

Central Bank of Nigeria



Payment Systems Vision 2020

Initiative 2 - Person-to-Person
Payments

Request for Information

Person-to-Person Payments

Request for Information

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1 Introduction and Objectives

The Central Bank of Nigeria is undertaking a strategic review of the financial systems infrastructure under the title of FSS 2020. A key element of this review is the Payment Systems Strategy 2020.

The goal of the Payment Systems Strategy 2020 is to achieve increased usage of electronic payments that are internationally recognised as 'best-of-breed'. Seven specific initiatives have been identified as priorities by the Payment Systems Working Group.

This Request for Information is being issued to solicit potential solutions for Initiative 2 – Person to Person Payments.

The Central Bank believes that this is an area of huge potential and it will be actively backing this infrastructure as a method of displacing cash within Nigeria - the most populous country in Africa and with a rapidly growing GDP.

We are seeking robust and innovative solutions from potential service providers. The responses should cover the key requirements listed below, but need not be limited by the suggestions. Our objective is to define and implement a world-class solution that allows Nigeria to move rapidly from cash to a secure, reliable and trusted alternative for person to person payments

2 Rationale for Initiative 2 – Person to Person Payments

2.1 Current Situation

Nigeria has historically operated with a cash-driven economy, particularly in the consumer sector. Many developing countries have actively promoted the creation of a robust payment system as a vital element in their financial infrastructure, as a necessary channel for effective monetary policy implementation and as a means of promoting economic efficiency.

The Nigerian Payment System has witnessed improvements over the years, moving from its rudimentary level during the early years of banking business to the current state of sophistication comparable to other economies at the same level of development. However, the efficiency of the system is hampered by the unusually large cash usage as a mode of effecting payments. For instance, cash outside the banking system as a proportion of broad money supply has remained relatively high at about 17.5 per cent in 2003.

The Central Bank of Nigeria has recognised that the high dependency on cash results in an inefficient allocation of resources and low depth of financial intermediation, creating an adverse impact on monetary policy implementation. It discourages the use of banking services, and incurs a high operational cost for the Central Bank and commercial banks.

2.2 Focus for Person to Person Payments

Much of domestic economic activity is in the form of person-to-person (P2P) trade and is exclusively cash settlement. Changing behaviour to use electronic payments has many significant barriers but the impact on reducing cash transactions means it is a prize worth chasing.

An effective person-to-person payment system could also support the domestic leg of Workers Remittances (the distribution stage in which funds are paid to the recipients in Nigeria). A report from the World Bank and Department for International Development identifies the gross financial inflows of Worker Remittance officially recorded by the Central Bank of Nigeria to be \$2.3 billion in 2004 (excludes 'in-kind' remittances such as gifts), with informal transfers through family and friends adding an estimated 50% to this figure. Providing a secure and simple distribution channel would increase the trend towards electronic flows.

2.3 Initiative 2 – Person to Person Payment

By end 2007 a business plan should be created to evaluate a robust and easy-to-use method for secure person-to-person electronic payments without the need for extensive infrastructure. It is expected that mobile phones will be the primary channel for access.

The solution has to be as effective and accepted as cash and offer fast circulation of money since it will be used for selling and subsequent stock replenishment within the same day.

The business proposition will cover all aspects such as technical feasibility, security and controls, regulatory environment, user acceptance and pricing.

If the business plan is viable, a pilot program should be deployed during 2008

| Rationale | Target | Constraints |
|---|---|--|
| Drives large number of domestic payments. | Produce a full business plan and feasibility study by end 2007. | Lack of widely available payment method. A new solution will be required |
| Bottom-up approach to | Identify a suitable pilot program for | Changing the cash culture is a tough challenge |

| | | |
|--|--|--|
| <p>increase the acceptance of electronic payments</p> <p>Links to the Government policy of reaching the 'unbanked'</p> <p>The core infrastructure (mobile networks, secure messaging and card settlement) is largely in place.</p> | <p>deployment in 2008 (assuming feasibility is favourable).</p> <p>The likely solution will offer secure, simple to use person to person payment, probably using the mobile phone networks for access and card switching for movement of funds</p> | <p>Literacy level in more remote areas means any solution has to be very simple to use.</p> <p>Charges for access and funds movement may be prohibitive</p> <p>Potential lack of confidence on the recipient's side that funds have been moved.</p> <p>Adequate regulation will be required to provide suitable anti-money laundering and fraud controls but must not be excessive.</p> <p>Cash offers anonymity which some traders may prefer.</p> <p>Absence of suitable regulatory framework and legal recognition for consumer protection and services such as cashback via agents.</p> <p>Lack of Dispute resolutions mechanism</p> |
|--|--|--|

3 The RFI process

This RFI is intended to supply sufficient information for a full response. Should you require clarification on any point, please send an email to any of the contact points listed below. The Central Bank reserves the right to circulate these questions and the response to all organisations that received a copy of the RFI.

We request that you provide an indication of your intent to respond by Friday 10th August, 2007.

Responses should be in electronic form to the contact point below. The responses should contain sufficient detail to allow the Central Bank to determine the appropriateness of the solution. However, detailed technical and operational descriptions are not required at this stage. We would expect the response to be around 20 pages maximum.

The timeline for preparation and review of this Request for Information is as follows:

| | | | |
|--|-------------------------------------|----------|------|
| RFI issued to potential service providers | 6 th | August | 2007 |
| Service providers indicate their intention to respond | 10 th | August | 2007 |
| Response to RFI | 22 nd | August | 2007 |
| Review by Payment Systems Strategy Working Group | 30 th | August | 2007 |
| Follow-up questions for clarification of the responses | 17 th – 21 st | Sept | 2007 |
| Preparation of Business Plan | | December | 2007 |

The working group may request presentations on specific responses. It is likely that such presentations, if required, would be held during the week of 17th September, 2007.

The timeline may be subject to change should the review of potential solutions require additional time by the Working Group.

Contact points:

1. Email: mabudu@cenbank.org 2. ecobaigbona@cenbank.org

Phone: +234 9 61638441 +234 9 61638428

3. aoyedele@cenbank.org 4. oaakinwunmi@cenbank.org

Phone: +234 9 61638414 + 234 9 61638425

5. saibrahim@cenbank.org 6. habdullahi@cenbank.org

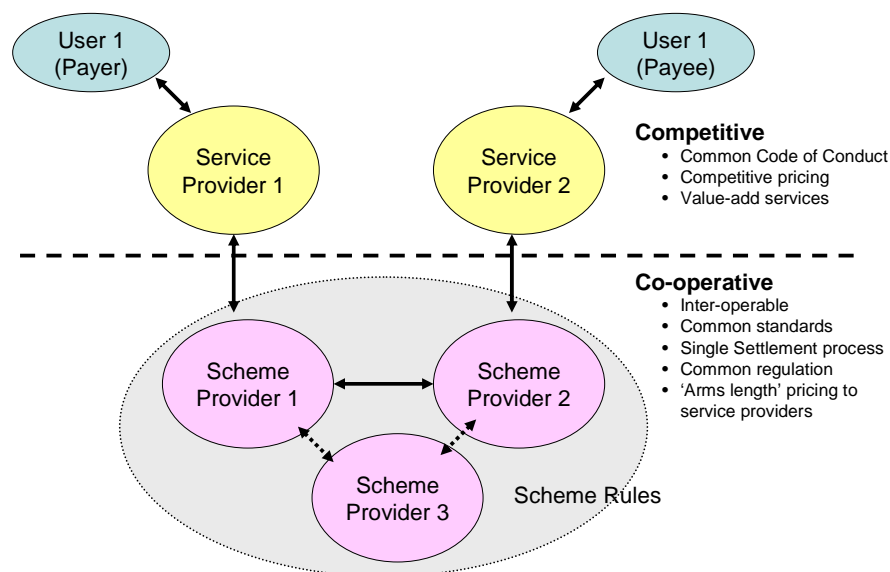
Phone: +234 9 61638425 + 234 9 61638471

4 Terms of Reference

4.1 Summary of Requirements

- 4.1.1 The Central Bank of Nigeria has issued this Request for Information to potential solution providers. The objective is to introduce a 'best-of-breed' payments service that is relevant for the local Nigerian market based on current banking practice and being mindful of geographical, infrastructural and cultural constraints.
- 4.1.2 Given the low level of deployment of current Point of Sale (POS) devices, it is assumed that the proposed solution will be based on mobile phone infrastructure with the movement of funds and subsequent settlement using the common card switching infrastructure. However, other solutions will be considered should they meet the requirements outlined in the sections below.
- 4.1.3 The proposed solution must be multi-bank and multi-network to encourage widespread usage. Our business model is to support common payment infrastructure, but allow competition in providing services that run across this infrastructure.

Business Model for Interoperability



To create the appropriate operating framework, the separate roles of Scheme Provider and Service Provider have been defined. Scheme Providers will operate the core infrastructure, covering the switching of transactions, the calculation of net settlement positions, and subsequent settlement through the existing payments systems. Service Providers support the end user (the 'first mile' and 'last mile') and will be encouraged to offer innovative solutions to encourage usage.

It is perfectly acceptable for the same organisation to be both a service provider and scheme provider, but the commercial arrangements between the two roles must be transparent and at 'arms length' pricing to guarantee fair competition in the service provider market.

The CBN will accept solutions where core infrastructure (the scheme) is run by a single commercial organisation if the business case is compelling, but the preference is for a multi-scheme provider solution working to agreed interoperability standards.

4.2 User Experience

- 4.2.1 The service should, as far as possible, provide all the benefits of payment by cash (immediacy, transferability, speed of transaction, limited literacy required).
- 4.2.2 Any solution has to be as easy to use as cash. As a guideline, the process should involve a maximum of four steps (request payment, input beneficiary number, enter amount, enter security code) and approximately 25 key strokes.
- 4.2.3 The solution must be demonstrably secure for the payer and payee. Confirmation of movement of funds is critical to both parties. The beneficiary of funds requires immediate (less than 30 seconds) confirmation of receipt of funds together with an identifier of the payer.
- 4.2.4 The payment origination process must mitigate against the potential sensitivity of disclosing account details to payer.
- 4.2.5 The initial set up and payment process must be simple if the service is to be deployed to rural areas or lower literacy levels.
- 4.2.6 To set up the service for usage, a user will enrol with the financial service provider or telecommunication provider
- 4.2.7 If software is required for the mobile handset, this should be a simple process such as sending a text to accept the upload software which allows a menu for the appropriate payment services.
- 4.2.8 The benefits over cash (such as protection against theft, ease of use when payer and beneficiary are not in the same location) must be explored and emphasised in any implementation.

4.3 Funds Movements and Settlement

- 4.3.1 Value is to be recorded on a central account, not on the device. The loss of a device should not mean loss of funds. The account could be any of the following: a bank account, a card account, an independent store of value that is topped up from a bank or card account.
- 4.3.2 Transfer of value (from payer to payee account) should be immediate if possible.
- 4.3.3 The response should summarise the proposed process for calculating the net settlement position between scheme providers and/or service providers.
- 4.3.4 The response should summarise the process for ensuring that settlement occurs. It will be critical to ensure resilience of the payment process through guaranteed settlement by the Scheme Providers and Solution Providers. Settlement should be end of day at latest, but ideally will either be real-time or settled on several occasions throughout the day.
- 4.3.5 The solution will be predominantly in local currency (Naira). However, the solution should support the option for other currencies. Two specific reasons drive this requirement – the planned implementation of the common currency (ECO) within the WAMZ, and the need to support the inflow of workers remittances that may originate in the currencies other than Naira.

4.4 Inter-operability

- 4.4.1 The proposed solution must be an open solution, offering interoperability with multiple financial service providers (primarily the commercial banks) and mobile networks
- 4.4.2 The basic payment service should be supported on all digital mobile handsets, regardless of make or network.

4.5 Regulatory Environment

- 4.5.1 The service will be regulated by the Central Bank of Nigeria in its role as regulator of money movement systems.
- 4.5.2 The individual payment amount and total daily payment amount will be subject to a relatively low maximum value so that the service can be subject to relatively light regulatory supervision. If the solution uses a store of value other than a bank or card account, there will be a limit on the maximum balance. The service provider will be expected to automatically monitor usage to ensure such limits are rigidly enforced.
- 4.5.3 The Central Bank will demand periodic pre-defined reporting of the value and volume of cash movements for statistical reporting. The Central Bank may also require 'ad hoc reporting' of flows.
- 4.5.4 The service provider will be expected to report any unusual or suspicious movements to support Anti-Money Laundering and Fraud controls.

4.6 Standards

- 4.6.1 The solution must use current internationally recognised standards, with the expectation that the switching standards will use ISO 8583.
- 4.6.2 The scheme provider must commit to remain in line with the commonly accepted relevant international standards.
- 4.6.3 Data transmission must be fully secured using Triple-DES or suitable equivalent.
- 4.6.4 Note: Most mobile telecom providers use the Gemplus card which has the facility for payments in-built.

4.7 Operational and Customer Service Requirements

- 4.7.1 The response should highlight any predicted customer service issues, and recommendation for handling enquiries.
- 4.7.2 Scheme Providers and Service Providers will be expected to conform to an industry Code of Conduct to ensure consumer confidence in the scheme.
- 4.7.3 The dispute resolution procedures must be simple and clearly articulated. For example, who bears the loss in the event of dispute, what happens when money ends up in the wrong account (through user error, through service/scheme provider error)?
- 4.7.4 The core infrastructure must demonstrate resilience with no single point of failure. Full contingency plans will be necessary to achieve regulatory approval.

4.8 Infrastructure Considerations

- 4.8.1 The service should use existing infrastructure where possible.
- 4.8.2 The level of core infrastructure is relatively poor in Nigeria, particularly within the rural areas. Unstable electricity supplies and poor access to land-line telephony has restricted deployment of many technical innovations. Any solution should not be dependent on advanced infrastructure.
- 4.8.3 In contrast, the banking infrastructure for card-based transactions is relatively advanced, and offer good inter-operability for multi-bank, multi-provider solutions. Solutions that use this existing common switching infrastructure are likely to be preferred.
- 4.8.4 Card transactions currently are dominated by ATM withdrawals and debit cards. The use of credit cards is very low, and there are a limited number of stored-value card solutions.

- 4.8.5 There is very limited deployment of Point of Sale (POS) terminals within Nigeria. The proposed solution must not be dependent on POS terminals for the baseline service. However, it is acceptable to include description of potential POS solutions (such as contactless POS) that may be of future interest as the deployment of POS devices expands.
- 4.8.6 Mobile usage is rapidly expanding. Based on current data, over 60 million handsets are in use in Nigeria. Virtually all mobile contracts are pre-paid, primarily due to the lack of a credit culture. There is no central Credit Bureau (although this may change in the foreseeable future as creation of a credit agency is a recommendation of the Payment Systems Strategy). It is assumed that a solution will, at least in part, be based on mobile to mobile payments.
- 4.8.7 Different levels of service may be offered based on the technical sophistication of the handset. Mobiles are becoming increasingly sophisticated and the payment process may be able to use certain feature present in more advanced handsets. For example, allowing a beneficiary to 'beam' his account identifier would reduce the number of key strokes and reduce the likelihood of an incorrect number being entered.

4.9 Commercial Terms

- 4.9.1 To encourage usage, the service should strive to match the pricing dynamics of cash (which is perceived to be free for the end user). The Central Bank is open to ideas on the most appropriate financial and pricing model.
- 4.9.2 The response should identify a proposed business model for the charges from Scheme Provider to Service Provider.
- 4.9.3 The Central Bank is willing to receive responses from a consortium of organisation should this provide a superior solution.
- 4.9.4 Your response should identify any aspects of your solution that are subject to restrictions of use (such as patents and import/export restrictions).

4.10 Practical Experience

- 4.10.1 It would be useful to hear of other similar implementations that have been undertaken (or are planned) using the solution that is proposed.

4.11 Submission of Response to the RFI

The hard copy of response to the RFI should be forwarded to the Director, Banking Operations Department, Central Bank of Nigeria Head Office, Central Business District, Abuja while the soft copy should be emailed to any of the email addresses listed on Page 6.