

# M-Banking: Opportunities and barriers for the development of Mobile Financial Services in Latin America and the Caribbean

Washington DC, November 20th 2008

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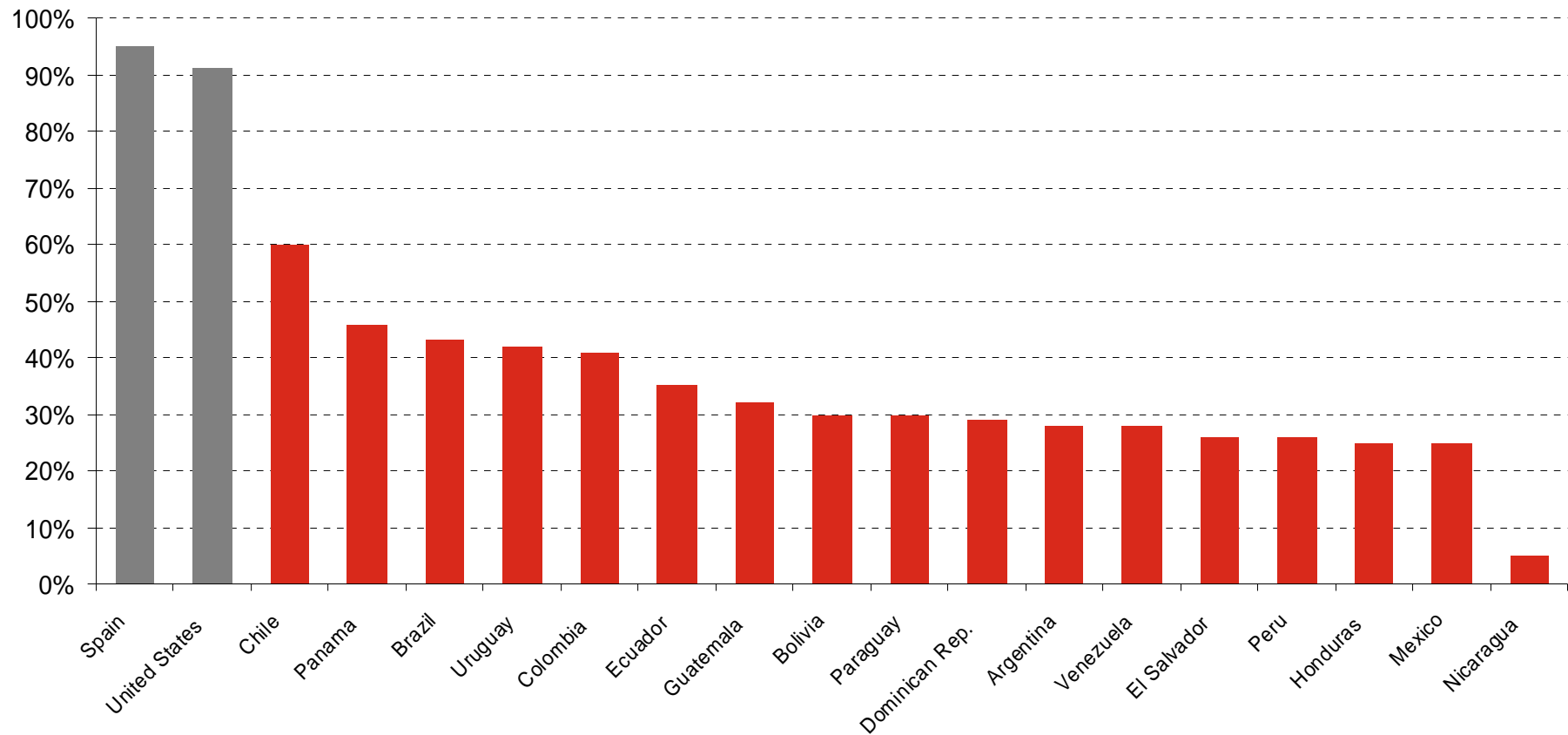
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## Opportunities and barriers for the development of Mobile Financial Services in Latin America and the Caribbean

- Methodology:
  - Analysis of international best practices
  - Study of the environment for MFS in LAC and, particularly, in Bolivia, Brazil, Dominican Republic, Ecuador, Mexico and Peru
  - Recommendations for MIF intervention
- Cooperation with Fundación Telefónica:
  - Workshops in Ecuador, Colombia, Peru, Argentina, Brazil, Venezuela and Chile
  - Dissemination: Forthcoming publication + blog
- Peer review by David Porteous (Bankable Frontier Associates)

## Regional background

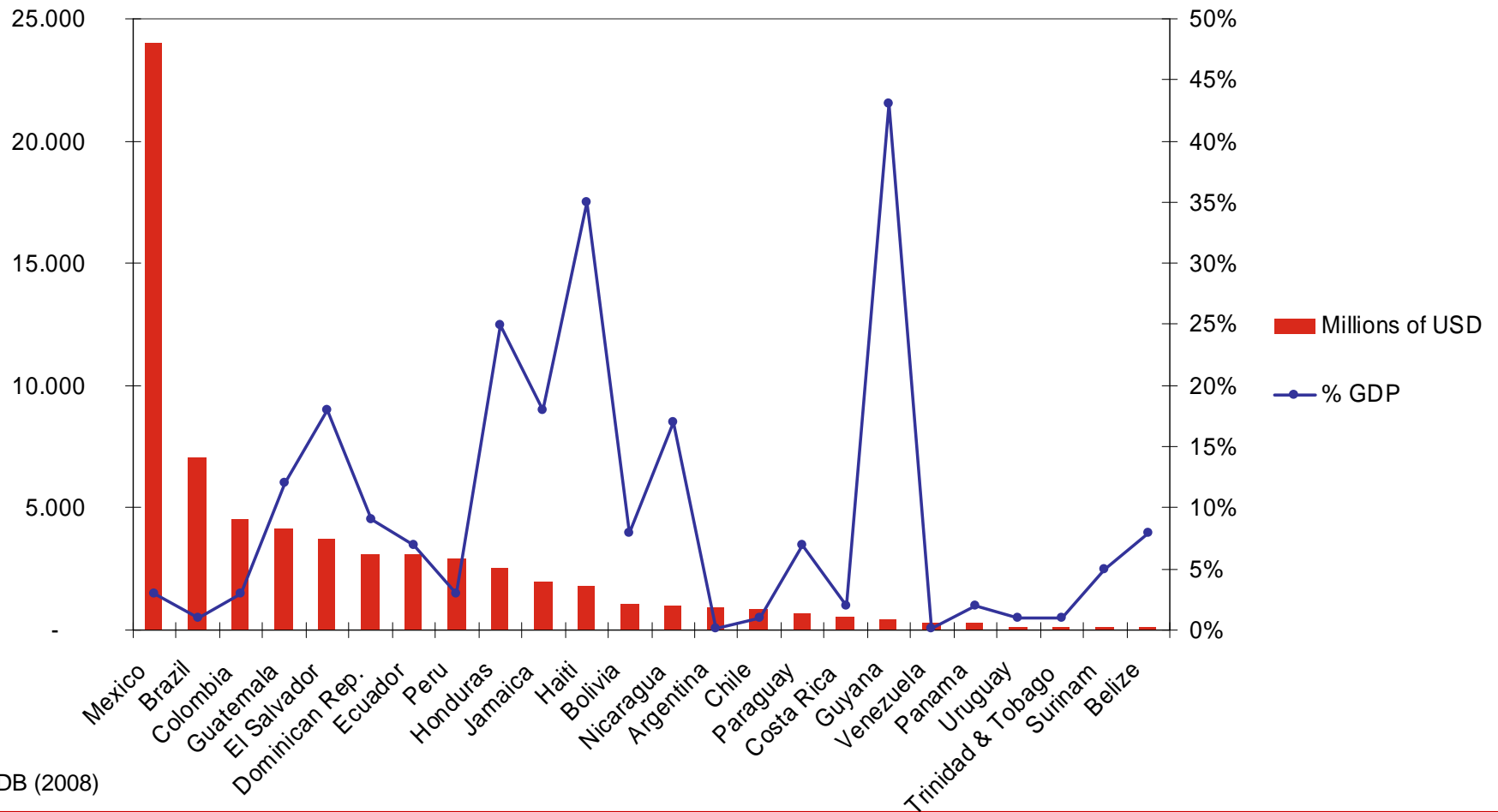
- Low access to formal financial services in LAC



Source: Honohan (2007)

## Regional background

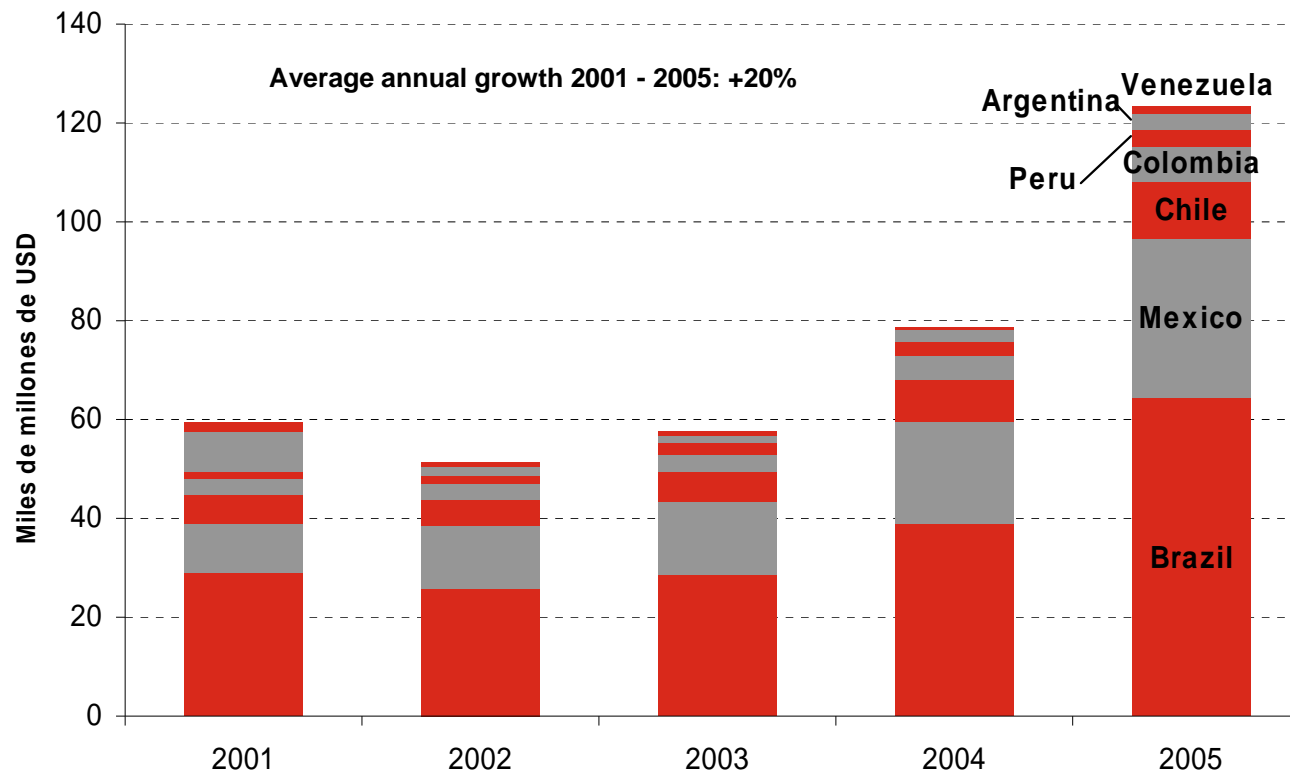
- Large remittance flows



Source: IADB (2008)

## Regional background

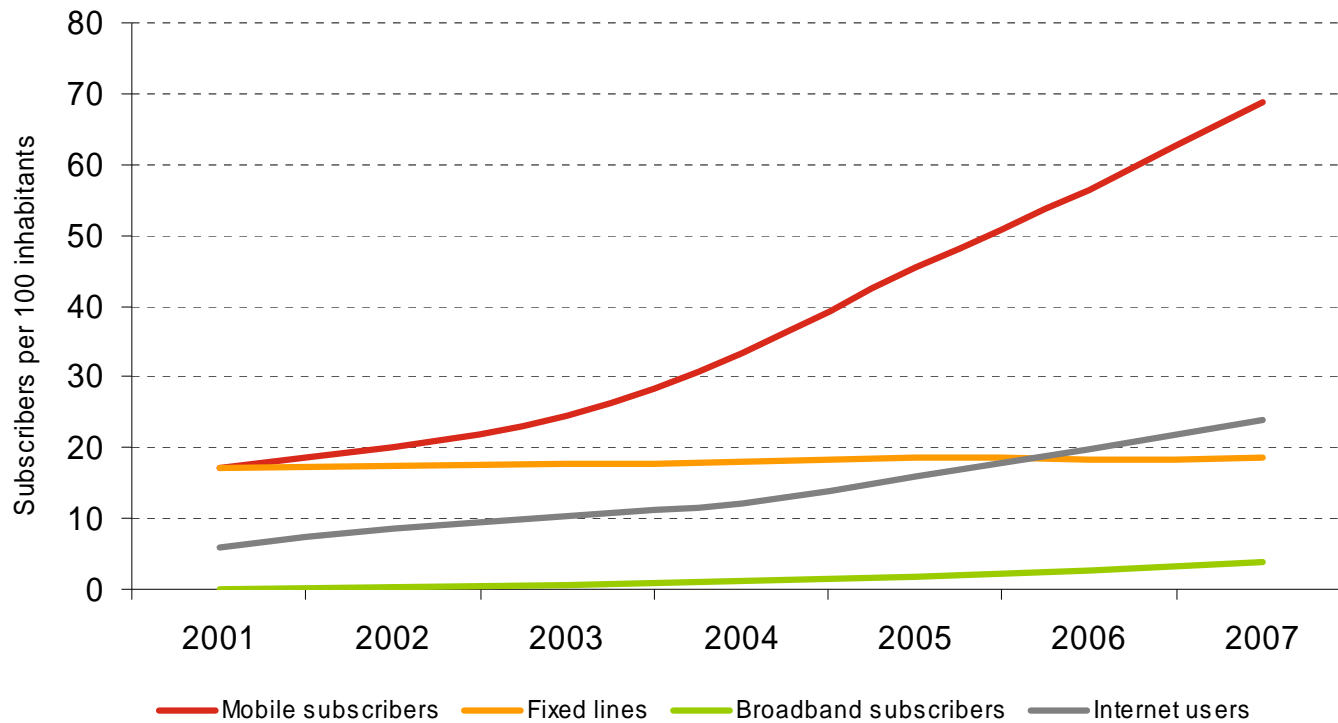
- Surge in consumer credit



Source: McKinsey (2007)

## Regional background

- Mobile is the fastest-growing ICT in LAC

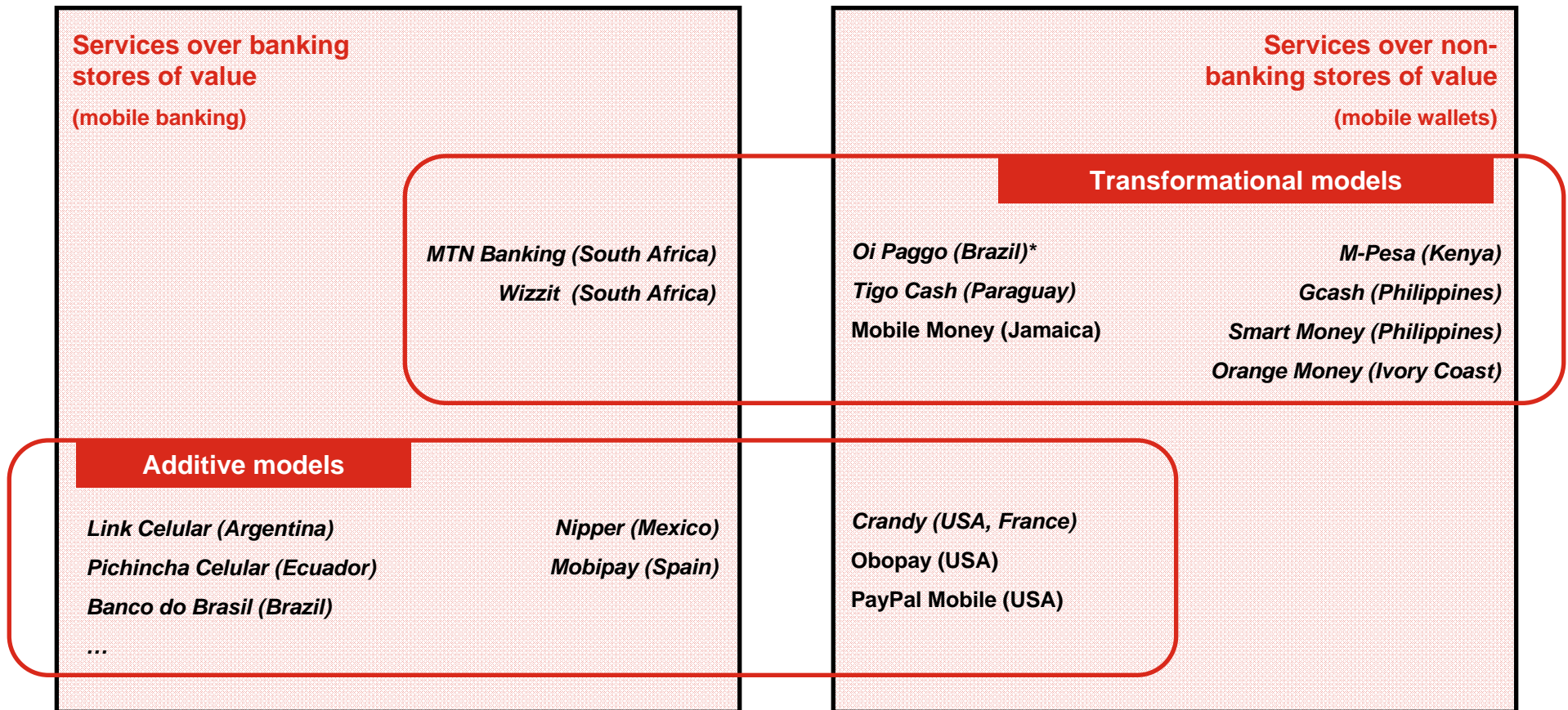


Source: ITU (2008)

## Regional background

		Argentina	Brazil	Colombia	Mexico	Peru
<b>Penetration</b>	Low-income cell phone users (2007)	70%	53%	89%	37%	60%
	Low-income owners (2007)	61%	42%	63%	30%	37%
	Total penetration (2007)	102%	63%	74%	64%	55%
<b>Prepay</b>	Low income (2007)	74%	96%	90%	92%	96%
	Total (2007)	73%	80%	83%	89%	87%
<b>Cost of the service</b>	Negative perception (expensive)	18%	54%	21%	38%	35%
	Neutral perception	68%	34%	51%	45%	55%
	Positive perception (cheao)	14%	12%	28%	16%	10%
	Average expense Low-income - US\$ (2007)	11,0	12,0	6,0	16,0	7,0
	ARPU telecom operators – US\$ (2007)	14,5	15,3	8,1	17,9	10,3
	Voice ARPU telecom operators – US\$ (2007)	11,8	14,1	7,1	15,1	8,9
<b>Elasticity in low-income users</b>	Would stop using cell phone if its cost doubled	9%	8%	16%	23%	9%
	Wouldn't change use pattern if cost doubled	34%	24%	20%	29%	21%
	Would increase use if cost halved	83%	84%	78%	83%	82%
	Would increase use if income doubled	37%	42%	47%	30%	68%
<b>SMS in low-income users</b>	SMS use	91%	36%	44%	53%	45%
	Doesn't use because doesn't know how (over non-users)	37%	38%	34%	39%	53%

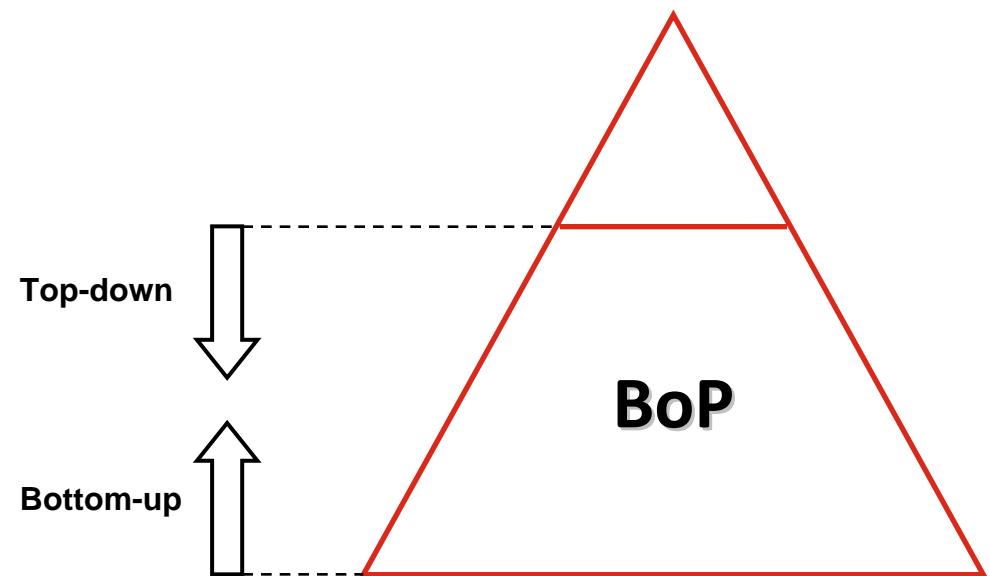
## Classifying Mobile Financial Services



\* Oi Paggo is a credit-based mobile payment system that requires no bank account, but it is not strictly a mobile wallet

## Transformational Mobile Financial Services

- Main regulatory concerns:
  - Financial stability & Competition
  - Agent networks
  - AML/CFT
  - E-money
- Main technical concerns:
  - Mobile bearer technology
  - Banking core technology
  - Access to payments systems



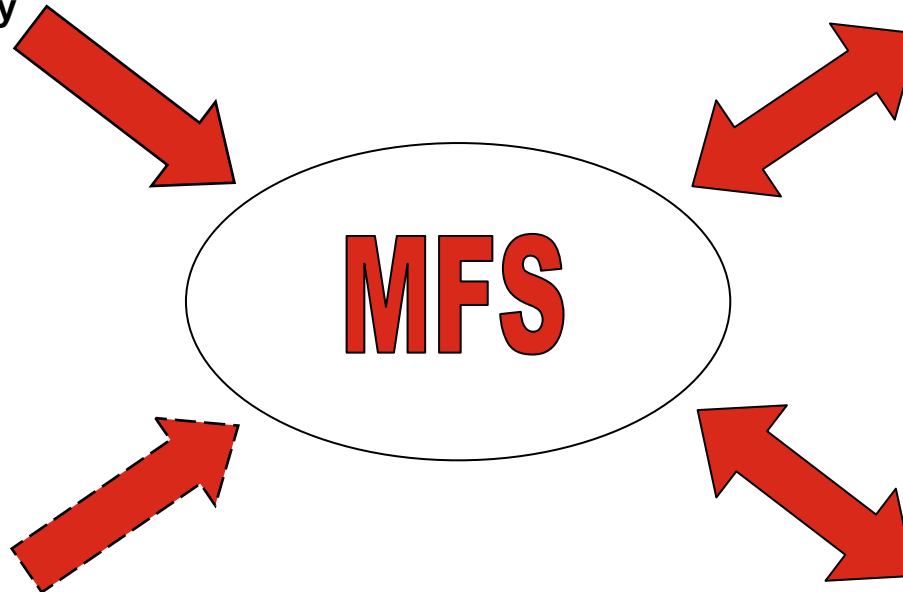
## Environment for Mobile Financial Services

### PRE-REQUISITES

- Mobile network
- Tested technology
- No regulatory impediments

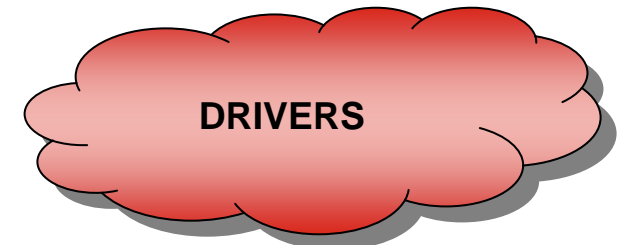
### ENABLERS

- Agents
- AML / CFT
- E-money
- High mobile penetration
- Banking technology
- Literacy



### BUSINESS CASE

- Promoters & model
- Price scheme
- Distribution & Cash management
- Consumer insight

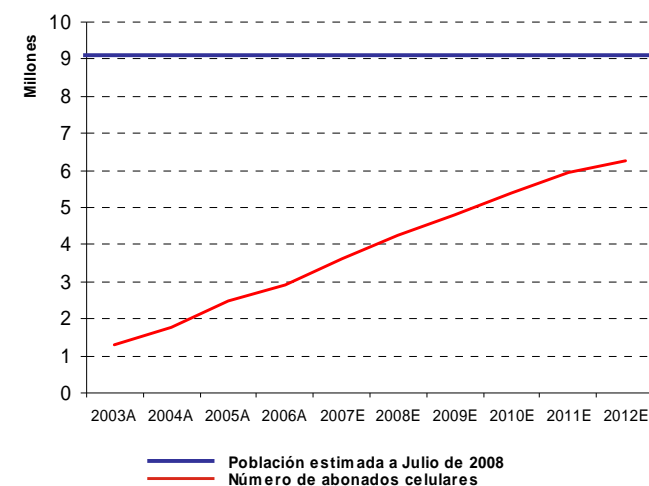
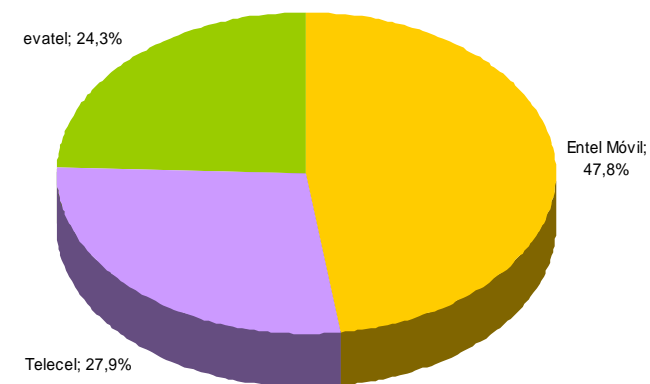


### AVAILABLE SERVICES

- Top-up
- Bill payments
- Money transfers & remittances
- Salaries / subsidies
- Purchases

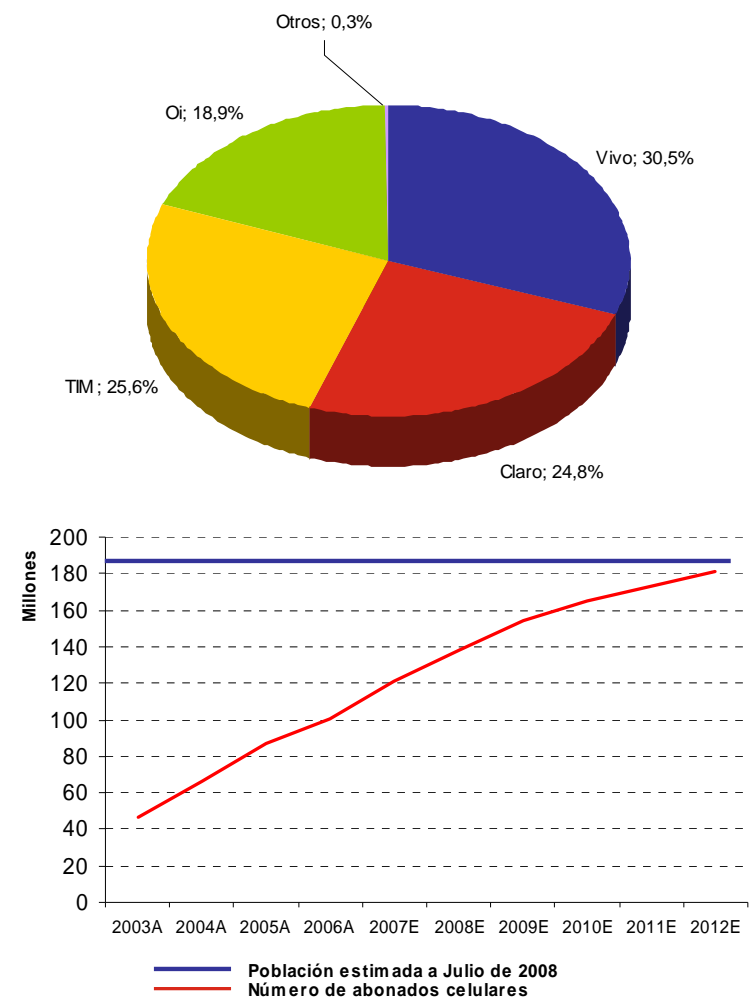
## Key national findings

COUNTRY	BOLIVIA	
<b>Financial System</b>	Access to formal financial services	30%
	Banking agents	Regulation and operation
	E-money	No regulation
	Remittances (over GDP)	8%
<b>Mobile telephony</b>	Penetration	34,2%
	Prepay	85%
	Sophistication	7,39%
<b>MFS</b>	<i>M-banking</i>	Yes
	<i>M-wallet</i>	n.a.
<b>Additional information</b>	<ul style="list-style-type: none"> <li>• Limited banking technology available at most MFIs</li> <li>• América Móvil and Telefónica not present</li> </ul>	



## Key national findings

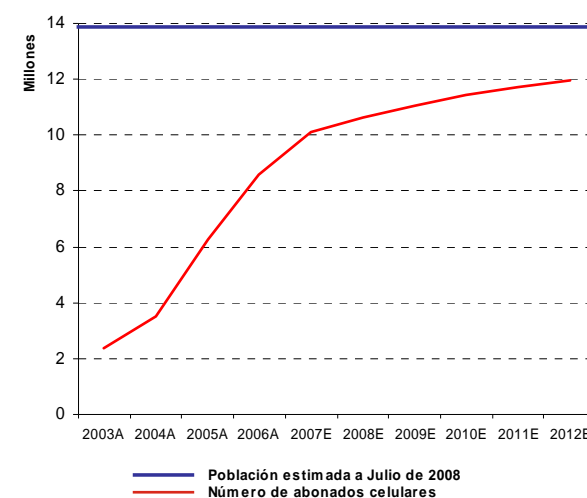
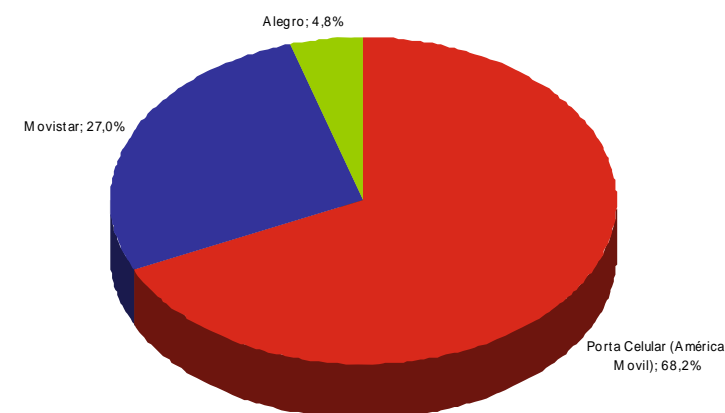
COUNTRY	BRAZIL	
<b>Financial System</b>	Access to formal financial services	43%
	Banking agents	Regulation and operation
	E-money	No regulation, prepaid cards
	Remittances (over GDP)	1%
<b>Mobile telephony</b>	Penetration	63,1%
	Prepay	80%
	Sophistication	7,75%
<b>MFS</b>	<i>M-banking</i>	Yes
	<i>M-wallet</i>	Yes (Oi Paggo*)
<b>Additional information</b>	<ul style="list-style-type: none"> <li>•Brazil was pioneer in regulating banking correspondents and has achieved a full coverage of municipalities in the country with this scheme.</li> <li>•ANATEL, the telecommunications regulatory body in Brazil, must authorize certain value-added services over telecom networks, as it might be the case with MFS.</li> </ul>	



\* Oi Paggo is a credit-based mobile payment system that requires no bank account, but it is not strictly a mobile wallet

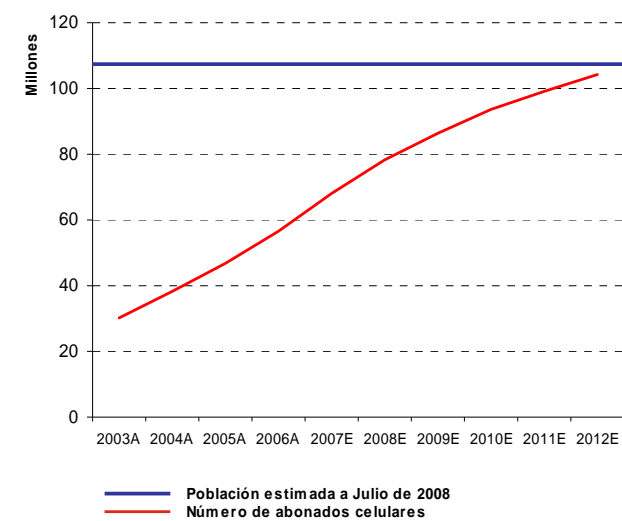
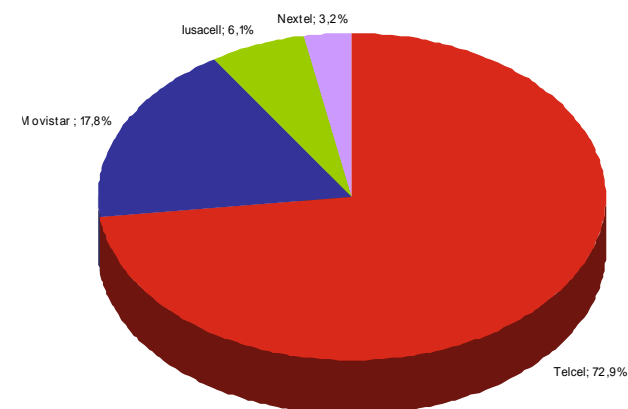
## Key national findings

COUNTRY	ECUADOR	
<b>Financial System</b>	Access to formal financial services	35%
	Banking agents	Regulation and operation
	E-money	No regulation, prepaid cards
	Remittances (over GDP)	7%
<b>Mobile telephony</b>	Penetration	75,6%
	Prepay	88%
	Sophistication	15,77%
<b>MFS</b>	<i>M-banking</i>	Yes
	<i>M-wallet</i>	n.a.
<b>Additional information</b>	<ul style="list-style-type: none"> <li>•Most Ecuadorian migrants live in Spain, where nearly 77% of them have a bank account.</li> <li>•In Ecuador, HalCash operates through Banco de Guayaquil. This system allows the reception in a mobile phone of a code that allows the recipient to withdraw his/her remittance at an ATM, as long as it has been sent from a Spanish bank account. The recipient does not need such account.</li> </ul>	



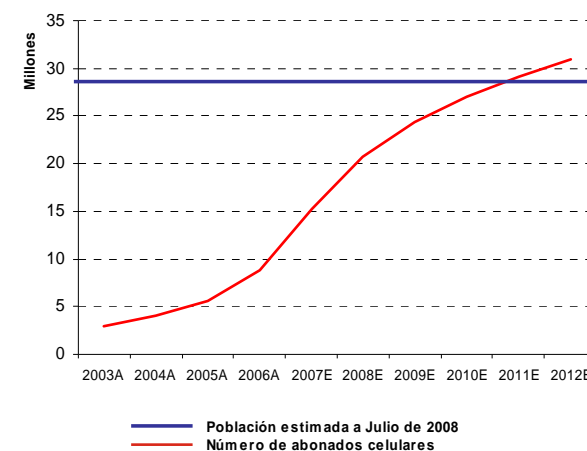
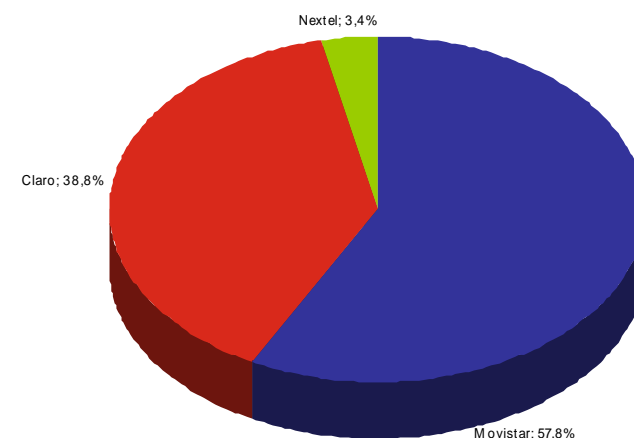
## Key national findings

COUNTRY	MEXICO	
<b>Financial System</b>	Access to formal financial services	25%
	Banking agents	Regulation and operation
	E-money	No regulation, prepaid cards
	Remittances (over GDP)	3%
<b>Mobile telephony</b>	Penetration	64,1%
	Prepay	88%
	Sophistication	15,66%
<b>MFS</b>	<i>M-banking</i>	Yes (inc. Celopago, Nipper)
	<i>M-wallet</i>	n.a.
<b>Additional information</b>	<ul style="list-style-type: none"> <li>•Mexico alone received in 2007 remittances for 24.000M\$, nearly 50% of all remittance flows in LAC.</li> <li>•Western Union offers the use of a mobile application in Trumpet Mobile terminals as an alternative channel for money transfer services.</li> </ul>	



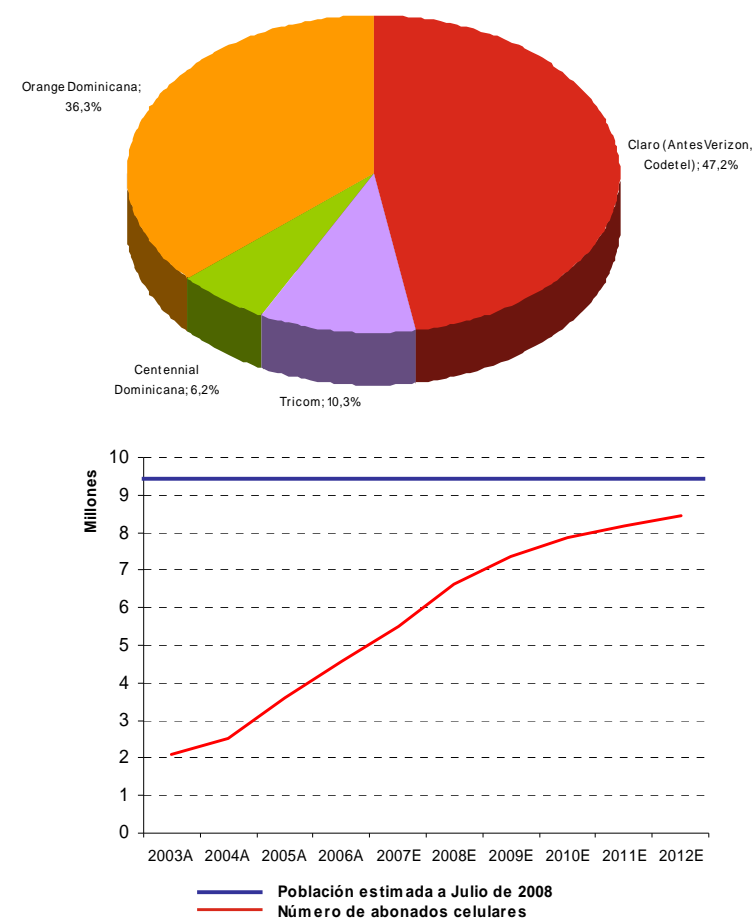
## Key national findings

COUNTRY	PERU	
<b>Financial System</b>	Access to formal financial services	25%
	Banking agents	Regulation and operation
	E-money	No regulation, prepaid cards
	Remittances (over GDP)	3%
<b>Mobile telephony</b>	Penetration	55,3%
	Prepay	88%
	Sophistication	13,86%
<b>MFS</b>	<i>M-banking</i>	Yes
	<i>M-wallet</i>	n.a.
<b>Additional information</b>	<ul style="list-style-type: none"> <li>Banking supervisors (Superintendencia de Banca y Seguros) and the Central Bank have agreed not to consider mobile wallets as deposit taking, but as a mere payments service.</li> </ul>	



## Key national findings

COUNTRY	DOMINICAN REPUBLIC	
<b>Financial System</b>	Access to formal financial services	29%
	Banking agents	No regulation
	E-money	No regulation, prepaid cards
	Remittances (over GDP)	9%
<b>Mobile telephony</b>	Penetration	56,5%
	Prepay	85%
	Sophistication	5,86%
<b>MFS</b>	<i>M-banking</i>	n.a.
	<i>M-wallet</i>	n.a.
<b>Additional information</b>	<ul style="list-style-type: none"> <li>•Dominican Republic was the only analyzed country in which no regulation for banking agents was found, nor any additive m-banking models.</li> </ul>	

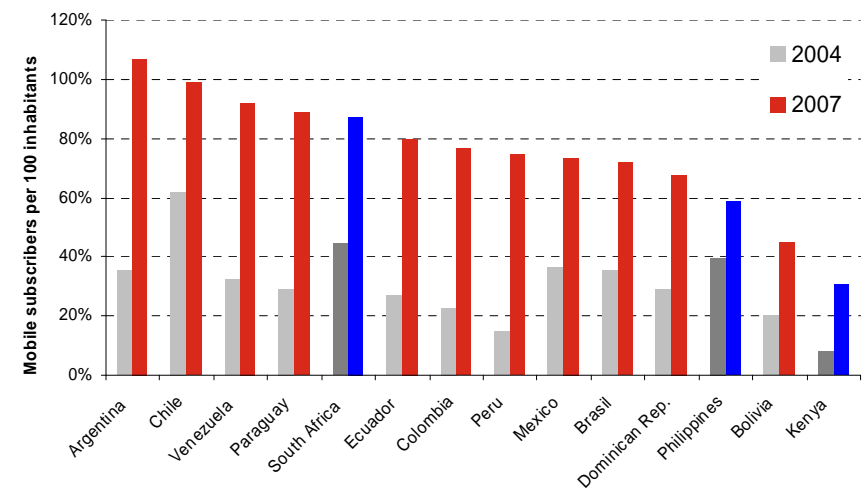
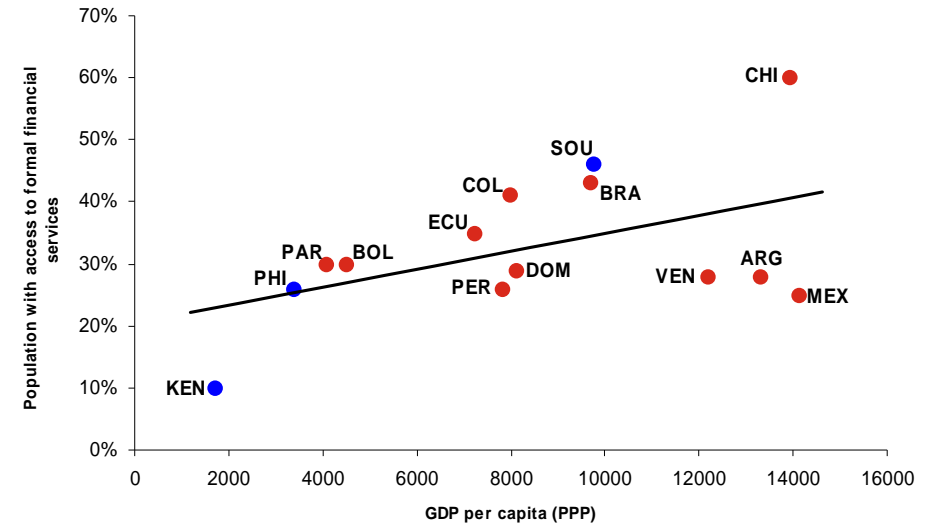


## International experiences

	Country	Year	Promoter	Adoption	Distribution
<b>MTN Money</b>	South Africa	2005	MTN (Operator) and Standard Bank	15K clients by April 2005	Account opening in MTN and Standard Bank branches. If identity is not confirmed, limited functionality. Cash-in in stores and EasyPay network.
<b>Wizzit</b>		2005	Bank of Athens	50K clients in less than 2 years	Account opening with agents (Wizz Kids) and 400 Dunn stores; cash-in at PostBank, Absa or Bank of Athens; cash-out available at stores.
<b>M-Pesa</b>	Kenya	2007	Vodafone - Safaricom (Operator)	2M registered (April 2008) over aprox. 4M bank accounts	Account opening, cash-in and cash-out in 850+ agents and Safaricom stores
<b>GCash</b>	Philippines	2004	Globe Telecom - GXI (Operator)	500K active users in urban zones	Account opening, cash-in and cash-out in 4900+ official agents (only account opening requires physical presence - KYC)
<b>Smart Money</b>		2003	Smart Communications (Operator) and 5 banks (including Banco de Oro)	4M subscribers (900K active) by 2006	Account opening requires physical presence in any of hundreds of Smart shops; cash-in available at 12000+ associated stores, ATMs (with card) or bank branches

## Lessons learned

- Transformational approach
- Partnership
- Technology: STK
- Killer application: Top-up
- Distribution (cash-in/cash-out)
- Regulation
- Scale



## Conclusions: criteria

- Low levels of access to financial services
- Enablers:
  - Regulation on banking agents, e-money and/or prepaid cards
  - High mobile penetration and growth
- Drivers:
  - Importance of remittance flows
  - Sophistication of cellular market
- Other (previous MFS in the country, telecoms regulation, competition...)

## Conclusions: summary of key national findings

	Access to financial services			Financial Regulation		Remittances	Mobile Market		MFS experiences
	Population with access to financial services	Branches/ 100K inh.	ATMs/ 100K inh.	Agents	E-money / prepaid cards	%GDP	Data ARPU / Total ARPU	Lines per 100 inh.	MFS
Bolivia	30%	0,13	4,80	√	X / X	8%	7,39%	34,2	
Brazil	43%	3,05	17,82	√	X / √	1%	7,75%	63,1	Oi Paggo
Ecuador	35%	4,38	6,32	√	X / √	7%	15,77%	75,6	Hal Cash
Mexico	25%	4,09	16,63	√	X / √	3%	15,66%	64,1	Celopago, Mobipay, Nipper, Western Union
Peru	26%	0,89	5,85	√	X / √	3%	13,86%	55,3	
Dominican Republic	29%	10,83	15,08	X	X / √	9%	5,86%	56,5	

## Conclusions: most suitable environments for MFS

- **Ecuador**
  - **Mexico**
  - **Peru**
- } • Regulation on banking agents, existing prepaid cards
- } • High mobile penetration and growth
- } • High sophistication of mobile market
- } • Important remittance flows
- 
- Brazil: role of ANATEL, existing e-payments (cards) infrastructure, taxation
  - Bolivia: low mobile penetration (competition?), challenging banking infrastructure (particularly in MFIs)
  - Dominican Republic: No agents, lowest mobile sophistication, no MFS

## Recommendations

Addressee	Goal	Recommendation	Risks and issues
<b>Donors</b>	To choose the country with the greater potential to develop initiatives with regional impact.	<b>To assess the environment in each of the countries, prioritizing those in which, given the relevant pre-requisites, MFS enablers and drivers are also found.</b>	Promoting initiatives based on excessively favorable environments, making them unsuitable for export to other countries.
	To create a positive environment for the development of MFS.	<b>To collaborate with regulators and authorities in order to define an open legal framework which provides certainty and harmonization at a regional level.</b>	Creating national regulations with diverging national interpretations
	To support successful models	<b>To apply lessons learned in successful models to the reality in LAC.</b>	Failing to adapt international experiences to LAC institutional and cultural traces.

## Recommendations

Addressee	Goal	Recommendation	Risks and issues
<b>National authorities and regulators</b>	To provide an open and well-defined regulatory environment.	<b>To define relevant regulation for MFS and, particularly, in the fields of banking correspondents, e-money and AML/CFT compliance for low-value accounts.</b>	Rising regulatory demands excessively could have a negative impact on some MFS models.
	To favor the affordability of MFS.	<b>To reduce taxation over financial transactions and telecommunications services.</b>	An increase in competition could affect profitability or solvency of some intermediaries.
	To favor dialogue among stakeholders.	<b>To coordinate policy and actions by Central Banks, Financial Supervisors and telecoms regulators.</b>	Not finding a balance between the interests and mandates of each institution.

## Recommendations

Addressee	Goal	Recommendation	Risks and issues
<b>Financial Institutions</b>	To offer more secure and complete MFS.	<b>To reach agreements with telecoms operators in order to benefit from their greater reach and access to the SIM.</b>	Conceding total control of the operations to MNOs, instead of benefiting from the strengths of both.
	To achieve a better knowledge of customers	<b>To research the market to find out the habits and necessities of the BoP.</b>	Misinterpreting the needs of potential customers.
	To offer greater convenience to customers	<b>To design channels, products and services specifically designed for the BoP (transformational).</b>	Aiming at complete but excessively complex solutions.

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