

# eTrust Perspective: Digital Fiat Currency

David Wen, President Digital Fiat Currency Institute ITU Forum for PKI and e-Trust, 2019

## Money is Changing Form

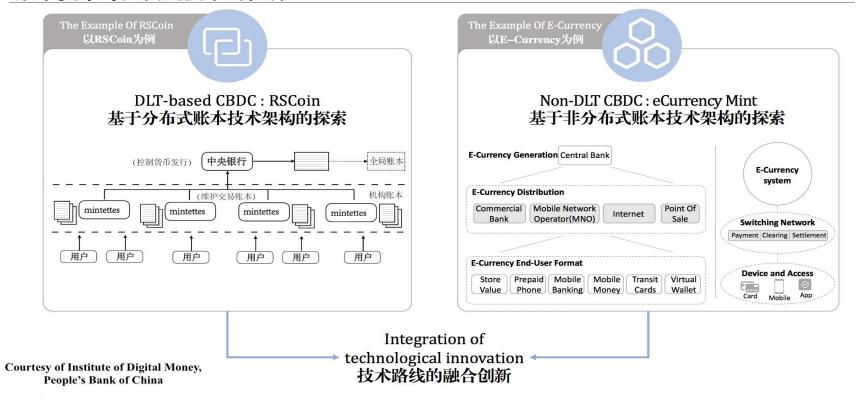


Private e-Currency Gold DFC Private money money PayMaya airtel money

## Ledger-based and Instrument Based



#### Decoupling CBDC from Blockchain Technology 数字货币与区块链技术的松绑



#### DFC will enable existing payment infrastructure



	Ecosystem Layers	Security Function	Providers	
6	Currency Supply	Instrument Security	Central bank	1,000 Turrency
5	Banking Systems	Financial Security	BARCLAYS	**
4	Payment Systems	Trans. Security	VISA M-PESA	PayPal
3	Mobile & POS terminal	Device Security	(•) Verifond	GLOBALPLATFORM
2	Payment Application	Apps Security	Alipay.com pay	<b>É</b> Pay
1	User Access	User Security	Pay with Touch ID	fido

Secure the supply of DFC at the source

- Security built-in at the core of the system
- Authenticity of the DFC is verified in every transaction
- Impossible to add counterfeit DFC to the supply pool

#### Example of Governance Technology at Work

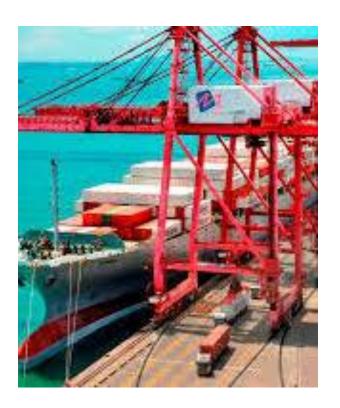






# Governance Technology

- -Standardization
- -Enhance Security
- -Interoperability
- -Reduce theft
- -Efficiency
- -Shorten time



This is done on top of transportation infrastructure and without Investing on new means of transport

## DFC from Concept to Implementation



- Bank of International Settlement (BIS) survey 11/2018 found 57% central banks are evaluating DFC technology
- Head of International Monetary Fund (IMF) Christine Lagarde 11/2018 made the case for Central Bank Digital Currency
- Seven Central Banks Presented use cases at the ITU Focus Group on Digital Currency workshop 7/2018
- Bank of Japan, European Central Bank, Bank of Canada, Federal Reserve conducted proof of concept for CBDC in 2018
- Swedish Central Bank led the way with e-Krona project started 2017 and is conducting implementation phase in 2019
- Sandbox and proof-of-concept have been conducted by developing countries for retail CBDC in Ecuador, Tunisia, Uruguay, Philippines, etc
- Bank of England, Monetary Authority of Singapore have piloted wholesale CBDC used for Real Time Gross Settlement systems
- People's Bank of China announce their two tier CBDC architecture during ITU FG DFC workshop in New York, 7/2018.

# Mission of Future of Currency Lab



#### Mission Statement

Provide a world leading, technologically agnostic, vendor neutral, open access laboratory environment for the research and development, sharing, promotion, testing, evaluation, and adoption of Digital Fiat Currency (DFC) technology. Serve the world central banks and financial community with evaluation, standardization and recommendation of leading Central Bank Digital Currency(CBDC) solution, under the auspices and oversight of ISO, ITU, and other standard making bodies.

#### About Digital Fiat Currency Institute (DFCI)

- Founded in June 2017 as a 501(c)(6) not-for-profit organization
- Signatory organization for the support ITU FG-DFC work
- Sponsor of Future of Currency Laboratory
- www.dfc-institute.org

#### **DFCI Structure and Business Model**



#### **Digital Fiat Currency Institute**

ITU FG DFC
Global Ecosystem
Development

Working Group: Regulatory Requirements

Working Group: Reference Architecture

Working Group:
Security

Future of Currency Labs

CBDC pilots serving

Regional Central Banks



Hangzhou, China

Tunis, Arab League

Stanford, USA

iDFC
Professional Training
& Certification



Global Knowledge
Exchange Fora

ISO/ITU Standardization and vendor integration

Professional & Academic Skills Courses

Future of Currency
Incubator Fund



Plug and Play Future of Currency Corner

Future of Currency Incubator (Malta)

Future of Currency Incubator (China)

## Why a "Future of Currency Laboratory"



- To fill the gap between the interest in CBDC and best technological solutions
- After Bitcoin bubble, a need developed for a regulatory framework for digital currency
- A need for an expert panel and a platform to develop comprehensive metrics for evaluating the multitude of blockchain and other solutions
- A need for a repository of leading central banks pilots that can be shared with developing countries conducting research in CBDC
- A need to grow an eco-system by including regulators, economists, financial institutions, academics, and consumer advocates
- Provide a path for standardization, certification and implementation of CBDC worldwide

## What is "Future of Currency Laboratory"



- Established by members of the ITU Focus Group on Digital Currency (ITU FGDFC)
- Provide neutral platform for sharing by enforcing ITU/IEC/ISO Intellectual Property Guideline
- Built on two years of work of ITU FGDFC reference architecture working group
- Host leading central bank DFC proof-of-concepts conducted by vendors in the market
- Evaluation based on metric created by expert panel from leading universities, international institutions and consulting companies
- Provide comprehensive DFC research and education opportunities for the developing countries using ITU regional laboratory model

## Benefit of "Future of Currency Lab"



- For Central Banks around the world (180+)
  - One-stop-shop for comprehensive and up to date information on all matters of Central Bank Digital Currency (CBDC)
  - Choose from evaluation report, training/seminars, hands-on lab, to Proofof-Concept
  - Access to top CBDC pilot learnings from leading central banks
  - Meaningful relationship building with peers
  - Access to evaluation and consultation from leading experts from across disciplines
  - Access to integration and consortium of vendors, enabling informed choices and more comprehensive solutions
  - Peace of mind in a rapidly changing market and solutions
  - Ability to influence creation of global standards and certification effort
  - Potential for direct transition to implementation by the vendors after research and proof of concept

## Benefit of "Future of Currency Lab"



- For Fintech and Financial Institutions
  - Opportunity to pilot proof of concepts with real cases and peers
  - Potential for pipeline development for vendors, seeded in Labbased testing with partners
  - Opportunity to showcase technologies in a credible, secure, open environment
  - Fair, transparent, neutral evaluation of solutions by leading academics and thinktanks
  - Provide neutral forum for integration between traditional financial institutions and new fintech (e.g. SWIFT and R3, RTGS and blockchain, mobile wallet and DFC)
  - Access to member central banks around the world
  - Access to regional labs to serve world wide market
  - Access to partnership, consortium opportunities
  - Access to standardization, certification efforts

# Future of Currency Lab built on ITU Focus Group eco-system and members





First ITU FG DFC meeting: 2017.10 Hosted by People's Bank of China Over 40 countries participated

Workshop on

Digital Fiat Currency and its Applications

Second ITU FG DFC meeting: 2018.7 at New York with 7 Central banks presenting use cases of DFC

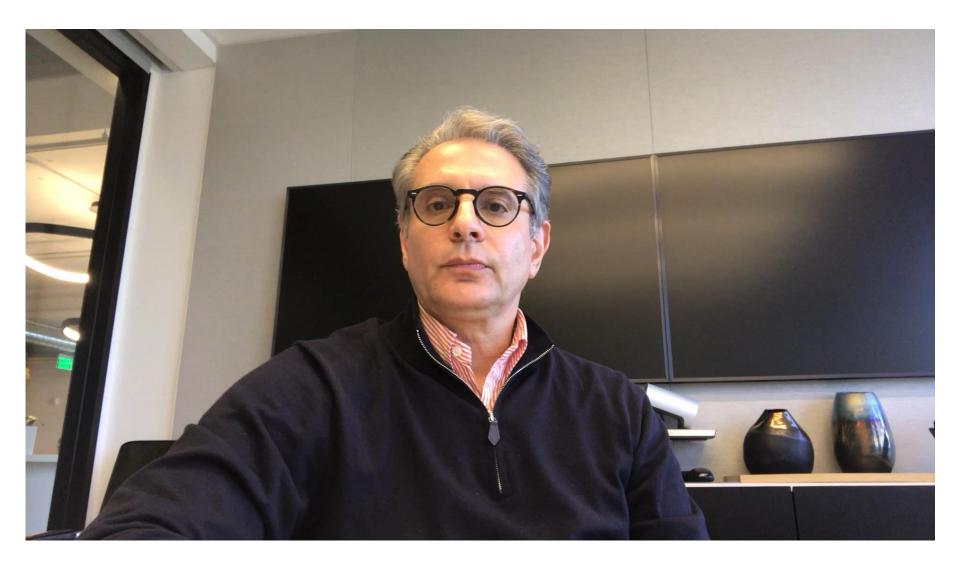
## Future of Currency Lab Tunis Inauguration





## Message from Future of Currency Lab Stanford





#### Message from Future of Currency Lab Hangzhou



Dear Dr Mohamed Ben-Amor, Dr Bilel Jamoussi, Dr David Wen, and distinguished guests,

As one of the Digital Fiat Currency Institute members from China, I would like to give my sincere congratulations to you all for the inauguration of the Future of Currency Laboratory Tunisia. It is an honor for me to have witnessed the delightful changes with you in the digitization of currency and the fast development of financial inclusion on a global scale. The credit goes to Professor Larry and Dr. David Wen, the co-executive directors of the Future of Currency Laboratory Stanford, and everyone who contributed their talent in the establishment of this new laboratory and the future of digital currency. I believe Dr Mohamed Ben-Amor and Dr Bilel Jamoussi will lead the Future of Currency Laboratory Tunisia to make its outstanding contributions in the future development of digital currency in this region.

Looking forward to the great opportunities for collaborations between our labs and wish you all the best with great success!

Yours,

Lin Luhua

Sally Lin Luhua





#### For More Information

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