



Digital Financial Services: Job creation, Innovation and Entrepreneurship

Increasing the Impact



Partnership Dialogue
ITU, Geneva, Switzerland
30 September 2016

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Agenda

- I. Introduction
- II. Job creation, innovation and entrepreneurship from within DFS
- III. Expanding the economic gains from DFS across the economy
- IV. Increasing the impact of DFS

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DFS as a platform for achieving the SDGs

- access to financial services (SDG 8.10 & 9.3)
- poverty reduction (SDG 1)
- business opportunities for small and medium enterprises (SDG 9)
- increase employment (SDG 8)
- funding sustainable agriculture (SDG 15)
- improved food security and nutrition, and hunger reduction (SDG 2)
- borrowing for and insuring health (SDG 3)
- financing investment in education (SDG 4)
- spreading risk to improve security during natural disasters and man-made crises (SDG 10)
- gender equality (SDG 5)

Common measures adopted at 2016 GDDFI*

Aim: to foster and strengthen collaboration between ICT regulators and financial services regulators and identify new collaborative regulatory approaches fostering access to DFS

- Develop an inclusive ECOSYSTEM for digital financial services
- Encourage INTEROPERABILITY
- Encourage public private PARTNERSHIPS
- Enable access to INFRASTRUCTURE
- Protect CONSUMERS and enhance consumer experience
- Address lack of IDENTITY
- Promote a collaborative regulatory approach

*GDDFI was carried out in partnership with the Bill & Melinda Gates Foundation

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I. Introduction

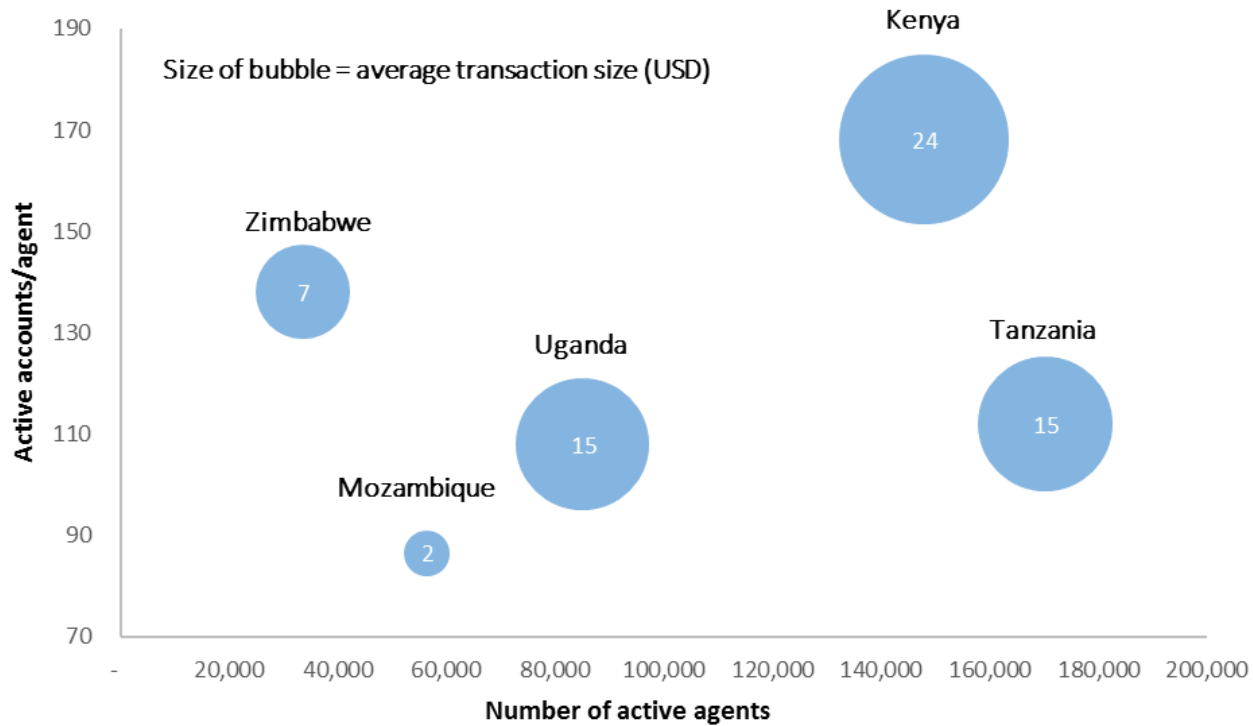
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Livelihoods in agent businesses

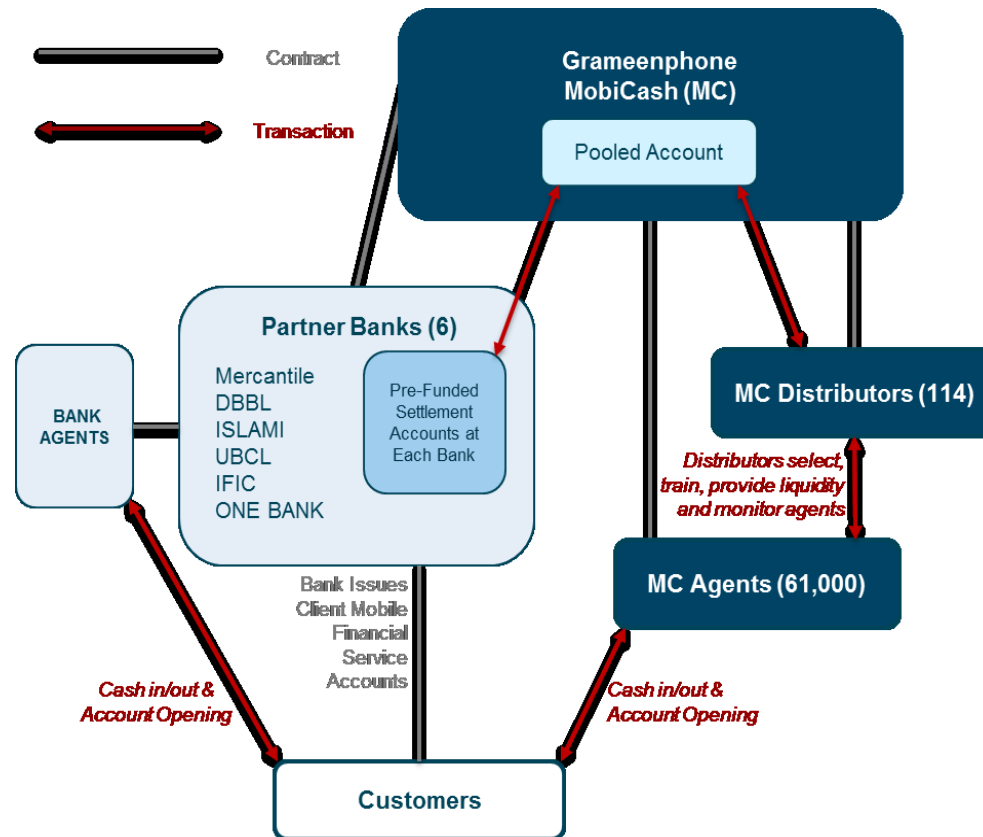
Active agents and accounts in Zimbabwe, Mozambique, Uganda, Kenya and Tanzania, 2015



Source: Communications Authority of Kenya, 2016; Postal and Telecommunications Authority of Zimbabwe, 2016; GCR, CCRED et al 2016

Innovation in agent networks

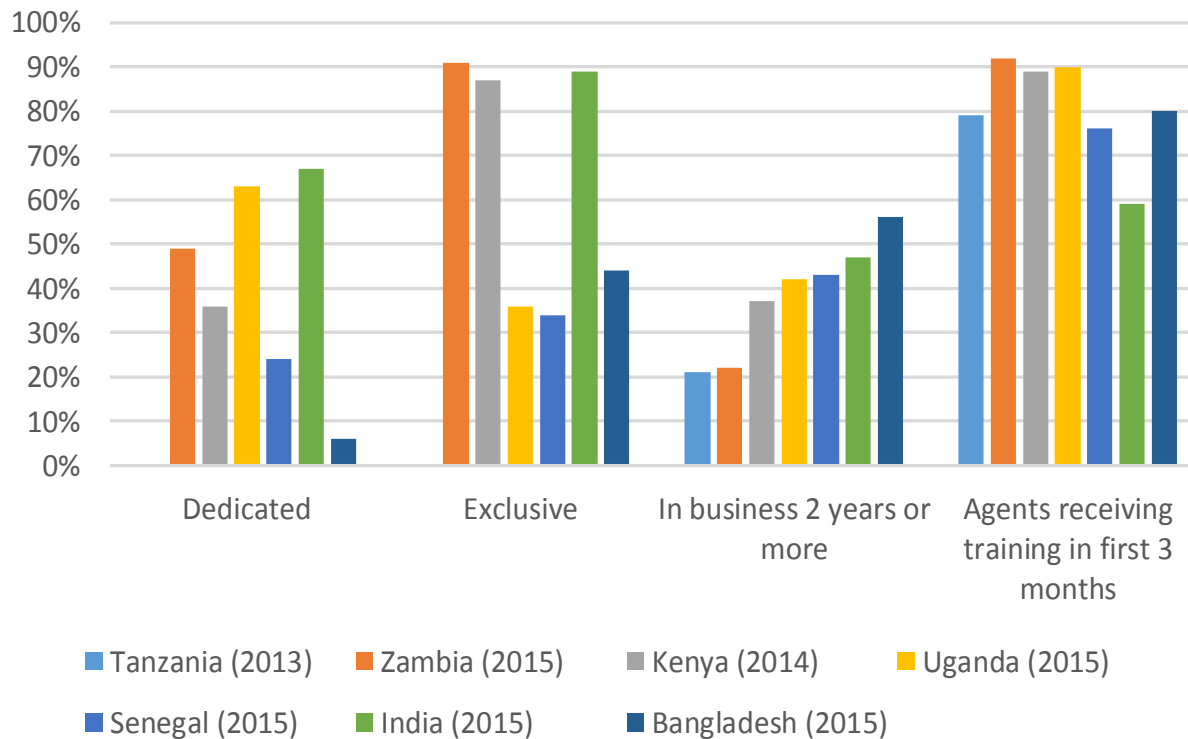
MobiKash shared agent network in Bangladesh



Source: Noor, W. and Shrader, L., CGAP, 24 February 2015, MobiCash shared agent network – Bangladesh

Training in digital and financial skills

Agent business models, success and training











Source: Helix Agent Network Accelerator Survey reports per country

Aggregators on retail and wholesale sides

- **Home grown high tech companies** aggregating merchants, utilities, schools
- Integrating into the payment system with value added financial management and accounting services, **building the digital economy**
 - *Cellulant example*
 - *Launched in 2004 as a VAS provider (music, news other content)*
 - *Operations in 11 countries, launching in another 9, 240 employees*
 - *Average 4.1 million transactions, estimated US\$ 150 million value moved monthly*
 - *Conventional aggregator functions*
 - *Channel agnostic digital payment lifestyle solutions*
 - *Social payment platforms for businesses and customers*

Innovation in risk-based financial services

Country	Fin. Institution (and partners)	Explanation	Type of analysis
 Kenya	 Safaricom + CBA	<ul style="list-style-type: none"> Customers' mobile top-up and mobile money data are used to evaluate size of initial M-Shwari loan Afterward, M-Shwari repayment data determines size and access to additional lending 	Segmentation Predictive Modeling
 South Africa	 MTN + Bank of Athens	<ul style="list-style-type: none"> Triangulate SIM card usage with bank transaction data to identify irregular patterns and weed out fraud 	Pattern recognition
 Mexico	Traditional retail bank + Major supermarket	<ul style="list-style-type: none"> Retail bank partnered with supermarket to collect data from loyalty cards on retail spending habits Developed predictive models with 200 rules to use spending decisions as input into credit scoring 	Segmentation Predictive Modeling
 Tanzania	 + Vodacom Tanzania	<ul style="list-style-type: none"> Customers' mobile usage data used to assign a credit risk score The score can then be used to assess microloans and other financial products from First Access client institutions 	Automation Segmentation
 Brazil	Traditional insurance co + Major telco	<ul style="list-style-type: none"> A provider of basic life and funeral insurance used mobile phone data to segment customers Segmentations allowed for more focused customer acquisition, exclusion of riskiest customers, and more accurate group underwriting 	Segmentation Predictive Modeling

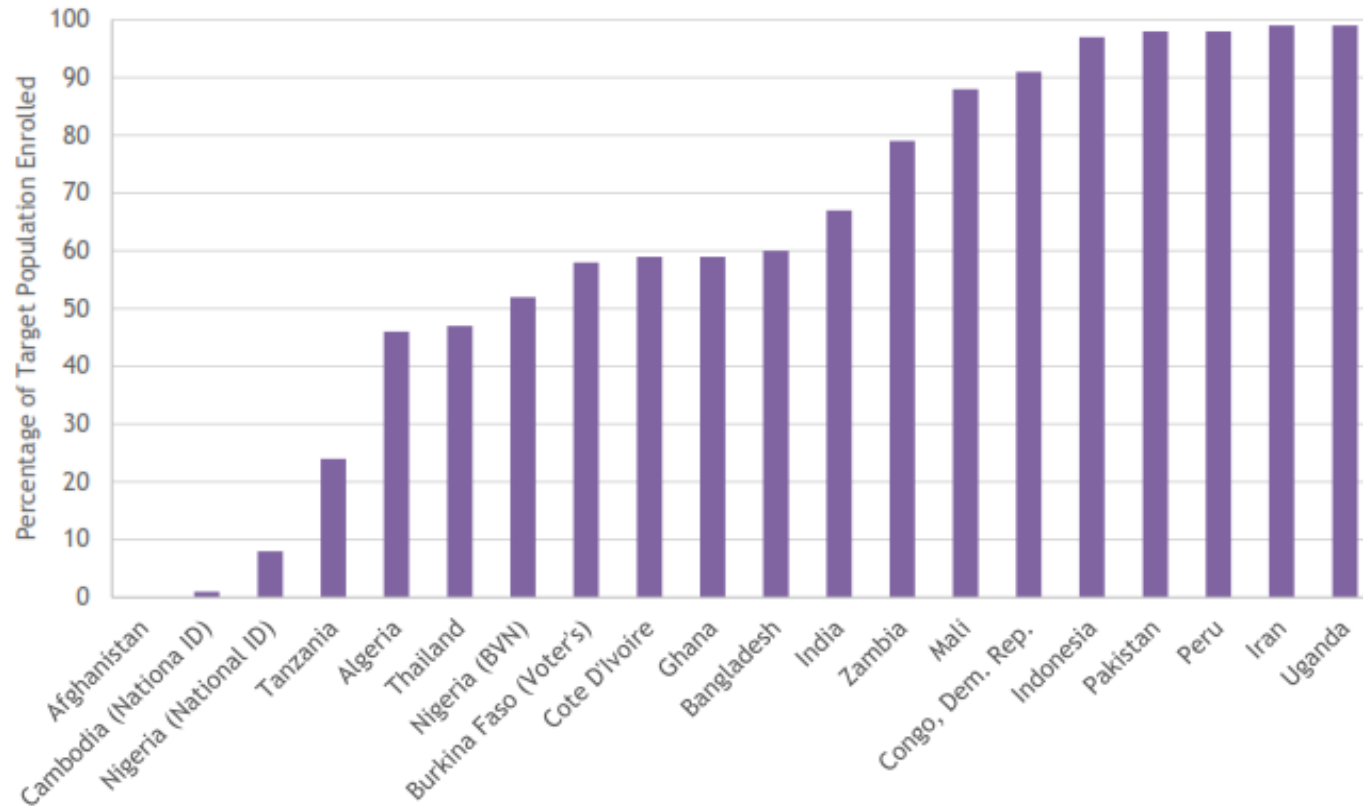
Source: CGAP, December 2014, *Projecting Impact of Non-Traditional Data and Advanced Analytics on Delivery Costs*

Innovation in risk-based financial services

- M-Kopa
 - lease purchase of solar panels for households
 - 8W solar panel, light bulbs, phone charger and other accessories
 - US\$35 upfront, US\$0.50 daily for a year over a mobile payments platform
 - 400,000 homes in Kenya, Tanzania and Uganda, 550 new homes daily
 - sales force of 1,500 agents and 100 service centres, 2,500 jobs in East Africa
 - reports to credit bureaus, creating 75,000 positive credit ratings
 - remote disablement in case of default
 - possibility to remortgage to finance other products
 - launching TV lease purchase now

DFS driving digital identity

Coverage rates of national ID programmes



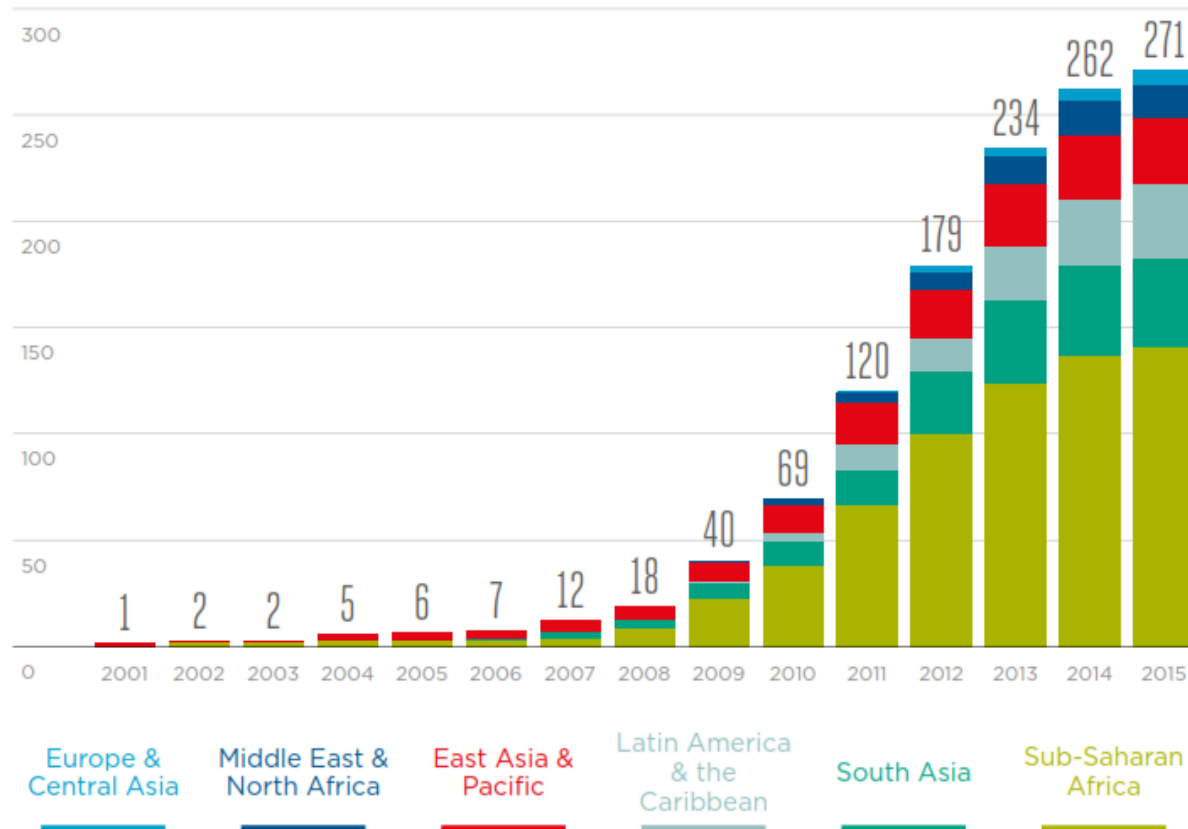
Source: ITU Review of National Identity Programs 2016

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Increasing access to financial services

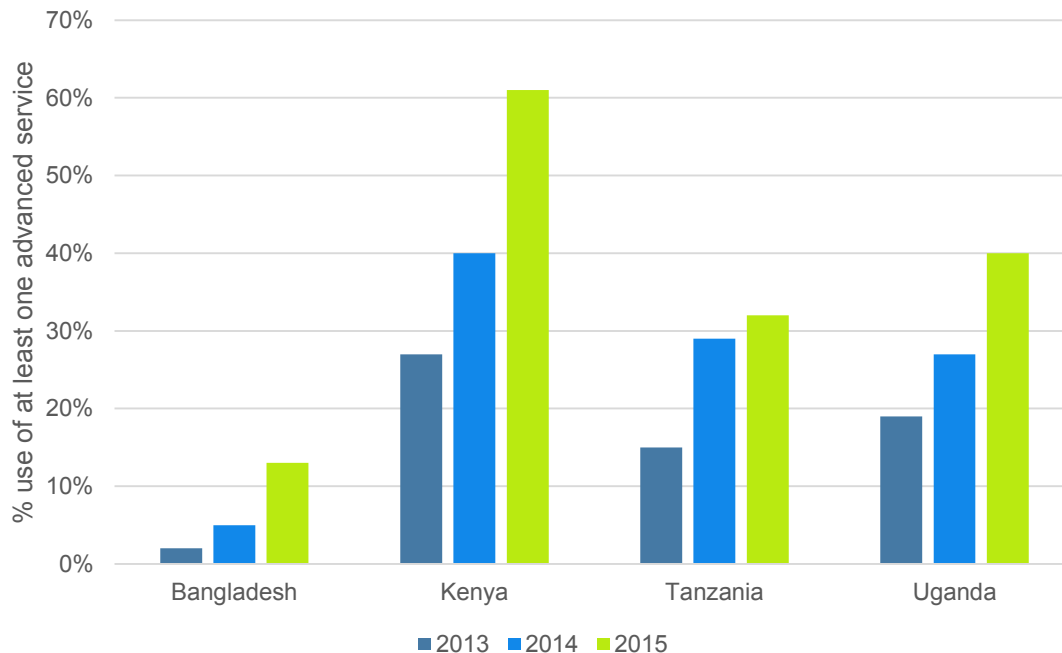
Number of live mobile money services by region
(2001–2015, year-end)



Source: GSMA, 2015 State of the Industry Report: Mobile Money.

Rapid up-take in some countries

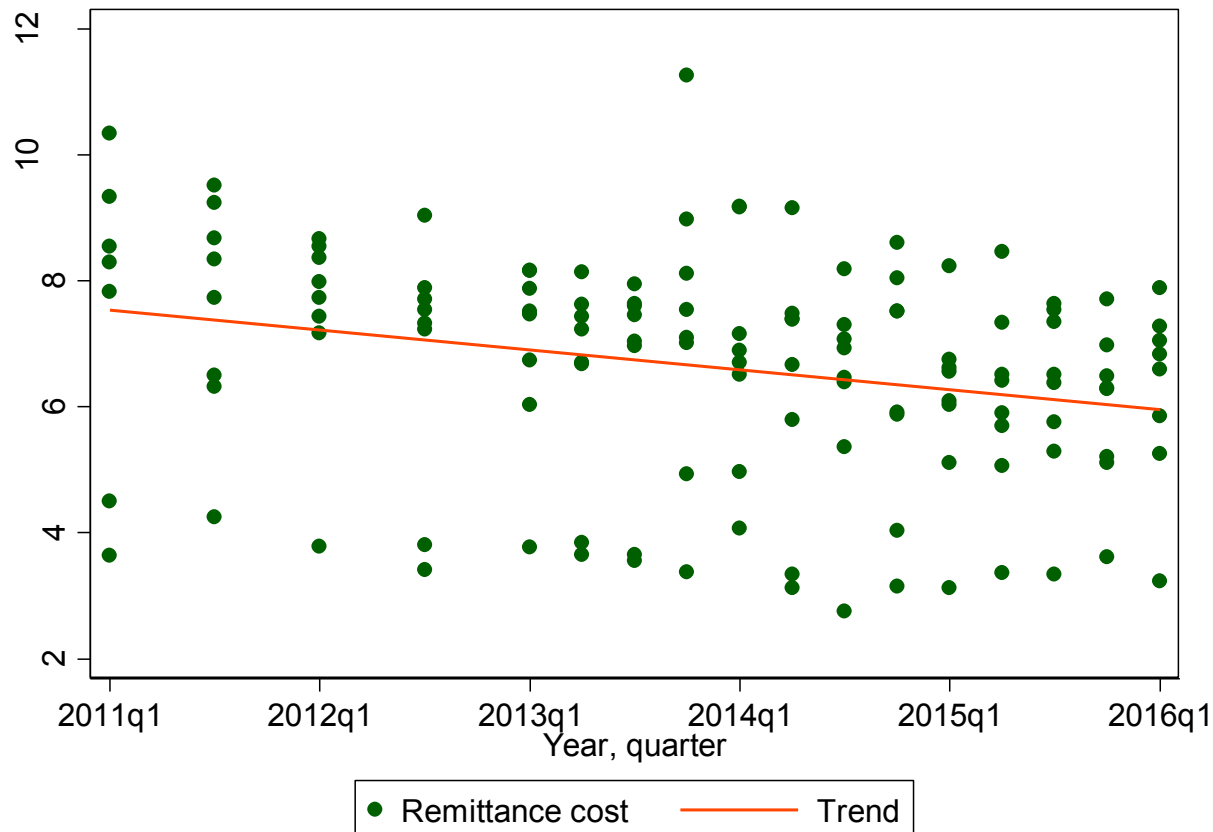
Percentage of active account holders using at least one advanced mobile money function (2015)



Source: 2015 FII surveys in each country, published in 2016

Efficiency gains

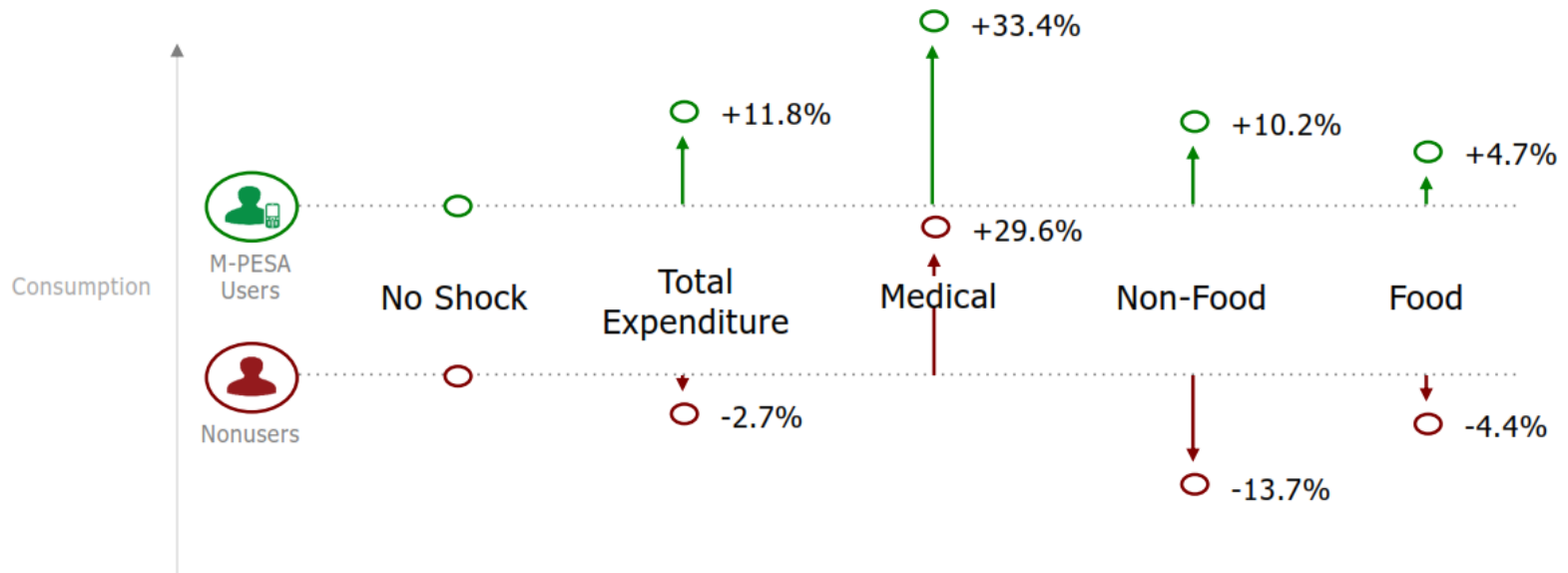
Average remittance costs in countries with significant numbers of mobile money accounts (Bangladesh, Ghana, Kenya, Paraguay, Philippines, Rwanda, Tanzania, Uganda and Zimbabwe)



Source: Authors' analysis of: "The World Bank, Remittance Prices Worldwide, available at <http://remittanceprices.worldbank.org>"

Sharing and spreading risk

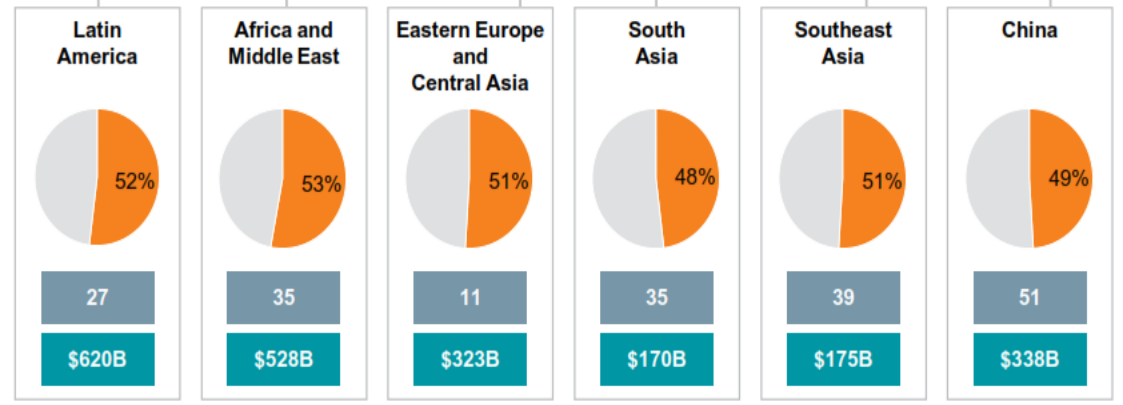
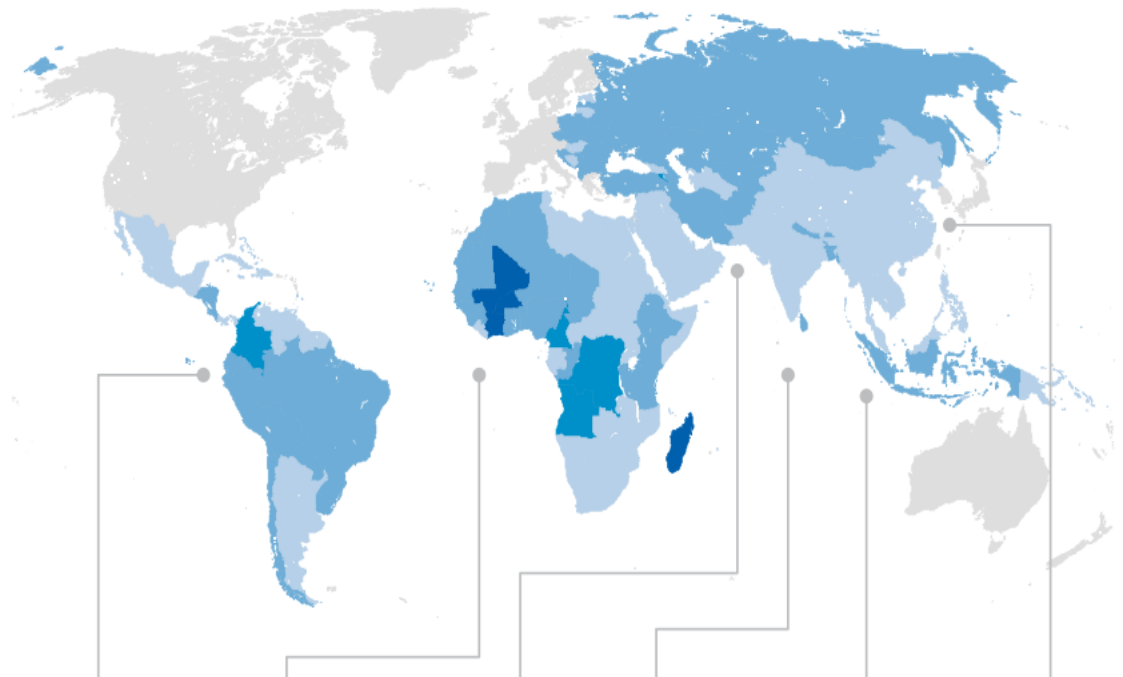
Changes in household consumption per capita in response to a negative shock



Source: Presentation of Jack & Suri's (2014) paper at International Growth Centre conference on mobile money

Micro, small and medium-sized enterprises across developing regions cannot access the credit they need to grow

2013



The opportunity of digital credit

Source: McKinsey Global Institute, citing in turn SME Finance Forum and internal analysis

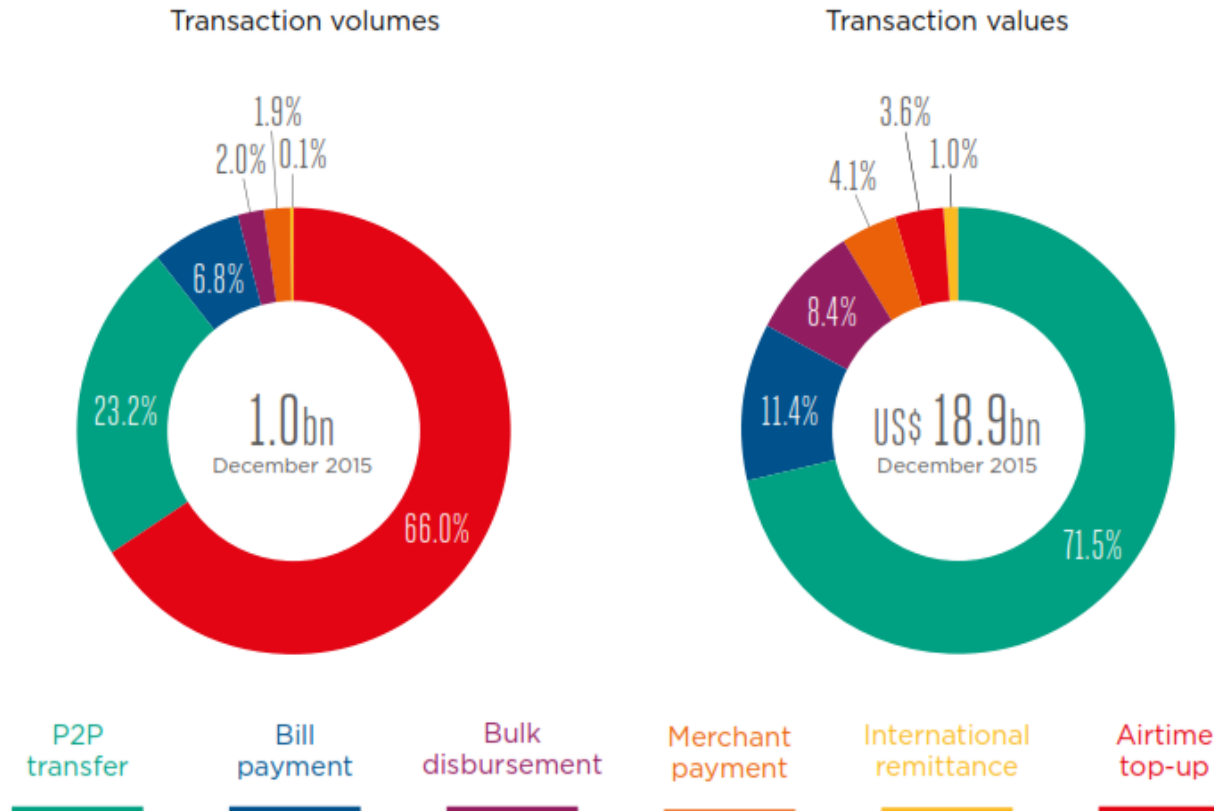


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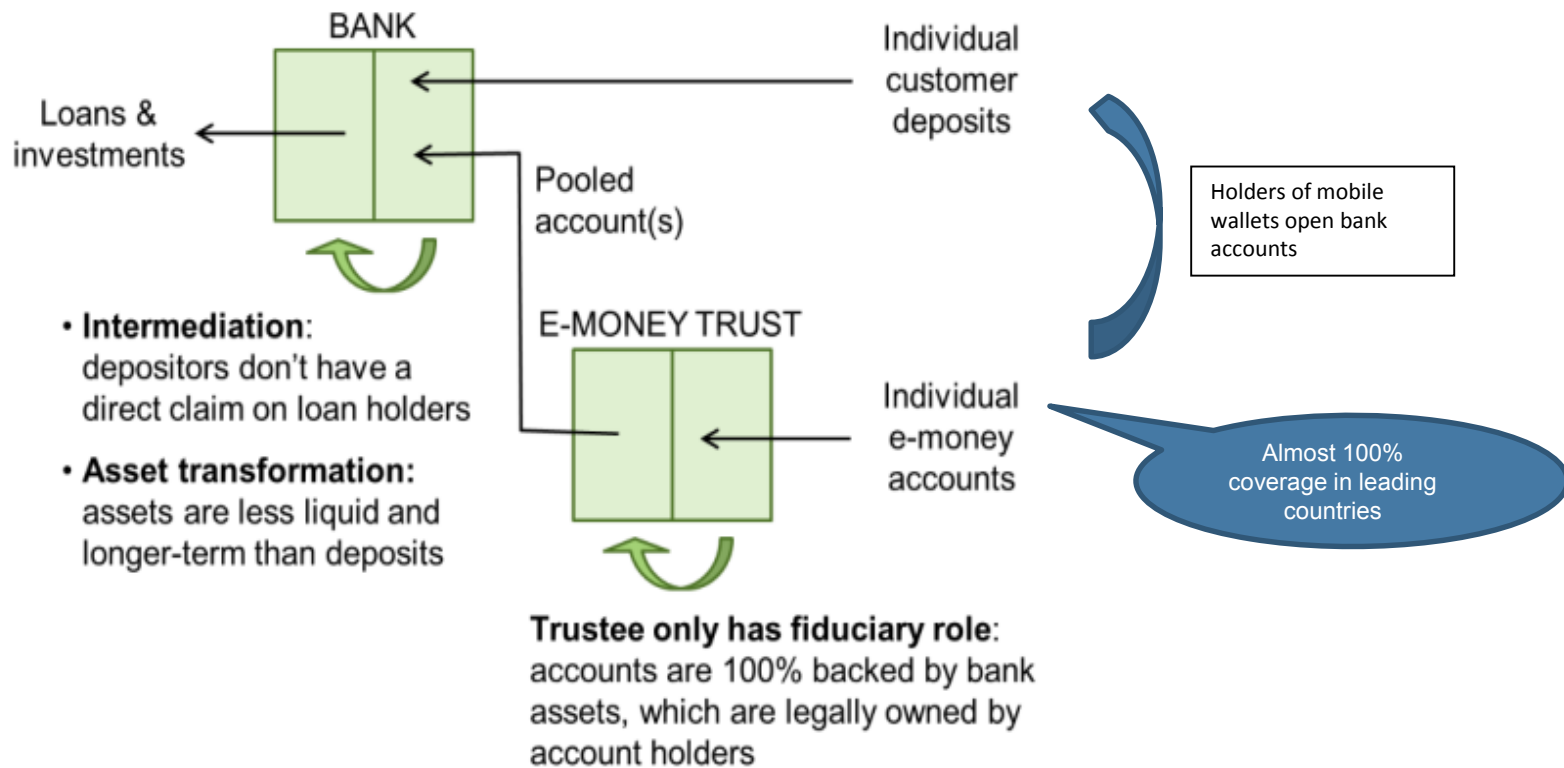
Product evolution still in early stages

Global product mix by volume and value (December 2015)



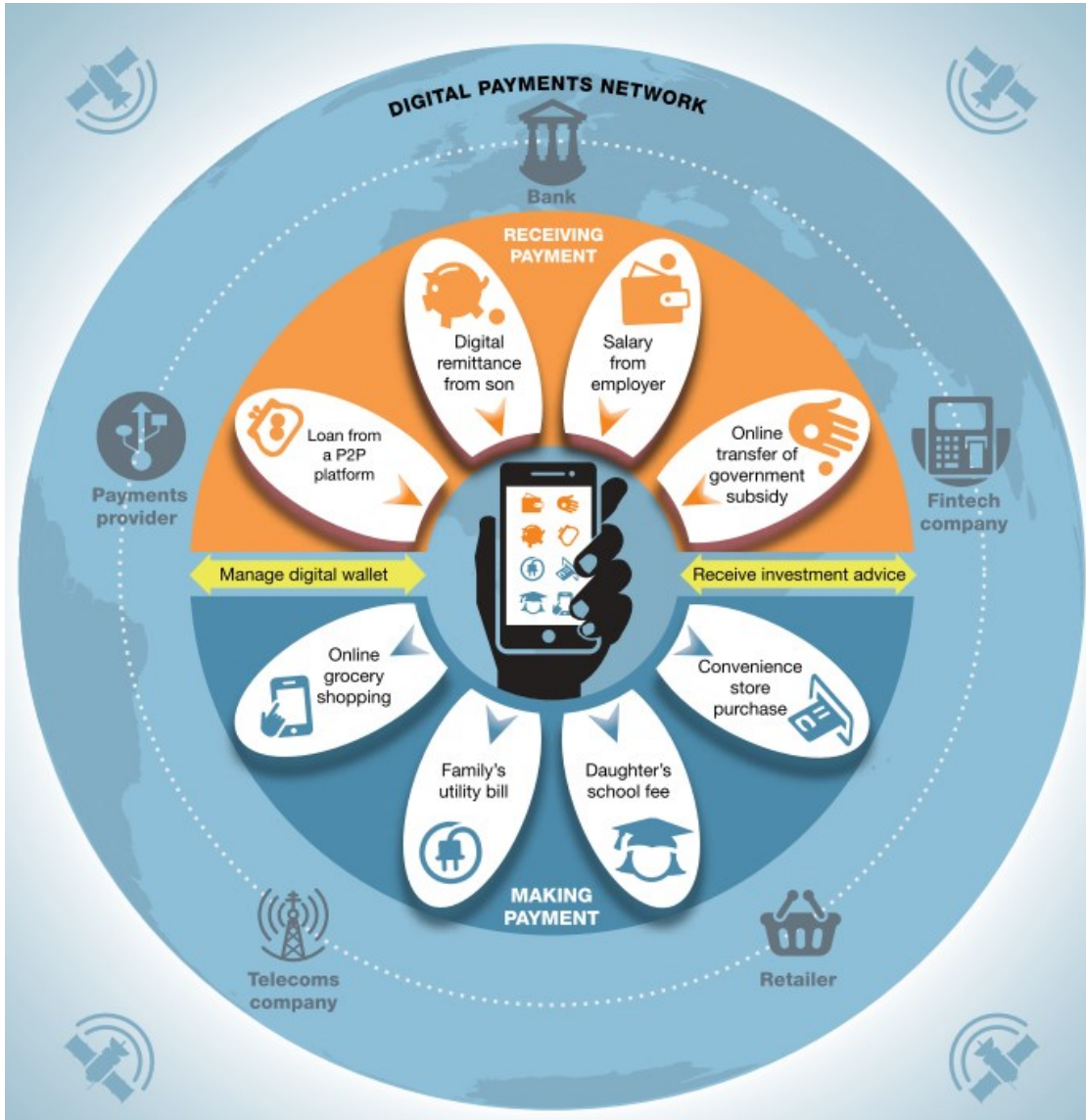
DFS a step into the banking system

Electronic money as a step into the banking system



Source: Adapted from Mas, I, 29 July 2014, *Shifting branchless banking regulation from enabling to fostering competition*

Building the digital economy



Source: McKinsey Global Institute

Building a deep knowledge base

- **Background**

- DFS are new and complicated, raising confusing **new economic issues** relating to licensing, market dynamics, market power, competition, interoperability, consumer protection, and legal issues around regulators' mandates in this area
- Lack of **mutual understanding and cross-cutting expertise**: Many telecom regulators lack a deep understanding of the regulatory issues involved in DFS even as they relate to telecom regulation and financial regulators are not aware of telecom-related enabling environment for DFS

- **The need: developing a comprehensive knowledge base and expert community as well as inclusive dialogue for regulators from each side on regulatory issues in DFS markets**

- Preparing regulatory studies and handbooks on DFS
- Exploring different approaches and best practices in questions of access, discriminatory treatment in wholesale services
- Examining approaches to pricing problems
- Capacity building and training for regulators in DFS issues
- Fostering the dialogue and collaboration

Fostering inter-sector regulatory collaboration

- **Background**

- DFS is **revealing enhanced relationships between telecom and financial markets**, and hence questions about the relationships between regulation of these markets
- **Telecom, financial and competition regulators bring different objectives, knowledge, legacy prejudices and overlapping powers to the job**
- Many regulators recognise a need for **cross-sector collaboration, but do not have a clear view of their respective roles or how to construct their collaboration**

- **The need:** fostering collaboration among different sector regulators

- Exchanging information perspectives to build trans-sector understanding of objectives and barriers in DFS
- Developing and operationalising protocols and practices for inter-agency collaboration
- Coordinating regulatory procedures and remedies to address market failures
- Managing concurrent jurisdiction, reviewing institutional/jurisdictional boundaries

Ensuring connectivity for and use of ICTs for DFS

- **Background**
 - Network access is fundamental to DFS providers and users, yet it is not always easy
- **The need:** reaching a common understanding of the connectivity-and use-related barriers to DFS development, and whether traditional telecom competition and access regulation suffices or needs to be rethought
 - Addressing current basic connectivity issues (USSD and SMS in particular)
 - Preparing for network neutrality debates as smartphones and apps increase
 - Examining upstream-downstream issues, feedback loops in market power between telecom and DFS markets, discriminatory treatment issues
 - Elaborating commercial and regulatory models for charging for wholesale telecom services (wholesale / retail; session / hop; revenue share / usage based) and pricing objectives
 - Demand side measures, e.g., using DFS for distributing and receiving funds
 - Financing the use and spread of ICTs for DFS, e.g., universal service funds for infrastructure

Unlocking interoperability

- **Background**

- Many DFS services involve interoperability between bank accounts and mobile wallets, but wallet-to-wallet interoperability remains less common
- Lack of interoperability leaves network effects private and limited rather than combined, and leaves a gap for competition problems to arise
- These can have a feedback loop effect into telecom services
- Telecom regulators have experience with analogous interconnection issues

- **The need:** collaborate with financial and competition regulators and donors to provide a supporting environment for interoperability negotiations

- Examining the impact on telecom markets of network effects and lack of interoperability in DFS
- Understanding the different models of potential interoperability and suitability to different circumstances
- Developing facilitative mechanisms for commercial interoperability negotiations and rapid dispute resolution

Contributing to digital identity

- **Background**

- Digital identity is a foundation of the digital economy, SDG 16.9 aims for provision of legal identity to every person, and public and private initiatives abound
- There are many approaches to identity, centralised/decentralised, foundational/functional, interoperability, mutual recognition and standardisation
- Mobile operators are well positioned to contribute to development of digital identity (nationwide digital communication and agent networks, connection to the digital device and SIM, trusted licensee status, customer-oriented attitude)

- **The need:** collaboration among operators, ministries responsible for digital economy, data protection and privacy regulators, standards organisations

- Examining how operators can play a role in enrolment, credential and authentication phases of identity programmes (e.g., birth registration, driving licences, identity for financial services)
- Developing government policies, business models and PPP opportunities for such involvement

Maximising the opportunity of customer data

- **Background**

- Conflicting trends of data aggregation, sharing, trading and analytics versus demand for privacy and importance of trust
- Customers benefit if their data is used to further economic opportunities (e.g., building credit profiles and digital identities), but they also seek privacy
- Telecom laws, regulations & licences often vaguely require operators to keep customer information confidential; data protection laws add a new dimension

- **The need:** collaboration among telecom regulators, operators and data protection and privacy regulators

- Examining the trade-offs between freedom to innovate and consumer protection
- Building consensus in the regulatory policy community around issues, principles, opportunities and boundaries relating to use of customer data
- Developing generally recognised standards and principles for telecom operators in collection, storage, sharing, trading, anonymization and destruction of customer data

Interests and roles in collaboration

- Operators
 - **Bring:** technical, market and customer knowledge and commercial drive
 - **Need:** economically viable, clear rules of the game to justify investment
- Governments
 - **Bring:** policy making vision, holistic (cross-sector) vision, potential demand-side leadership, national convening power, legislative power
 - **Need:** deeper understanding of DFS and how to grow it, private capital and expertise
- Regulators
 - **Bring:** understanding of sector, leadership role, legal powers
 - **Need:** understanding of cross-sector market dynamics and institutional/legal issues and options
- International organisations
 - **Bring:** convening capability, access to knowledge and expertise, project scale, neutrality
 - **Need:** Partnerships and dialogue with operators, governments, regulators and other organisations

Conclusion

- DFS are a major platform for achieving the SDGs
 - DFS are themselves leading job creation, innovation and entrepreneurship
 - DFS are increasing access to financial services, improving efficiency, enabling risk sharing, and enabling a new credit market
- Mostly today, DFS are in early stages and very limited in scale and scope
- Increasing the impact of DFS depends on collaboration among public and private stakeholders:
 - Build a deep knowledge base
 - Foster inter-sector regulatory collaboration
 - Ensure connectivity for DFS
 - Unlock interoperability
 - Contribute to development of digital identity
 - Maximise the opportunity of customer data

Conclusion

- What Next?
 - Feed into ICT4SDG study
 - Knowledge exchange and dialogue
 - Country level implementation of concrete recommendations



Thank You

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