Building An Agent Network Infrastructure Issues for Consideration

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THE WORLD BAND

Setting the Scene

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Source: Internet World Stats - www.internetworldstats.com - June 2009 Copyright © 2009, Miniwatts Marketing Group

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• Financial Access strands in Africa (www.finscope.co.za)



E Formal - Bank 🖸 Formal - Other 🔲 Informal 📕 Financially excluded

We Have Heard:

- One in every two people has a mobile phone BUT 1 in every 7 has access to fin services
- One billion mobile phone users don't have basic bank account
- Over 800,000 rural communities lack sustainable mobile coverage
- Fastest growth in mobile phones is in emerging markets
- More than 2 billion adults worldwide have no access to formal financial services (90% Africa, Asia, Middle East, Latin America)
 - Chaia et al (2009) Half the World is Unbanked

We Have Heard:

- A number of barriers to access to financial services
 - Low income, education, product design, cultural barriers, infrastructure, regulatory issues, cost, etc
 - Eligibility barriers; Affordability;
 - Financial inclusion drives economic growth
 - Over three billion mobile phone subscriptions in 2009
- Many countries looking at policy and regulatory issues in response to innovative schemes
- Technology has outpaced the capacity of policymakers

PSDG Interventions

•The Payment System Development Group is at the center of an international network, whose main objective is supporting countries to reform Payments, Remittances and Securities Settlement Systems



PSDG Methodology

Generally Accepted Standards and Principles

1. Assessment of existing payments systems against accepted standards. Recommendations for improvement

2. Technical Assistance

3. Monitoring and impact evaluation against specific indicators for payment systems

Large Value Systems	Securities and Derivatives Settlement	Retail and Government Payments	Remittances
Legal Framework			
Technical Infrastructure			
Financial Access			
Market Structure			
Consumer Protection			
Oversight			

World Bank Global Payment Systems Survey 2010

- Answers received from 132 central banks worldwide, representing 139 countries
- Topics covered:
- *i.* Legal and Regulatory Framework
- *ii.* Large-Value Funds Transfer Systems
- iii. Retail Payment Systems
- *iv.* Foreign Exchange Settlement Systems
- v. Cross-border Payments and International Remittances
- vi. Securities Settlement Systems
- vii. Payment System Oversight and Cooperation
- viii. Planned and On-going Reforms to the National Payments System
- NEW: Annex 1! Survey on innovations in retail payments issued as an Annexure to GPSS. Builds on CPSS "Survey of Developments in Electronic Money and Internet and Mobile Payments". Annex 1 is divided into 5 key areas:
- *i.* Type of Products
- ii. Design Features of the Products
- iii. Legal and Regulatory Framework
- iv. Statistics
- v. Planned Reforms/New Products

innovations in retail payments, i.e. solutions that involve a) the development of a new product, and/or b) innovation in processing

Status of Retail Payments and Need for Reform

15+ years of discussion and reforms have led to important progress worldwide with regard to Legal Framework and High-Value Payment Systems...

- At least 116 central banks report having a RTGS system (from 3-4 in 1995)
- Most of the RTGS in place are secure and have been designed around international standards and best practices

Challenges:

- Access (cost, geographic coverage)
- Lack of coherent national payments strategy in many countries
- Infrastructure shortcomings
- Inefficient payment instruments
- Customer attitude and trust in electronic payments

...but retail payment systems in developing countries still lag behind significantly when compared to those of developed countries

- 100+ per capita cashless transactions per year in the EU and ODC
 - 15-20 for EAP and ECA
 - Less than 1 for AFR

Cashless Retail Payment Transactions Per Capita (2009)



Possible Reasons for Situation in Retail Payments:

- Infrastructure and access. Slow development of access channels to initiate and deliver cashless payments – e.g. POS terminals, and limited interoperability. Limited access by individuals to modern payment instruments in most developing countries
- 2. Competition and cost. Limited competition among banking institutions and payment service providers resulting in higher costs and more limited coverage
- Government and corporate payments. The specific needs of the government/utilities companies/large commercial firms not being addressed adequately – resulting in a preference for cash and cheques
- 4. **Risk management.** Another relevant point emerging from the analysis is that, notwithstanding some improvement, risk management in cheque systems and ACHs worldwide is still weak

Innovative Payments

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General findings and policy implications for innovative products



Infrastructure and access Transaction channels supporting innovative payments



•Fairly widespread availability of electronic channels for conducting retail payment transactions

In particular, 91 of 101 countries reported having internet banking of some form and 76 countries reporting having mobile-based access to bank accounts (referred to here as mobile banking)

•The survey did not gather information on whether these channels are widely available within each country or the intensity with which they are actually used

Infrastructure and access Entities involved the provision of innovative payment services

Role of banks still dominant but in (contractual) collaboration with other entities:

73% Banks are involved in the operation of the innovative product in terms of being responsible for signing up new customers, setting up account and managing customer service, BUT in only

33% banks are <u>solely</u> responsible

9% schemes are operated by explicit joint venture between banks and non-banking entities

43% of the products surveyed use **agents**, with highest usage of agents found in low-income countries (75%), EAP (100%) and SSA (71%), and large countries >30 million inhabitants (49%)



Infrastructure and access Interoperability of innovative payment products



 Information was collected on locations where products could be used and ability to use products for transfers to customers of other payment products

 Most of the innovative payment products are closed-loop (108 of the 173) products reported. Only 17% were reported having fullfledged interoperability, while 29% have some degree of interoperability

•Full interoperability is less common in high-income countries, especially ODCs, and somewhat more common in ECA and LAC

Infrastructure and access

Use of clearing and settlement infrastructure by innovative products



- The traditional clearing and settlement infrastructure is generally not used
- •More than 50% of the innovative products reported in the survey were settled in the books of the issuer, with only around 24% settling in central bank money
- Less than 40% of the products settled in T+0

Government Payments Types of transactions supported by innovative products



4 central banks believe that payment innovations will improve the efficiency of government payments in the immediate future

17 central banks believe that payment innovations will lead to higher levels of financial inclusion

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Risk Management

Security and risk management in innovative payment products



Regulators' involvement in setting minimum requirements for security, data integrity and operational reliability is lower in high income countries as a whole, although there is a significant contrast between EU countries with a percentage higher than the worldwide figure, and ODCs with the lowest percentage

 Regulator involvement in this specific issue is higher across low income countries, especially in the SSA region

Risk Management Protection of customer funds



•For payment products based on bank account, this issue is generally addressed as part of the overall prudential and operational requirements for the bank, by deposit insurance and/or other safety nets.

Non-bank issuers might not be covered, although other mechanisms to mitigate risks can be enforced

 Strong consumer protection measure of deposit insurance is available for only 36% of the products, 20% of products have no form of protection

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Annex 1 on innovative retail payment products

101 countries reported collectively 173 different products/product groups

•There is a fairly wide-spread adoption of innovative retail payment mechanisms. 91 CBs reported having internet banking and 76 mobile banking. Around 70% reported usage of ATM/POS

• Usage innovative payment products is still lower compared to traditional products. However, they are important for financial inclusion in over 14% of the jurisdictions and 70 countries indicated growing usage

Around 10% of the products were reported to have no fees. Around 80% had a per-transaction fee

•The majority of innovative products have limited interoperability. Less than 20% were reported to be fully or partially interoperable

•The traditional clearing and settlement infrastructure is in general not used. More than 50% of the innovative products were settled in the books of the issuer

CBs identified themselves as the overseers for around 60% of the products

Impact of future reforms: 31 CBs, around 30% of the participating CBs anticipated an increase in usage of electronic payment instruments because of the planned reforms. 16 CBs projected a positive impact on levels of financial inclusion. 8 CBs anticipated an improvement in efficiency, and only 3 CBs anticipated reduction in demand for cash. 6 CBs anticipated an increasing role for non-bank players

WHY CASH POLICY?

- "To <u>drive</u> the development and modernisation of our payment system in line with Nigeria's Vision 2020 goal of being amongst the top 20 economies by the year 2020. An <u>efficient</u> and modern payment system is positively collerated with <u>economic</u> <u>development</u> and is a key enabler"
- "To <u>reduce the cost</u> of banking services (including cost of credit) and drive <u>financial inclusion</u> by providing more efficient transaction options and <u>greater reach</u>."
- "To improve <u>the effectiveness</u> of <u>monetary policy</u> in managing inflation and driving <u>economic growth</u>"



Expected Benefits of Cash Policy

- "Increased convenience; more service options; reduced risk of cash related crimes; cheaper access to banking services and access to credit.
- "For Corporations: Faster access to capital; reduced revenue leakage; and reduced cash handling costs."
- "For Government: Increased tax collections; greater financial inclusion; increased economic development; increased tax collections; greater financial inclusion; increased economic development."

What does this mean for us?

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Challenges

- Understanding role of central bank in payment systems
 - Paradigm shift
- Setting up payment systems units within the central banks
- Getting banks to cooperate on instruments and infrastructure provision
- Lack of payment systems expertise
- Costs for development are considerable and ultimately passed on to the customer



Challenges

- Lack of integrated systems
- Standardisation
- Underdeveloped financial industry
- Financial markets not well developed
- Intricate linkage between monetary policy and payment systems
 - Striking the right balance
 - Liquidity requirements vs control of money supply growth
- Legal framework
- Infrastructure constraints
- Risk Management
 - Check old processes vs new processes



- Efficient payment systems are important to society at large and to national economies.
- Need to understand the business environment
- Strategic choices
- Threats and challenges, but there are also opportunities
- Public awareness is key
- Banks provide critical interface
- Businesses help in building confidence
- Payment systems development is anchored on cooperation
- Government is an important player
- Central bank must take the lead



 "Believing in the power and convenience of self service technology, and in the incredible longevity of cash, we commit our industry to the goal of ensuring that the ATM remains the dominant and best global channel in the payment space up to 2050 and beyond"

Michael Lee, CEO, ATM Industry Association

Traditional Payment Process





Paying Bank
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•Central bank

•Beneficiary Bank •31





A Conceptual Framework

- Mobile money is new, but is actually a confluence of familiar concepts in the area of retail payments
- Mobile Money has married these existing concepts to create a truly remarkable product with the potential to dramatically expand financial inclusion
- Mobile Banking is essentially offering another channel to access a bank account, akin to internet banking

A Conceptual Framework (continued)

- Mobile Money is a confluence of three independent innovations, two of them already well-established retail payments concepts:
 - E-Money Prepaid Payment Product where the underlying funds are stored on a device (e.g. chip card), or in the system of the issuer (e.g. PayPal) which is then accessed through various channels for example using a card or at the internet etc. In some jurisdictions the issuer need not be a bank, as the product is not deemed to be a deposit product. <<Europe and many countries have had this for at least a decade>>
 - Rapid spread of mobile telephony (incidentally mostly using prepaid connections as opposed to post paid), coupled with inherent capability to exchange data and basic computing capability. <<This is akin to the development of internet as a channel for exchange of payment information.>>
 - Concept of business correspondents/agents leveraging existing businesses/shops as a channel to offer payment services using their own cash/flow, leveraging technology developed for card payments at the point of sale. <<Brazil introduced this many years ago>>

Public Policy Objectives in Retail Payments

- Safety and Efficiency. The safe and efficient use of money as a medium of exchange in retail transactions is particularly important for the stability of the currency and a foundation of the trust people have in it
- Promote Affordability and Ease of Access to Payment Services. A wide range of payment instruments is essential for supporting customers' needs in a market economy (both domestic and cross-border, e.g. remittances). A less than optimal supply of payment instruments may ultimately have an impact on economic development and growth
- Promote Socially Optimal Usage of Payment Instruments. Payment instruments could have associated costs for society – e.g. excessive usage of credit cards could be detrimental and ability to mask business transactions as person-to-person could have tax implications
- Promote efficient infrastructure to support development of payment products. Lack
 of efficient clearing and settlement mechanisms like payment card switches, automated
 clearinghouses and RTGS systems have implications on efficiency and safety of payment
 products, and also on competition and market structure
- Financial inclusion is not just access to payment services but to also deposit, credit, investment and insurance services – hence, to be a tool for financial inclusion, mobile money needs to support these additional products
Regulatory Considerations – Mobile Money

- The approaches used to regulate and oversee prepaid products and Remittance Service Providers are equally applicable for Mobile Money. Mobile Money conceptually is a prepaid product which could be offered by non-bank entities and serviced through a wide variety of channels which have not traditionally been used for payment services
- Safety of Customer Funds operational reliability issues and bankruptcy of issuer. Even where a bank is the issuer, existing treatment for deposit accounts might not be legally applicable to prepaid account. Measures like trust funds, segregation of funds, requiring basic operational reliability measures etc. can be used to mitigate risk
- Heightened AML/CFT risks. The way Mobile Money accounts are setup, operations overseen and transactions conducted could create higher AML/CFT risks – but could be addressed effectively through simple measures, e.g. limit transaction size and frequency
- Weaker authentication could lead to higher fraud risks
- Consumer Protection. The profile of customers targeted could be first time users of payment products. Need to ensure they understand the terms and conditions
- Need to ensure competitive market conditions. Regulation should adopt a holistic retail payments view else it could lead to situations like - banks are constrained with banking regulations and new set of players have relaxed or no regulatory requirements

To summarize

- Mobile Money represents a very strong potential for financial inclusion, some early success has already been seen
- From a regulatory perspective, development of Mobile Money should be encouraged but does not need a radically different approach
- Frameworks developed for addressing development of safe and efficient remittances market and experience with regulating e-money products are relevant
- The World Bank, through the Payment Systems Development Group, Financial Infrastructure Service Line, Financial Inclusion Practice, and also other World Bank Group units have been active in this area and stand available to assist authorities

Scaling up Interventions in the Retail Payments Space

"Balancing Cooperation and Competition in Retail Payment Systems"

> A World Bank study coordinated by Mario Guadamillas

Payment Instruments and Services



Public Policy Objectives and Goals

Efficiency and reliability are the general policy objectives.
In addition, at least three policy goals should be considered:

✓ Achievement of a socially optimal use of payment instruments

✓ Deployment of an efficient infrastructure to support payment services

✓ Affordability and easiness of access to payment instruments and services

Guideline 1. Market complexities need to be recognized and analyzed in detail before any action is decided and implemented

✓ Environmental, legal and legacy factors are important issues shaping the evolution of retail systems

✓ Governance of the infrastructure has a significant impact on cooperation and competition

✓ Gaining access to messaging, clearing and settlement services is of capital importance for the ultimate success of new entrants in the market

✓ Pricing of some retail payment systems are subject to network economies (e.g., two-sided markets) and traditional cost structures are not appropriate to analyze these markets as pricing structures matter

 Guideline 2. Policy trade-offs are relevant in this domain. Therefore, policy priorities will have to be determined and the type of public intervention should depend on the main public objective(s) pursued

✓ Public policy objectives in retail payments systems are multiple

✓ The justification for intervention depends upon the main public policy objective(s) pursued and upon evidence of perceived market failure

✓ An ex-ante and transparent determination of policy objectives clarifies actors' roles and avoids mistrust in the development and operation of the infrastructure

✓ Market transparency is key to promoting competition and dispelling mistrust among market players

✓ Any policy solution should be considered in a dynamic rather than static context

Guideline 3. Effective Oversight of retail payment systems by the central bank is crucial to balance cooperation and competition issues

✓ Effective oversight is the main tool to achieve an appropriate balance between cooperation and competition

✓ Central banks are the natural overseers and should play a central role due to their stake on the confidence in money and functioning of commerce

✓ Other authorities have an important role due to multiple implications of retail markets (e.g., competition authorities, financial supervisors, Ministries of Finance, Telco regulatory authority, etc.)

✓ The oversight function scope should be broad enough to ensure that new instruments and players are covered

✓ Oversight instruments range from regulations/incentives (including on access and pricing) to moral suasion and policy dialogue, from antirust enforcement to structural measures (e.g., government-owned service provision)

Guideline 4. Institutional mechanisms to promote cooperation and information sharing are essential

✓ Policy making is complex due to the institutional fragmentation of relevant policy makers as well as by the different –and sometimes overlapping– scope of their mandates

✓ Sometimes authorities have already established cooperative arrangements but normally with a narrow scope that has to be broadened, other times these arrangements are inexistent and need to be established

✓ In particular, it is essential to count with a good cooperative framework between the overseer and the anti-trust agencies that rule against uncompetitive behavior

✓ The public authorities should use Payment Councils, industry associations groups and similar bodies as important cooperative tools

International standards for remittance services: World Bank-CPSS General Principles

• GP 1: Transparency & consumer protection

The market for remittance services should be transparent and have adequate consumer protection

• GP 2: Payment system infrastructure

 Improvements to payment system infrastructure that have the potential to increase the efficiency of remittance services should be encouraged

GP 3: Legal & regulatory environment

 Remittance services should be supported by a sound, predictable, nondiscriminatory and proportionate legal and regulatory framework

• GP 4: Market structure and competition

 Competitive market conditions, including appropriate access to domestic payments infrastructure, should be fostered in the remittance industry

• GP 5: Governance & risk management

 Remittance services should be supported by appropriate governance and risk management practices.

Definition of Oversight

...."Oversight of payment systems is a **central** bank task, principally intended to promote the smooth functioning of payment systems and to protect the financial system from domino effects which may occur when one or more participants in the payment system incur credit or liquidity problems. Payment systems oversight aims at a given system rather than individual participants" BIS

Intricate linkage between payment system and monetary policy

- Payment system reform aims at :
 - Financial stability
 - Increasing operational reliability
 - Enhancing speed of settlement
 - Reducing transaction costs
- However it has a bearing on:
 - Level of money supply
 - Efficiency of monetary policy instruments
 - Demand for reserves
- Similarly :
 - Monetary policy decisions can affect operational efficiency of payment systems due to their effects on the level and the price of liquidity

Strategic Process to Reforming Payment Systems

- Project launch
- Sensitisation
- Information gathering and stocktaking
- Vision and strategy formulation
 - CSFs
 - Fundamental Principles
 - Strategies
 - Deliverable: Document signed by NPC
 - Vision must be in line with Government and regional vision and strategy
- Conceptual design
- Business process specification
- Technical specification
- Procurement
- Development
- Implementation

Support Structures for the Strategic Process

- Appropriate structures and skills are needed to support modernisation efforts.
 - National Payments Council (NPC)
 - NPS Functional Department
 - NPS Project Team
 - NPS Strategy Team
 - Formulate the vision and strategy
 - Expert Committees/Teams
 - E.g. Legal, IT, Standards, Instruments, Government payments and other etc



BIS General Guidance for NPS Development

- GG 1 Keep the central bank at the centre
- GG 2 Promote the role of a sound banking system
- GG 3 Recognise complexity
- GG 4 Focus on needs
- GG 5 Set clear priorities
- GG 6 Implementation is key
- GG 7 Promote market development



BIS General Guidance for NPS Development

- GG 8 Involve relevant stakeholders:
- GG 9 Collaborate for effective oversight
- GG 10 Promote legal certainty
- GG 11 Expand availability of retail payment services
- GG 12 Let the business case guide the large-value payment system
- GG 13 Align development of payment and securities systems
- GG 14 Coordinate settlement of retail, large-value and securities systems

Agent Issues for Consideration

Some requirements

- Network availability/connectivity
- Accessibility
- Security/safety of environment

Possible challenges

Liquidity constraints

Viability

Publicity/branding/visibility

Fraud and abuse of system

Loss of confidence in product

Issues for Consideration

- Promote innovation
- Foster interoperability
- Permit use of third parties
- Permit use of agents for extension of banking and payment services
 - Broad scope of entities, using risk based criteria
- Encourage non exclusivity
- Clear transparent legal and regulatory framework
- Consider objectives of AML/CFT
 - Risk adjusted CDD
- Consumer protection issues
- Strengthen Oversight framework
- Implementation approach

Examples

Mexico

50% unbanked vs 78 % urban population.

 Geographic challenges +lack of infrastructure in some areas.

 Responsibilities split between Fin Supervisor and Monetary authority

- Effective oversight of payment systems identified constraints.
- Sustained attention to create appropriate payment systems infrastructure.
- Establishment of a fund to expand POS infrastructure
- Allowed non-bank financial service providers to provide payment services and gain access
- Legal reforms eased account opening procedures: 4 tiers of accounts
- Allowed usage of agents/business correspondents



To facilitate on-boarding of new clients in Mexico, alternative account types were created, with less onerous process and ID requirements

•Case of Mexico – 4 tiers of accounts				
	Low risk accounts			
	Type 1 (Prepaid cards)	Type 2	Туре 3	Туре 4
Accountholder data	None	Name, birthday, address, sex*, state* *In case of no presence	Name, birthday, address, gender*, sex*, place of birth, citizenship, occupation, phone number *In case of no presence	
Requirements for opening and customer identification	None	Only identification data, without copies. Two schemes: a)Presence, b)No presence	Only identification data, without copies* Presence *compare data with official ID	Copies of identification data. Presence
Place of opening	Branches, agents, electronic media	Branches, agents, and internet	Branches, agents and companies (payroll)	Branches
Amount limits (USD)	Deposits: \$255/month Balance: \$340	Deposits: \$1,000/month	Deposits: \$3400/month	None
Channels	Branches, ATM, POS, agents	Branches, ATM, POS, agents, e-banking, mobile phone		Branches, ATM, POS, agents, e- banking, mobile phone, cheques
Coverage	Domestic	Domestic and International		



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India

- Around 60% unbanked
- 600,000+ villages, over 70% of population in villages, bank branch in only 5%
- Tiered banking industry commercial banks, various categories of cooperative and rural banks.

- Coordinated action by the RBI and the Ministry of Finance.
- Strengthened the legal basis for payment systems in India
- Reformed and expanded the payments infrastructure.
- Created basic no-frills accounts
- Enabled usage of "business correspondents"
- Set national targets, engaged in financial literacy
- Introducing biometric national ID



In India, an ambitious effort is being made to extend banking the the vast rural population through different channels and products



Financial & Private Sector Development

China and Brazil have also taken a variety to steps to extend access to finance and payments systems in their markets



•Key initiatives taken by policy makers and industry to extend access

- PBOC actively promoted access to national infrastructure for rural, village and town based banks.
- Encouraged rural banks to establish local clearing houses for electronic payments.
- China Union Pay led a massive rollout of card payments infrastructure # of POS tripled and #ATMs doubled in 2 years.
- Low interchange fees for specific categories like schools, pharmacies, hospitals etc.
- Actively facilitated domestic migrant remittances through establishing card infrastructure at economic hubs and villages.
- Focused on economic hubs to migrate all payments in those hubs to electronic means
- Central Bank conducted a detailed stocktaking identified lack of inter-operability and price transparency as the major issues hampering adoption of electronic payment mechanisms.
- Created Simplified accounts no-fees when used through electronic channels.
- Banks collaborated to create an Electronic Bill payment and Presentment System.
- ATM and POS Clearing and Settlement moved to CIP a bank owned clearing house.
- Created Business Correspondent network to service G2P programs, largest Bolsa Familia.
 - •Families assisted: ~12 million
 - •Transfer of resources: R\$1,228 billion per month
 - •3 million simplified deposit accounts opened to receive the benefit; about 1.77 million actually conduct transaction in the account
 - •9.4 million receive by electronic benefit card



Financial & Private Sector Development

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All you need are three things

Commitment

Commitment

Commitment





Where do you want to go given the characteristics of your country and the winds of modernisation blowing around you?

Thank you

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