 alumna of Homewood-Flossmoor Community High School in Flossmoor, Ill.



### **Rohan Grey**

*Founder, Modern Money Network*

Rohan Grey is a Research Scholar at the Binzagr Institute for Sustainable Prosperity. He is the Founder and President of the Modern Money Network; a global learning hub that promotes public understanding of

money and finance. He holds a J.D. from Columbia Law School, an L.L.M. from the London School of Economics, and a M.A. in Music Education from Columbia Teachers College. Rohan currently works as an advocate for children in Manhattan Family Court, and was previously an elementary, primary and secondary music teacher.



### **Bejoy Das Gupta**

*Chief Economist, eCurrency*

Dr. Bejoy Das Gupta is the Chief Economist of e-Currency with extensive experience in analysis of economic policy, growth, private sector development, capital flows, financial sector, financial inclusion, digital finance, and country risk. At eCurrency, Das Gupta is a key contributor in driving the company's global expansion through stepped up engagement with multilateral organizations, central banks, policy officials, commercial banks, and service providers. His appointment comes at a key point in time when the expansion of digital financial services is set to transform the global economy and help foster inclusive growth, requiring regulators to make enabling policy choices. Das Gupta is an expert on Asia-Pacific economies, providing advice to the private sector on investing and managing risk and advising central banks, regulators and governments on policy choice and reforms. He has been Chief Economist for Asia-Pacific at the Institute of International Finance (IIF), serves on boards of a research institute and a cleantech company, and teaches in a leading US public affairs school. Prior to joining IIF, Das Gupta served as Economist for the International Lead and Zinc Study Group in London, and in investment banking. After graduating from the London School of Economics, he received M.Phil. and D.Phil. in Economics from Christ Church, Oxford. He is the recipient of several prizes, including the AMEX Bank Review Awards in International Economics and Finance.



### **Wimboh Santoso**

*Chairman, OJK*

Wimboh Santoso took the first step of his career by taking a job as banking supervisor at Bank Indonesia, following the completion of his undergraduate study at the State University of Surakarta in 1983. He pursued a further study at University of Illinois and gained a Master's degree in Business Administration in 1993. His thirst for knowledge led him to enroll to Loughborough University, from which he took home a PhD in Banking and Finance in 1999. Wimboh, who was born on March 15, 1957, in Boyolali, Central Java, continued dedicating his expertise to Indonesia's banking industry by serving as Director of Banking Research and Regulation at Bank Indonesia from 2010 to 2012. Later, he was appointed as Head of Bank Indonesia Representative of New York, before joining the International Monetary Fund



to take an executive director's seat there. Since 2015, Wimboh has been the President Commissioner at PT Bank Mandiri (Persero) Tbk, and in 2016, he also became Indonesian Banking Development Institute Director. The senior banker was part of Bank Indonesia delegation for a G20 meeting in 2010, and in the same year he also represented the Central Bank at the Financial Stability Board and the Basel Committee on Banking Supervision. Then in 2014, he co-chaired the Asean Banking Integration Framework. The prominent bureaucrat attained a number of certificates from the Banking Professional Certification Institute (LSPP) for a range of topics, from Risk Management Competency Levels 1 and 2, Facing Global Challenges for Better Economic Growth (2017), to Managing Compliance Risk while Controlling Cost. Wimboh has been teaching at leading universities in Indonesia, for both undergraduate and postgraduate programs and on top of that, he has produced considerable achievements and distinguished writings. Titles of his works include Effective Financial System Stability Framework (2007), the Impact of Global Liquidity on Financial Landscapes and Risk in the ASEAN-5 Countries (2007), Risk Profile of Households and the Impact on Financial Stability (2009), and many others.



**Kaushik Basu**  
*Professor of Economics,  
 Cornell University*  
 Kaushik Basu is Professor of Economics and the C. Marks Professor of International Studies at Cornell University and former Senior Vice President and Chief Economist of the World Bank (2012-16). From December 2009 to July 2012 he served as the

Chief Economic Advisor (CEA) to the Government of India at the Ministry of Finance. Till 2009 he was Chairman of the Department of Economics and during 2006-9 he was Director of the Center for Analytic Economics at Cornell. Earlier he was Professor of Economics at the Delhi School of Economics, where in 1992 he founded the Centre for Development Economics in Delhi was its first Executive Director. He is also a founding member of the Madras School of Economics. He is currently President of the International Economic Association (2017-2020).



**Daniel Reiss**  
*Central Bank of Brazil*  
 Lead, Department of Banking Operations and Payment System, Central Bank of Brazil

Daniel Gersten Reiss is dedicated at the Central Bank of Brazil to the research on the usage of payment instruments and on innovations in this area. He has worked with

payment systems for almost a decade, having managed the implementation of the Brazil-Argentina payment system in local currencies project (SML) in 2008. Dr. Reiss has a doctorate in Economics and background in both International Relations and Administration. He graduated the Brazilian Naval Academy. Recently, he has acted as vice-chairman to the ITU-T Focus Group Digital Financial Services and he is currently a member of the BIS CPMI Working Group on Digital Innovations.



**Alpha Wang**  
*Senior FinTech Security  
 Expert, Tencent*  
 12+ years cross-culture work experience, good knowledge on the relevant regulations and technical principles by working in France Telecom HQ and R&D, multi-sites projects coordination between France, UK, Poland and etc. In close collabora

tions with Orange technical and operational entities over SIM based contactless standardized technology deployment and services initiative. Leading SIM based NFC innovations & prototypes development in China in collaborations with European teams, effective collaborations with major local players in this area.



**Mr. Mohamed Helmy**

*Senior Business  
Officer - Payment Systems Dep.  
at the Central Bank of Egypt*

Mr. Helmy is a central banking payment systems, retail banking, Financial Inclusion, Mobile Payments and Digital Financial Services expert. He has more than 15 years of experience in Payment Systems, Market infrastructure and informa-

tion technology and diversified experience with major responsibility for Payment systems reform in Egypt during his roles and achievements within CBE and as well during his specialized international task forces & working groups valued contributions, participation and membership.



**Michael Li**

*Technical Director of  
Tencent Finance Platform,  
Tencent*

Mr. Li joined Tencent in 2004 and currently serves as Technical Director of Financial Technology Group and Head of Tencent Blockchain Technology. Mr. Li, as Technical Director of Financial Technology

Group, is responsible for Finance platform. He leads the development and deployment of key global initiatives and campaigns, supporting business growth and strategy execution across a wide range of products, solutions and services, such as Tenpay, Wechat Pay, Wechat Red Envelope (Hongbao) with 1 billion user base worldwide, and has achieved continuous breakthroughs in cloud computing, distributed transactions, big data and block chain, which brings comprehensive value to users. By combining blockchain and Internet services, Tencent is taking more social responsibility by offering extensive services, such as finding the lost people, digital invoice and intelligent healthcare.



**Thomas Kudrycki**

*CTO eCurrency*

Mr. Thomas Kudrycki, co-founded Real Girls Media Network, Inc. in 2006 and served as its Executive Vice President of Technology and Operations. Mr. Kudrycki served as Executive Vice President of Technology and Operations at Bella-

in technology development and management. He served as Executive Vice President of Technology and Operations of Bellamax, a photo editing software company. He served as President and Chief Executive Officer of Metacat, a product catalog information management company where he led the charge to create Metacat's enterprise software product. He served as Vice President of Engineering of Chemdex. And way back, as Vice President of Content Technology at CNET, he took the San Francisco engineering team from nobody to 75 strong. Mr. Kudrycki serves as a Director of MWA Intelligence Inc. Specialties: Early to mid-stage companies: initial company vision and planning, building of the initial business plan, venture fundraising, product definition and implementation, initial product launch, growth and profitability, operations and business performance metrics.



**Drummond Reed**

*Chief Trust Officer, Evernym*

Drummond has spent over two decades working on Internet identity, security, privacy, and trust frameworks. He joined Evernym as Chief Trust Officer after Evernym's acquisition of Respect Network, where he was CEO, co-founder, and co-author of the Respect Trust Framework, which was honored with the

Award at the 2011 European Identity Conference. Drummond has served as co-chair of the OASIS XDI Technical Committee since 2004, the new semantic data interchange protocol that implements Privacy by Design. Prior to starting Respect Network, Drummond was Executive Director of two industry foundations: the Information Card Foundation and the Open Identity Exchange, the international not-for-profit clearinghouse for Internet trust frameworks. He has also served as a founding board member of the OpenID Foundation, ISTPA, XDI.org, and Identity Commons. In 2002 he was a recipient of the Digital Identity Pioneer Award from Digital ID World, and in 2013 he was honored as an OASIS Distinguished Contributor.



**Konstantin Peric**

*Deputy Director Global Payment, Bill & Melinda Gates Foundation*  
Konstantin Peric, deputy director, Financial Services for the Poor leads the team that focuses on digital payments. From governance through business models to technology - from ideas through architecture to development: he oversees the strategy and

grants to deliver digital payment solutions for the poor. Current focus countries include Nigeria, Indonesia, Pakistan, India, Bangladesh. Prior to joining the foundation in 2013, he was the chief architect of SWIFNet, SWIFT's global secure network connecting 10,000 financial institutions and corporates in the world, and co-founder of Innotribe, SWIFT's initiative to enable collaborative innovation in financial services. Kostantin holds a masters degree in computer science from Free University of Brussels, Belgium. He is the author of The Castle and the Sandbox, a book on how to innovate in conservative companies using open innovation.



**Olivier Pfeiffer**

*Head of Financial and Critical Infrastructures Markets, ID Quantique, Switzerland*  
Olivier Pfeiffer is head of Finance and Critical Infrastructure markets at ID Quantique. He has more than 10 years' experience in the security industry and more than 20 in network and internet technologies. Prior to joining IDQ he led the business development activities for

Swiss IoT companies in the critical infrastructure, logistics and defense industries as well as media protection companies. Earlier, Olivier also co-founded a number of companies active in Internet-centric media technologies in the USA and in Europe. Olivier graduated from New York University (BA and APC in Business management). Authored several patents in the area of SIM based NFC, wireless system, broadcasting and spectrum topics Good knowledge on the spectrum assets, regulations and operations in major European

countries within CEPT (Commission of European Post and Telecommunications). Active interactivity with experts in GSMA (mobile identity), ETSI, 3GPP, NGMN, GTI, GlobalPlatform, M2M on both technical and evolution and business development topics, and contribute to ETSI and NGMN by joining the meeting regularly. Good knowledge on AFSCM and Cityzi deployment experience on both contactless infrastructure and its application area. Coordinated successfully the SIM based NFC collaboration between partners in Europe and players in Asia ecosystems by effective communication. Acted as prime delegate of CRAN project in NGMN, and leading Network sharing Topics on behalf of Orange. Excellent qualification in strategic planning with comprehensive knowledge of cross cultural technical project management, organizational development, team building, and project execution



**Edward M. Scheidt**

*Convenor of ISO TC68 SC2 WG13 Ad Hoc Group 4, Security of International Digital Currencies, Vice chair, ANSI x9 US Financial Standards, Global Security Standards, Chief, scientist, Tecsec*

Mr Scheidt is currently the Convenor of ISO TC68 SC2 WG13 Ad Hoc Group 4, Security of International Digital Currencies, Vice chair, ANSI x9

US Financial Standards, Global Security Standards, Chief, scientist, Tecsec. He is the former leader of the US ANSI x9 Accredited Standards x9f data and information security committee. He actively participates in specific x9 and ISO standards, including new directions to advance forms of security across the financial sector domains. He is the head of the US delegation to ISO TC68 SC2 Financial Services, Security and member of the Federal Reserve Security Task Force with adjunct membership in subcommittees of Standards, Identity Management, and Data Protection. He is employed with Tecsec, a security research and solution company providing support to the financial sector and has authored various papers regarding security, including examples such as "The World of Objects: Physical and Virtual" and "Blockchain Permission Model". He has a Master of Science from George Washington University.

For more information, please see the FG DFC website:  
<https://www.itu.int/en/ITU-T/focusgroups/dfc>



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