Digital Financial Services for Financial Inclusion

MasterCard

August 19, 2015

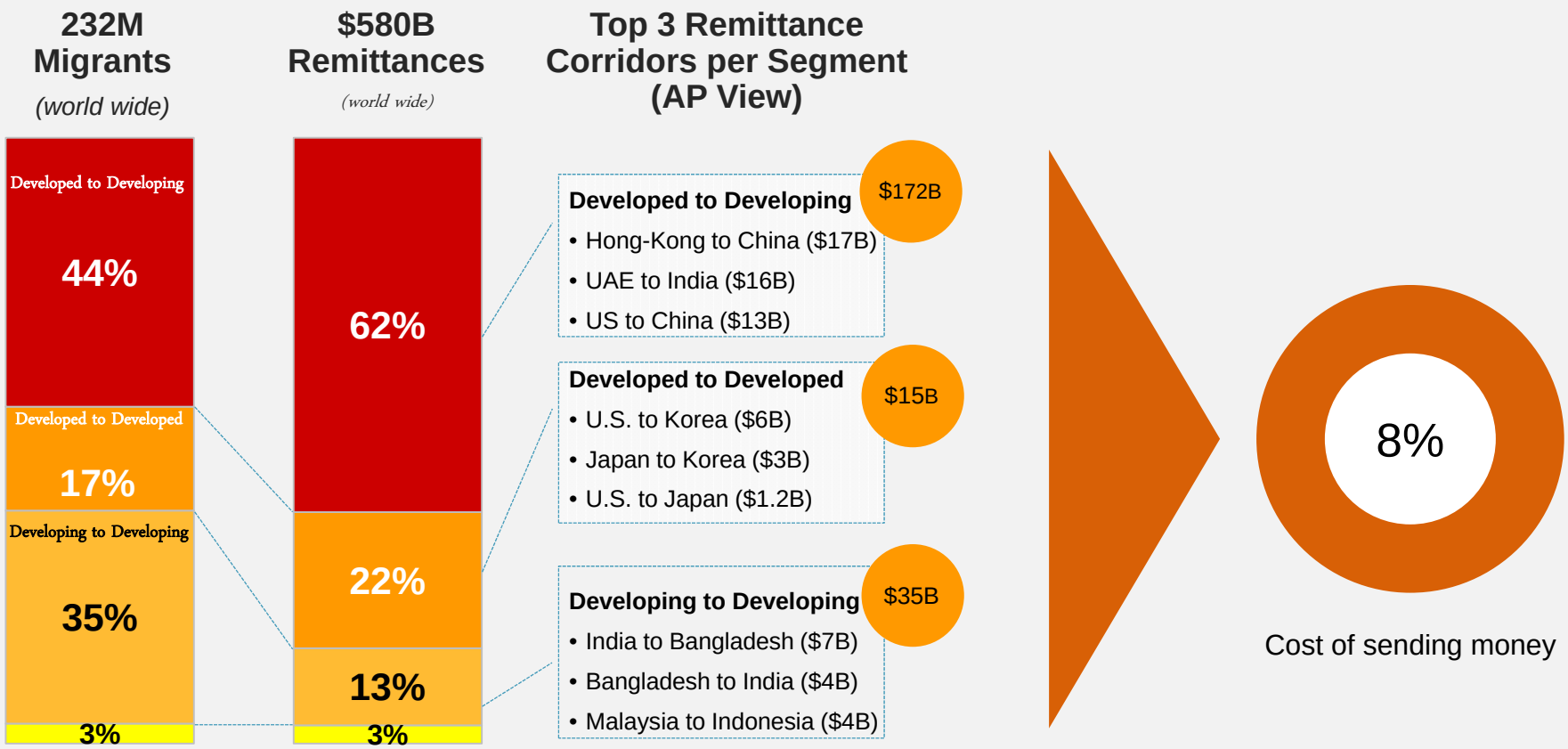
Mobile Money: Landscape and challenges

- The number of registered mobile money accounts globally grew to reach just under 300 million in 2014 with over a third of them active
- 255 mobile money services are now live across 89 countries.
- There is still huge potential for future growth, however, as these accounts only represent 8% of mobile connections in the markets where mobile money services are available.

Yet, despite these significant achievements, the mobile money industry today still faces challenges that will need to be addressed. Regulatory barriers, low levels of investment and lack of industry collaboration limit the ability for mobile money to reach scale.

GSMA: State of the Industry Mobile Financial Services for the Unbanked

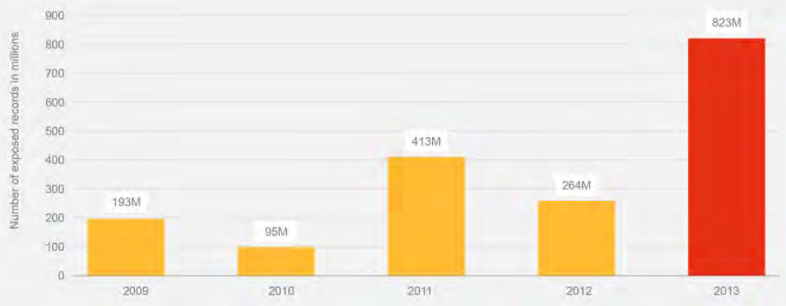
International Remittances



Source: International Organization for Migration, Migrant Well-Being and Development, 2013

Safety and Security

More records were exposed in 2013 than in any year before.[2]



As consumers share more personal information and make more transactions, they risk exposure to fraud and data theft. It takes only 1 data breach to create $1,000,000,000 risk in potential fraud.[1]

1. Symantec 'Cost of a Data Breach Study' 2013
2. Risk based Security, Inc 2013 Exposed Records sets the stage for Massive Identity Theft' February, 2014

Security of service delivery

- The Government is the largest contributor to a country's payment flows with the longest reach to realize the maximum social good.
- When public and private partnership is directed and well-organized, it is possible for government and citizens to realize impressive gains and savings.
- ICT can help delivery secure solutions that can reduce the rate of fraud in delivery of public services

Key themes

- 200+ mobile money programs
- Limited offtake
- Challenges in points of acceptance/ interoperability

Interoperability/ Partnerships

- $ 500Bn in remittances
- Average cost of ~8%
- Technical and commercial challenges in delivering last mile

Interoperability

- It takes only 1 data breach to create $1,000,000,000 risk in potential fraud
- Commercial challenges in ensuring delivery

Security

Symantec 'Cost of a Data Breach Study' 2013
AP-GfK poll 'Breaches not changing people's habits", January 2014

Partnerships/ Interoperability

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Unbanked adults with mobile phones represent a huge opportunity for Mobile Money programs.

2.5 billion

Worldwide, nearly 2.5 billion adults do not have accounts at financial institutions.[1]

1 billion

Unbanked adults have mobile phones, creating huge potential for Mobile Money service participants to gain share through new transactions.[2]

5 billion

"There are nearly 5 billion mobile connections in the developing world, increasing by 18 per second."[3]

Public-Private partnerships a key to success

1. Source: The World Bank, *Measuring Financial Inclusion*, April 2012.
2. GSMA: *Mobile Money for the Unbanked Deployment Tracker*, February, 2013
3. GSMA: *Mobile for Development Intelligence*, 2013.

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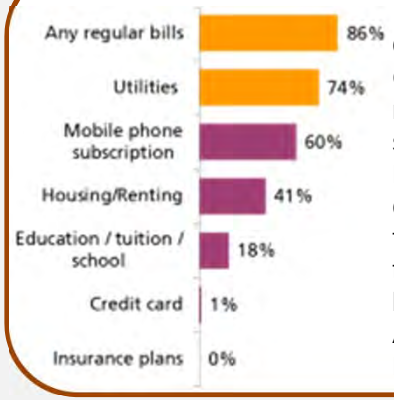
Egypt Mobile Program Overview
Foundation for the Central Bank's National Mobile Switch

Starting Position

Consumer Market Research



Customer Pain
Carefully conducted market research showed Bill Payment was a critical service which focused MasterCard team on signing the largest Bill Payment Aggregator to the Program

Partners

etisalat, EBC, Fawry

Current State

- **Flous** program: launched in June 2013, launched in collaboration with the National Bank of Egypt (NBE) and Etisalat (Telco), with Etitsalat providing USSD user interfaces and its 100 branches for sign-up and cash-in/cash-out.
- **PhoneCash** program: launched in September 2013 with NBE and Fawry (Bill Aggregator), with Fawry providing smartphone user interfaces and its 20,000 agents for cash-in/cash-out
- The **Egyptian Banks Company for Technological Advancement** (EBC) hosts the mobile money accounts and **NBE** provides the mobile money license and its branches for sign-up for both programs. **MasterCard** provides the rails for mobile payment interoperability.

Services Offered

- Mobile Bill Pay
- Mobile Person-to-Person Money Transfer
- Mobile Airtime Top-up
- Mobile Agent Cash-in/Cash-out
- Mobile Account Value Load
- Mobile Person-to-Merchant payment
- Mobile Virtual Card Numbers for eCommerce

Strategic Aim

The objective, together with the Central Bank of Egypt and the Egyptian Government, is to bring financial services to the fingertips of each and every Egyptian. The strategy is to ensure that all mobile money providers have interoperable services so that multiple options are provided to every Egyptian.

Interoperability

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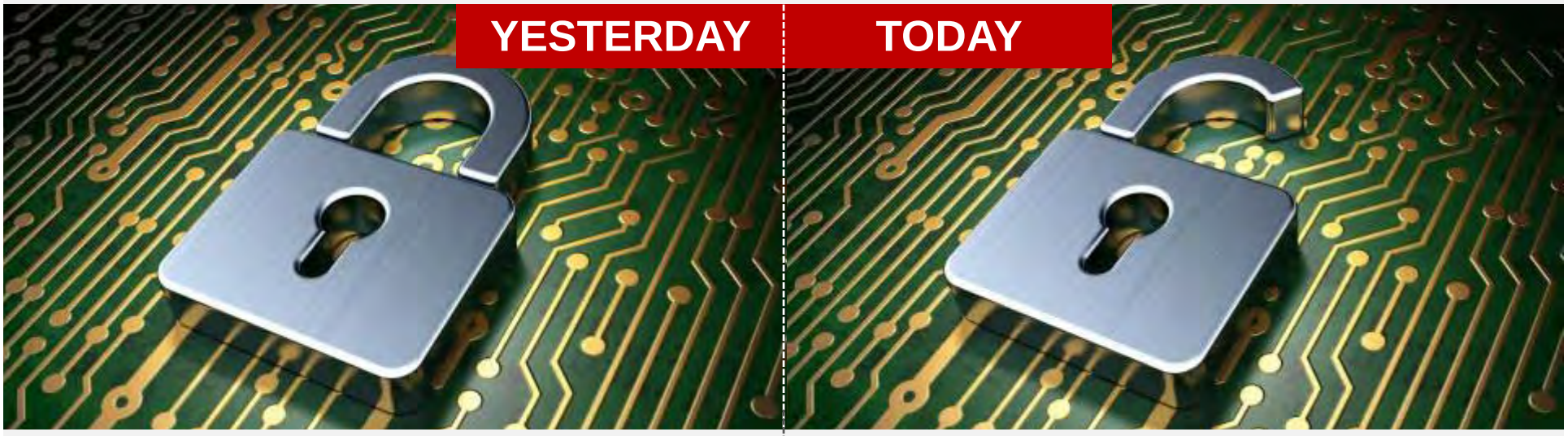
From Competition to Cooperation

Moving from closed networks to interoperable services.



Few Dominant and Competitive Players

- Proprietary or industry specific networks
- No interoperability

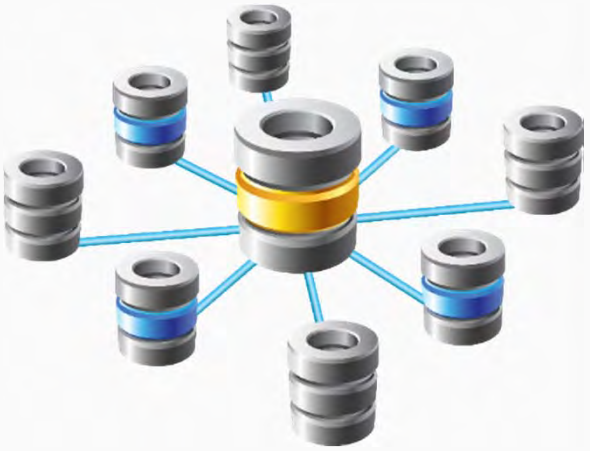
Open Ecosystem Model

- Interoperability between industry networks
- Collaboration between banks, MNOs and MTOs to reach the end user

Tapping into the Ecosystem Effectively

Bilateral Model

Hub Model



1) Allows for a quickly scalable business

2) Ease of doing business increases

3) Reduces cost and time of setting up and running a remittance business

Security

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Case Study: SASSA Card

The South African Social Services Agency (SASSA) introduced a social benefits card that rapidly and radically transformed the distribution of social security benefits.

Objective

- Leverage the current financial infrastructure to move disbursements from cash to electronic payments
- Distribute social benefits to 15 million recipients while reducing costs and fraud
- Develop a verified database of grant recipients
- Complete the project from start to finish in 3 months

Solution

- Issue cards instantly from a mobile issuance kit
- Host Biometric and Payments data separately and securely from a single chip
- Work instantly online and offline to open accounts and authenticate transaction in order to serve remote areas of the country.
- Increase local merchant acceptance by 23,000 locations

Case Study: SASSA

"The new biometric-based payment system for social grant beneficiaries has already paid off just a year after implementation."

— Social Development Minister Bathabilie Dlamini in a speech to Parliament, 5/8/2013

Key Results

1/3	7	$375	150M
OF ADULTS	**SOCIAL PROGRAMS**	**MILLION IN SAVINGS**	**FRAUDULENT APPLICATIONS**
15 million enrolled in the first year with 150,000 cards issued per day at the peak	Consolidated onto one card to streamline the entire grant distribution process	Projected in the first five years	Were eliminated in the first year, saving the government **$15million**

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Some key learnings

- Financial inclusion matters – it affects all of us.
- Interoperability is key to financial inclusion.
- We need public-private partnerships. The magnitude of the problem is too large. We cannot go it alone.


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Boost closed-loop revenues by making mobile accounts do more.

Multi-channel purchasing and expanded payment options lead to greater retention and new revenues.

Mobile Money connects mobile accounts to the global payments system:

Mobile P2P

Connects subscribers to mobile users in other mobile networks for easier payments and remittances including cross border.

Prepaid Companion Card

Enables purchases anywhere MasterCard is accepted with a card that links to mobile accounts.

Expand to open-loop capabilities easily

Tokenization and Digitization

Tokenization minimizes data risk by digitizing a single card number into tokens on each separate device. The process of digitization is what makes transactions secure.

Tokenization and Digitization

Tokenization and digitization work hand-in-hand to create secure card credentials and make them available for use on mobile devices or in the cloud.

Tokenization is the replacement of a consumer card's primary account number (PAN) with an **alternative card number**

Digitization is the process that **delivers** 'tokenized' card details to **mobile devices** or servers for more secure payments