

# Workshop on Standards for Digital Fiat Currency

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## The DFC Experience and Expectations for Tanzania

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# OUTLINE

- Our Understanding and Perspectives of DFC
- Progress in relations to (DFS and Interoperability) for the National Payment Systems(NPS) Ecosystem.
- Why the Bank wants to deploy DFC
  - Use, Benefits, Opportunities, Impacts
  - Micro economic impact
  - Needs for Implementing Key Requirements
  - Improve Compliance, Interoperability, security
- How the Bank sees the Focus Group work will help developing countries to deploy DFC



# Understanding and Perspectives of DFC

## Status of DFC

- **DFC** is currently being studied and tested by governments and central banks in order to realize the many positive implications it contributes to
  - *financial inclusion,*
  - *economic growth,*
  - *technology innovation and*
  - *increased transaction efficiencies.*
- Success stories of financial inclusion in Tanzania that came from implementing good policies on mobile financial services (M-Banking and M-Payment) shall add values.
- The Nation is currently in the critical evaluation of these innovations with highest prospects



# Understanding and Perspectives of DFC

## Terms used interchangeably: *DFC, Digital Currency and Electronic Money*

- **Digital Fiat Currency (DFC)** is the digital form of fiat money which is
  - a currency established as money by government regulation or law.
  - part of the base money supply, together with other forms of the currency.
- However, **DFC** is different from
  - **“digital currency”** (also known as **virtual currency** and **cryptocurrency**)
    - which are not issued by the state and mostly lack the legal tender status declared by the government.
    - The legal status of cryptocurrencies varies substantially from country to country and is still undefined or changing in many of them.
  - **“electronic money”**,

# Understanding and Perspectives of DFC

## Electronic money (e-money)

- A type of monetary value electronically recorded and generally understood to have the following attributes:
  - I. issued upon receipt of funds in an amount no lesser in value than the value of the e-money issued;
  - II. stored on an electronic device (e.g. a chip, prepaid card, mobile phone, or computer system);
  - III. accepted as a means of payment by parties other than the issuer; and convertible into cash.
- Heavily deployed in Tanzania through mobile phones in support of financial inclusion to **65%** in **2017** from **36 %** in 2009. Tanzania Finscope Survey, 2017



# Understanding and Perspectives of DFC

## Technology, Security. Digital instrument with identity

- The Technology to issue **DFC** is part of central bank issued base money (or monetary base).
- **DFC** is a high secure digital instrument, like paper bank notes, it is
  - a means of payment,
  - a unit of account and
  - a store of value
- unlike **paper currency**, each unit is uniquely identifiable to prevent counterfeit



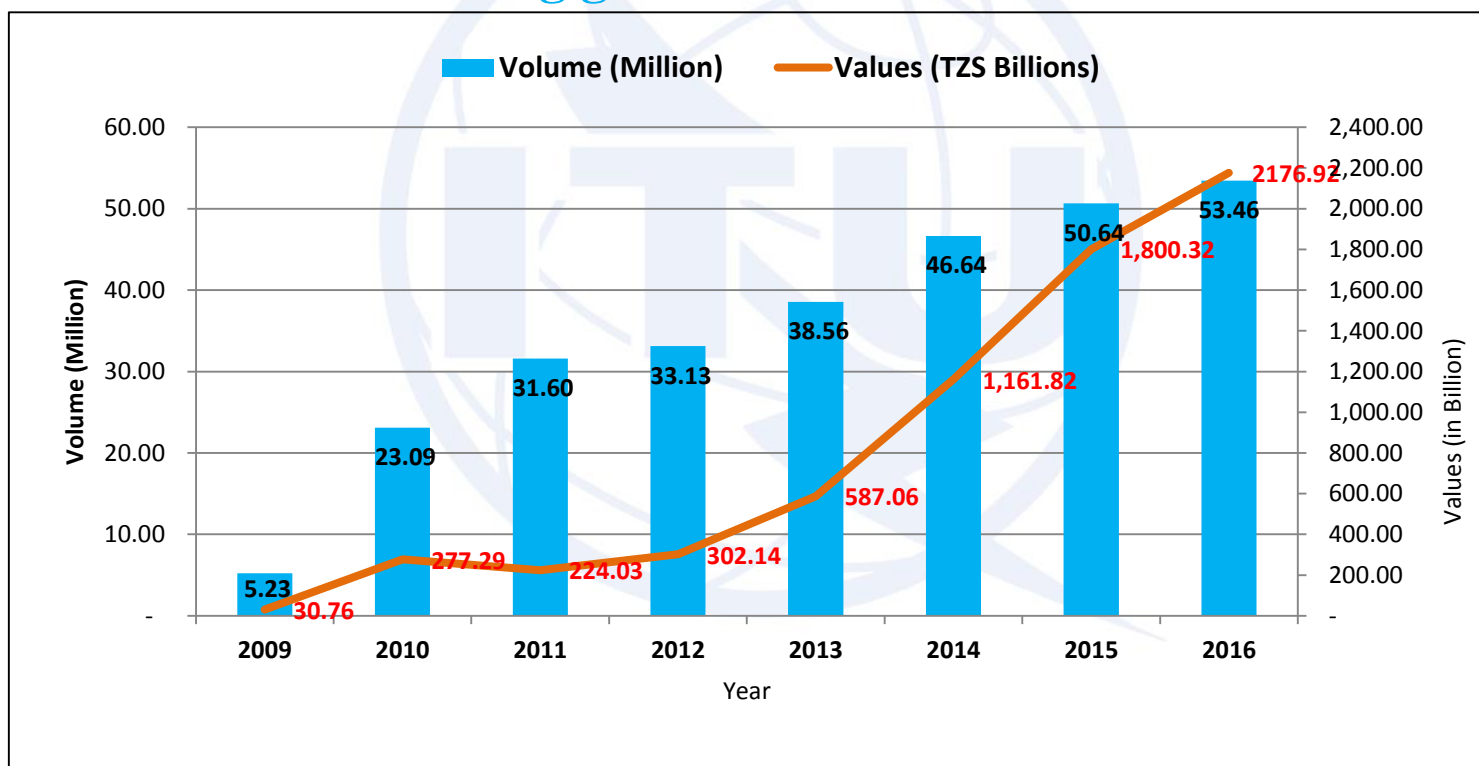
# Understanding and Perspectives of DFC

- DFC is a *digital bearer* instrument that can be stored, Transferred, transmitted by all kinds of **digital payment systems and services**.
- The validity of the **DFC** is independent of the **digital payment systems** storing and transferring the digital fiat currency
- It is preferred to issue/deliver **DFC** to public via the banks, as we do now with banknotes and coins against the current practices of issuing money through **money issuers**



# Progress in relation to DFS and Interoperability for the NPS Ecosystem.

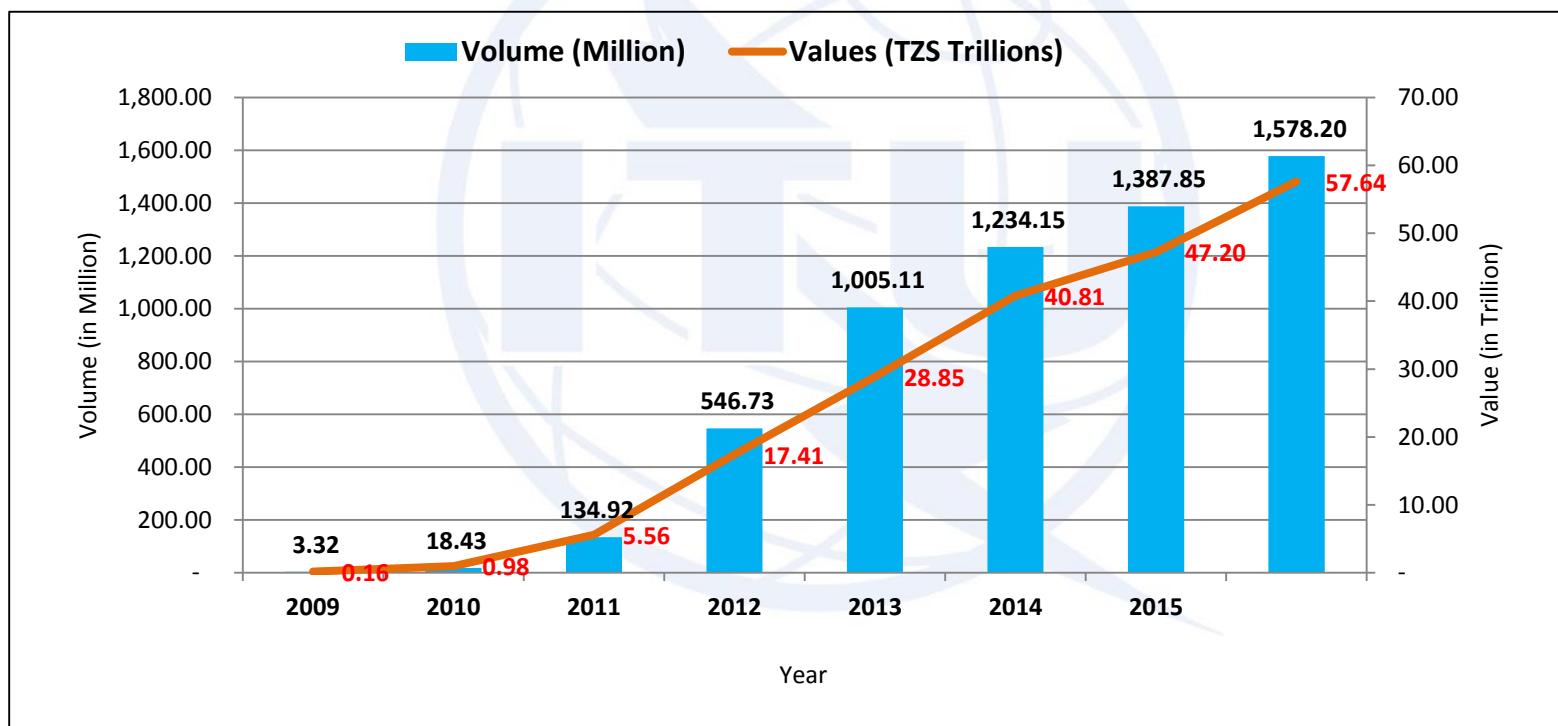
## Mobile Banking growth 2009 -2016 in Tanzania





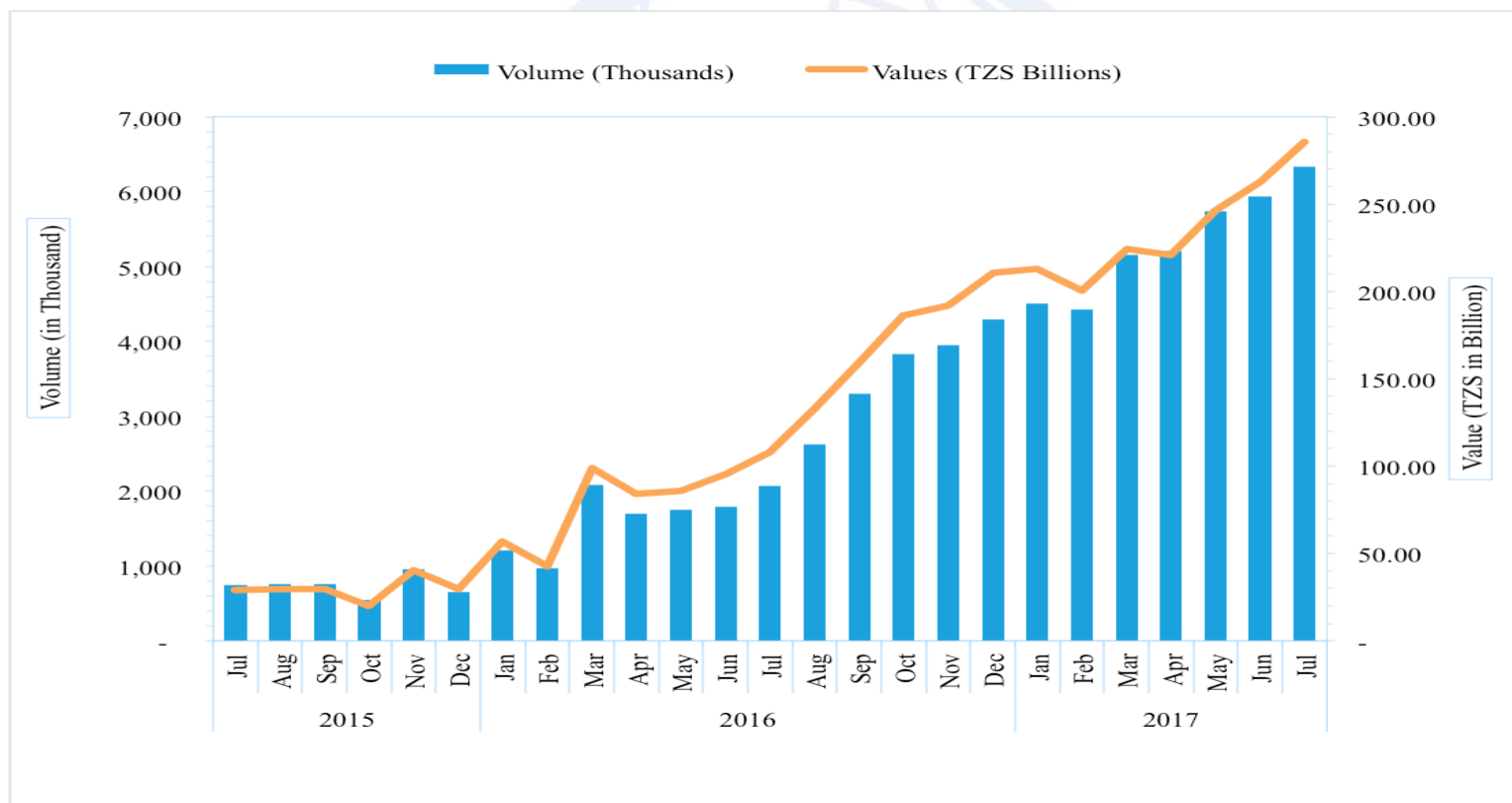
# Progress in relation to DFS and Interoperability for the NPS Ecosystem.

## Mobile Payment growth 2009 -2016 in Tanzania



# Progress in relation to DFS and Interoperability for the NPS Ecosystem.

## MFS Interoperability by MNO in Tanzania



Tanzania was the first country in the world to Implement Interoperability in MFS through bilateral arrangements among MNOs



# Progress in relation to DFS and Interoperability for the NPS Ecosystem.

## Growth of Retail MFS Schemes in Tanzania

### Mobile Payment Systems Statistics

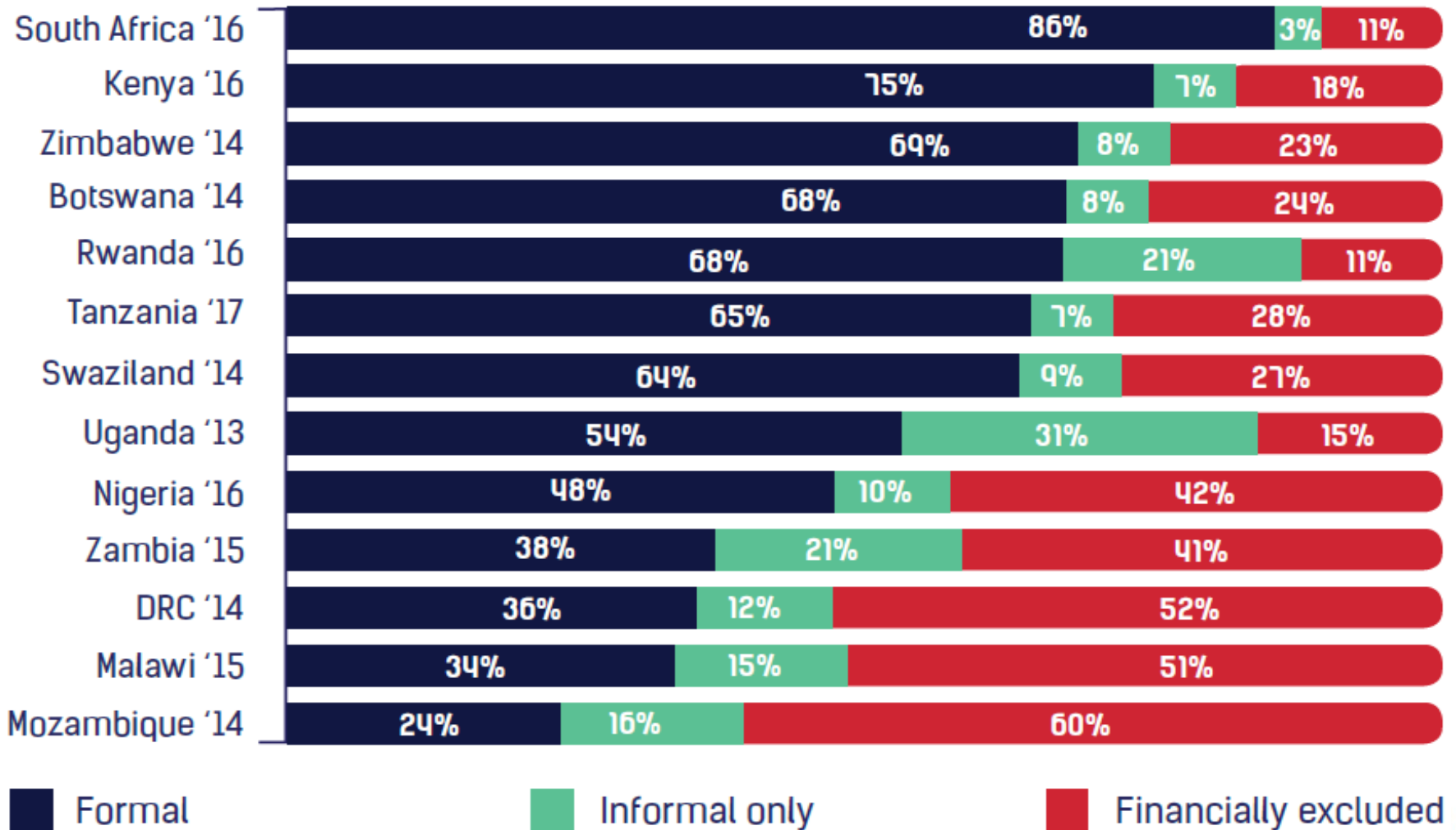
	2008	2009	2010	2011	2012	2013	2014	2015	2016	Jan – Jul 2017	
<b>Registered Accounts (In million)</b>	0.11	4.19	10.66	21.18	26.87	31.83	41.38	49.36	71.25	73.57	
<b>Registered Active Users (In million)</b>					7.87	11.02	13.86	19.79	17.03	17.73	
<b>Registered Agents (In thousand)</b>	2.76	14.47	29.10	83.80	97.61	153.37	238.46	267.03	371.13	398.09	
<b>Transactions</b>	<b>Volume (in million)</b>	0.41	3.32	18.43	134.92	546.73	1,005.11	1,234.15	1,388.09	1,578.20	1,083.20
	<b>Value (In billion)</b>	25.23	158.54	981.42	5,563.31	17,407.73	28,852.29	40,809.83	47,219.13	57,641.86	36,842.97
<b>Trust Accounts Balance (TZS billion)</b>	-	7.11	30.34	96.06	192.42	293.52	450.95	561.2	665.7	661.1	

### Mobile Payment Systems Statistics by MNOs as at end of July 2017

	Airtel Money	Tigo Pesa	TTCL Pesa	Halopesa	M-Pesa	EzyPesa	
<b>% Number of Registered Accounts (live in the system)</b>	8.42	52.86	0.00	10.30	24.22	4.20	
<b>% Number of Active Accounts ( past 90 days)</b>	18.25	34.79	0.01	1.75	43.72	1.49	
<b>% Number of Registered Agents</b>	20.59	18.83	0.01	19.05	41.12	0.39	
<b>% Transaction in a reporting period</b>	<b>Volume</b>	10.50	38.23	0.01	0.81	49.95	0.51
	<b>Value</b>	10.75	29.79	0.00	0.14	58.98	0.34
<b>% of Cumulative Trust account value</b>		14.10	33.48	0.11	1.65	49.15	1.52

# Progress in relation to DFS and Interoperability for the NPS Ecosystem.

Chart 26: **Ranked comparison of financial inclusion in Sub-Saharan Africa**



SOURCE: FinScope Tanzania 2017



# Why the Bank wants to deploy DFC

## Key requirements

- ***Need for Liquidity feature*** for injecting liquidity into a digital payments ecosystem, and enabling real-time, instant settlement of interoperable digital transactions.
- ***Need of Dashboard - oversight/ supervision*** of the entire digital payments ecosystem by the relevant regulators
- ***Need for Network*** that allows interoperability across banks, non-bank financial institutions, merchants, agents and mobile money systems
- ***Need for Interconnect through standards-based APIs*** for message switching



# Why the Bank wants to deploy DFC

## Available opportunities and demands

- Access to *the internet* is widespread, and *computers, smartphones and tablets* are household items.
- There is currently a need among the **general public** and **companies** to have access to **central bank money** and that this need will still be there in the **future**.
- Thus, the conditions are ripe for launching more electronic payment through **DFC** in developing nations

# How the Bank sees the Focus Group work will help developing countries to deploy DFC

Through these dialogs we shall be better informed on the **benefits** and **impacts** on key requirements and way forward.

- Need for **secure** and standard interoperable digital payment instrument issued and governed by a **Central Bank** and used as the **national digital payment instruments** that boosts confidence in privately controlled money systems and increases **trust** in the entire **National Payment Systems**.
- Sharing **experience** on various implementation across the world through this focus group



# How the Bank sees the Focus Group work will help developing countries to deploy DFC

## Who to take the lead

- ***Developing nations*** may likely take the lead based on opportunity costs and lessons learned in various electronic money implementations.
- We wish to advocate on the concept of ***test the innovation, monitor*** and then ***regulate*** policies, the approach applied by Tanzania on mobile money.