



**Comments on Consultation Paper on
USSD-based Mobile Banking Services for
Financial Inclusion**

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1. Reliance Communications Ltd (RCOM) welcomes the opportunity to comment on issues concerning USSD-based Mobile Banking Services for Financial Inclusion.

Overview

- (i) Even after 66 years of independence a large section of our population (particularly the rural section) does not have the access to appropriate financial products and services. However, in the recent years, the Government and RBI have come up with a concept of financial inclusion and have brought changes in the policies. The objective of Financial Inclusion is to extend financial services to the large hitherto un-served population of the country to open its growth prospective. In addition, it strives towards a more inclusive growth by making financing available to the poor in particular. To achieve the same the RBI have taken various steps by giving leverages to the domestic scheduled commercial banks (SCBs), regional rural banks (RRBs) and other private banks from taking permission from RBI to open branches in the rural, semi-urban areas and tier-2 to tier-6 centres subject to certain conditions.
- (ii) The use of technology is obvious choice to drive the financial inclusion programs as it helps reduce the cost of operations without compromising on service and security. In India, the mobile market is burgeoning, achieving unprecedented penetration in rural, remote and urban areas. Mobile-led financial inclusion has huge growth opportunity as India has experienced an unprecedented mobile penetration. But at the same time, concerns of telecom service providers (TSPs) are also required to be addressed so that they can effectively devise their role to achieve the goal of financial inclusion.
- (iii) In this consultation paper, TRAI has stated that USSD appears to be most appropriate mode for Mobile banking. **We would like to mention that USSD, being an open unstructured architecture, is not secure. Moreover, it only works on GSM phones hence it defies the goal of financial inclusion i.e. financial services for all, by dejecting those citizens which use other technologies like CDMA. Hence, a technology agnostic mode like IVR would be more appropriate for mobile banking because of its more consumer centric characteristics.**
- (iv) Mobile banking is a bank based model where the TSPs only work as a communication link provider. The SLA between the banks and the TSPs

drives the whole process and also takes care of the bank agents involved, if any, as well as the aggregation platform providers. It also draws the quality of service standards which the TSPs would offer to the banks for delivering the mobile banking services. Mandating any QoS norms, direct engagement of TSPs with agents of banks and authorizing a particular service provider as aggregation platform provider would not be necessary.

(v) In this consultation paper, TRAI has suggested fixing a tariff ceiling for USSD session for mobile banking. In our views this is not justifiable since the TSPs would have to maintain all the billing/ charging in their CDRs and for the same further investment is required. **Moreover, the tariff for USSD session is left to be decided in the SLAs signed between the banks and TSPs based on their mutual arrangement.**

(vi) Issue of security is of prime importance and needs a detailed analysis before finalizing any particular mode for mobile banking services while keeping in view the goal of financial inclusion i.e. providing financial services to the masses. The question wise comments of RCOM include a more detailed perspective on the issues posed by TRAI. We believe that TRAI would consider the same before coming up with a final view.

RCOM Comments on Issues for Consultation

Q.1 Do you agree that USSD is one of the most appropriate modes for mobile banking for financial inclusion? If not, which mode do you think is more appropriate? Please support your view point with reasons.

We feel that mobile banking can be delivered in the following ways:

- (i) Message based which includes SMS as well as USSD
- (ii) Interactive Voice Response (IVR)
- (iii) SIM Application tool kit (STK) and other downloadable applications
- (iv) Wireless Access Protocol (WAP)

(i) Message based (SMS as well as USSD):

The SMS based mobile banking is mainly used by the banks to alert customers of account balances, overdraft limits and for the notification of important transactions, such as transfers. The main advantage of SMS Mobile banking applications is that it can be deployed on almost all type of phones and can be used across both GSM and CDMA technology. Although there are security issues relating to SMS as end to end encryption is not available. RBI is also aware of this fact and has allowed only transaction upto Rs 5000 without end to end encryption.

Another message based mobile banking technique is USSD which is a real time connection during the USSD session. It is an open and two way exchange of messages between phone and server. Limitation of this mechanism is that there is no storage of sent messages, which means no records are available at consumer end, if the same is required for any future references. The USSD sessions are unstructured and not secure due to open connection hence risky. The USSD is not supported on CDMA based mobile services which have a good penetration in rural areas. More so, USSD is English based and thus most of the targeted population will be deprived of this service.

(ii) IVR:

IVR is a simple mode of communication which can be accessed through any of the handsets. India having lower level of literacy, especially digital literacy, IVR can be used to provide mobile banking service to consumers. This method is also secure mode of communication due to DTMF (Dual-tone multi-frequency signaling) process. Other advantage of IVR system is that it is customer friendly and provides a better customer experience, technology agnostic, can be manual as well and can support multiple languages which is very important for rural area and semi-literate consumers.

(iii) STK and other downloadable applications:

A development of recent years has been the downloadable applications that offer bank customers a selection of banking services through a single application delivered by the bank to the customer's mobile phone. The applications is also often Java or brew-based, but can also be based on a STK (SIM toolkit) which is used by operators to provide added value data applications. In addition, mobile applications enable a very secure environment.

(iv) WAP:

Banks have deployed mobile Internet and WAP websites which are fast gaining popularity. Most mobile Internet banking website users will have access to mini statements and balance enquiries at the base level and more advanced services including payment instructions and bill payments. The advantages of using a browser based service include security and from the viewpoint of rapid rollout, the browser is the universal application.

From above, we can conclude that the mobile space is filled with a wide variety of devices each offering a different set of capabilities such as SMS, WAP Browser, Mobile web browser, USSD capability, among others.

TRAI should consider all appropriate channels, and not just USSD due to below mentioned inherent drawbacks:

- It is a relatively new technology which has not seen a large-scale deployment for the purpose of offering financial services.
- Small screen phones can provide very poor user interface for USSD. Font sizes cannot be controlled. It may require a lot of scrolling to read a single message. This may result in session time-out by the time user reads the complete message.
- USSD services have language limitations. English literacy in India is fairly poor especially among the financially excluded masses and as such it may be difficult to reach out to them using this, primarily English language, channel.
- This technology does not work on CDMA phones which have 75 million subscribers – a large part of which would be rural and low income segments which are to be targeted for Financial Inclusion.

Given these limitations, looking at USSD exclusively for mobile banking will exclude a significant portion of the targeted audience and defeat the purpose of the exercise. We need to evaluate other already proven technologies such as IVR if there is to be serious effort made for Financial Inclusion.

We believe that IVR would be the most appropriate for this purpose because of following distinct advantages over other modes:

- The option to customize it in regional languages of hinterland India will allow mass adoption.
- An IVR solution backed with SMS functionality will offer security as well as ease of use.
- While it may be more expensive to operate than USSD alone, it is a proven technology as well as one that has gained acceptance among a large base.

Further, RBI in its guidelines for mobile banking has provided that:

“...9.1 Banks offering mobile banking service must ensure that customers having mobile phones of any network operator are in a position to avail the service, i.e. should be network independent....”

Thus, the mobile banking should be technology agnostic. Mandating a technology specific mobile banking mode will kill the sole objective of financial inclusion and also against the RBI guidelines that the mobile banking should be network independent.

Therefore, we do not agree that USSD is one of the most appropriate modes for mobile banking for financial inclusion. To have a wider and seamless acceptance

of the services, all modes of communication should be permitted and encouraged.

Q.2: Do you agree that the Mobile banking (Quality of Service) Regulations, 2012 should be amended for mandating every TSP, acting as bearer, to facilitate not only the banks but also the agents of banks acting as the aggregation platform providers to use SMS, USSD and IVR to provide banking services to its customers? Please support your viewpoint with reasons.

For operators, mobile banking does not usually represent an opportunity to serve a new market segment unlike the banks; instead, it allows them to cross-sell a new service to customers whom they already serve (i.e., their own subscribers) or compete for (the subscribers of other mobile network operators).

TRAI's proposal of 'mandating every TSP, acting as bearer, to facilitate not only the banks but also the agents of banks' is not viable. We would like to mention that the mobile banking service is a **bank-based model** where bank made some of their services available through the use of a mobile device. The complete end-to-end ownership to provide financial services through mobile banking lies with the Banks as the TSPs only act as a communication channel provider.

The business arrangement in this case between the Banks and TSPs would be that of one business party contracting the services of another. As such detailed Service Level Arrangements (SLA) would be drawn and agreed mutually between both parties which would frame the acceptable delivery of service guidelines. These guidelines could be agreed to jointly (by Banks and TSPs) for providing service to both the banks as well as their agents. There is no requirement of mandating the TSPs to facilitate the agents of the banks as the SLA between the banks and TSPs may provide the same.

RBI in its mobile banking guidelines have laid down the responsibilities to offer mobile banking services stating norms related to technology and security standards, authentication, customer protection issues etc. to the banks only. A bank enters into an arrangement with a mobile operator to offer financial services either through text messaging or more elaborate smart phone applications. It is between the operator and the bank on what terms and conditions they want to build the operator-bank partnership to offer mobile banking services.

In view of this, we would request TRAI to not to mandate the TSPs to facilitate not only the banks but also the agents. In operator-bank partnerships, each entity has to have the trust to let the other do what they do best.

Mobile banking services require the development and maintenance of a transactional platform that creates individual accounts for customers and agents; processes movements of value between accounts; and interfaces with handsets, billers, and the core mobile platform. Both mobile operators and banks have extensive experience

operating transactional platforms. Banks stress the importance of integrity and robustness when it comes to core banking systems, while operators' first priority for their billing platforms is stability and speed when handling huge volumes of transactions.

Normally, banks and operators do not build their own mobile banking transaction platforms, because there are a host of third-party providers offering them in the marketplace. The role of the bank or the operator is usually therefore confined to selecting the vendor, providing business rules and other specifications, developing APIs (Application Programming Interface) for systems integration, and hosting and operating the platform. Given the complementary standards by which banks and operators evaluate transactional platforms, operators can consult with their bank (or vice versa) when selecting a technology solution to be sure that it meets the needs of each participant in the value chain.

In view of the above, we would like to submit that depending upon their business models, banks should be allowed to approach any aggregation platform providers. It should not be mandatory either in part of banks or in part of TSPs to engage only one aggregator platform providers for mobile banking.

In case of USSD which uses control channels for data transfer from one to another, we would like to mention that the control channels are not meant to provide such services and primarily used to establish a call by organizing the radio elements of the cellular system. **Thus, being a byproduct of TSPs which uses the control channel; the USSD should not have any mandatory QoS norms.**

The QoS norms for services to the subscribers are defined by Authority and Operators are already following all these norms. In addition, TRAI is doing audit of QoS. This is beside the fact that there is enough competition in the telecom services which is already driving the operators to ensure better services to their subscribers. **Accordingly, we are of the view that a separate set of QoS norms for mobile banking on USSD channel need not to be mandated.**

As already mentioned, in mobile banking services, the whole arrangement works as per the SLA on which both the parties (the TSPs and the banks) have agreed jointly for providing service and also include the service delivery guidelines. These SLAs would preclude the need for the QoS regulations of 2012 being mandated on the TSPs.

Service providers are carrying the infrastructure required for providing an acceptable level of service to Banks for financial transactions and thus quality of service does not seem to be an inhibiting factor for mobile banking adoption and growth. The mobile banking is at infancy stage and high costs in terms of mandated quality of service may impede service growth. Also, the quality of service regulations 2012 prescribed QoS standards only for a part of the process and not for the end to end process is not justifiable.

In view of the above, we request TRAI to not to prescribe any further QoS norms and also to remove the quality of service as already prescribed for mobile banking.

Q.3 Do you agree that in case of USSD transactions for mobile banking, the TSPs should collect charges from their subscribers as they do in the case of SMS based and application based mobile banking? Please support your viewpoint with reasons.

Q.4: Do you agree that records for USSD transactions must be generated by the TSPs to provide an audit trail for amounts deducted from prepaid subscribers and bills raised to postpaid subscribers? Please support your viewpoints with reasons.

The Authority has stated that currently a B2C pricing model is in use for the mobile banking by using USSD wherein the TSPs are collecting charges from the subscribers for using their communication services for each USSD session. But, we would like to submit that the same should not be mandated and it should be left to the banks and TSPs to decide which pricing model they would like to implement for providing mobile banking services.

The fact that needs clear comprehension is that this is a service offered by Banks to its customers. TSPs are the service providers to the Banks and works as a facilitator. As such, this is a Bank-led service and the Banks need to have complete responsibility for it.

The risk of all transactions and the customer service for these transactions can only be the responsibility of the banks. The banks need to propagate the use of the service and market it. The process flows for all transactions need to be defined and monitored by the Banks. The Banks need to ensure customer on-boarding, security of the transactions and management of AML and other risks.

It is only logical that the service provider, in this case the Banks, collect the charges for the services provided.

TSPs cannot appropriate this billing service for the Banks at the least due to the system constraints. As an example, TSPs will only be able to bill all sessions whether the transactions have been completed or not as the charges are debited at the time of session initiation itself. Besides this, USSD sessions are prone to dropping for various reasons such as incoming calls, customer initiated call abandonment etc. In such a case, disputes arising out of charges levied by TSP to the customer for 'incomplete' sessions will not only create customer dissatisfaction but also further burden the TSP call centre and increase the cost of such service significantly. This will only adversely

affect the adoption of these services and defeat the efforts of the Government to create a service adopted by the masses.

We feel that this service and its complexity have not been well understood so far. There seems to be some thinking that this service can be outsourced to TSPs and they will take care of the technology, the customer care and the record keeping on behalf of the banks. Unless the banks step-up and take ownership of the service from end-to-end delivery perspective; the risk of failure is extremely high.

If the Authority decides that TSPs will collect charges from their subscribers for each USSD session, then the TSPs would have to implement recording and bill generating mechanism in their CDRs for USSD sessions. This requires investment in part of the TSPs so that the USSD gateway can able to maintain the interactive session once the connection is established and generates CDRs for charging purpose. TRAI in its consultation paper has admitted that core relationship in mobile banking value chain is between the bank and the citizens as customers of the banks and the TSPs perform the critical function of USSD message delivery in this value chain, hence they should be compensated adequately either by the banks or by the customers who are using the banking services.

We have already submitted that mobile banking is a bank-based model hence the responsibility of effective compensation to the TSPs for working as a communication link should lie to the banks so as the charging of customers for each transaction. Banks in case of internet banking directly charge the consumer for each transaction and they themselves debit the amount from the consumers account for such transactions. The same procedure can be implemented for mobile banking as well. It will also avoid any disputes arising out of charges levied by TSP to the customer for 'incomplete' sessions as banks will charge the consumers only for the successful transactions (as they do in case of internet banking).

In view of the above, we suggest TRAI to not to mandate any particular pricing model and let the banks/TSPs decide which model they would like to implement to provide the mobile banking service to the consumers.

Q.5: Would it be appropriate to fix a ceiling of Rs. 1.50 per USSD session for mobile banking? Please support your viewpoint with reasons.

Q.6: In case your response to Q.5 is in the negative, please suggest an alternative methodology to fix a ceiling tariff for a USSD session for mobile banking. You may also support your viewpoint with a fully developed model with associated assumptions, if any.

USSD transactions consist of multiple interactive messages between the consumer and the technology platform. Typically each transaction would involve exchange of 8-9 messages, each called a screen. Since a TSP cannot control the number of messages

or screens, the cost of each session can vary irrespective of the transaction in such sessions is defined as 'successful' or 'unsuccessful' by the Banks. If only successful transactions are to be billed, the TSPs should adequately compensate for those sessions which banks declared as "unsuccessful". As already submitted, in case the TSPs would have to charge for the USSD sessions, then they will have to implement a full billing system and the CDRS to capture and maintain the records. This will require extra CAPEX and OPEX. The tariff for USSD session is decided in the SLAs between the banks and the TSPs based on their mutual working model. **Hence, fixing a ceiling for each USSD session is not viable and we would request the Authority to keep the tariff for USSD and other mobile banking modes under forbearance.**

Further, if Authority decides to fix a ceiling tariff for USSD session, we would like to request that it should be fixed irrespective of whether the USSD session has been declared as successful or not by the banks. In addition to the transaction charges, the Banks must pay a set-up fee and a minimum guaranteed monthly fee till transaction volumes reach minimum acceptable thresholds.

We would like to further submit that the agenda of offering USSD based banking services is for Financial Inclusion, which has been defined as the mentioned five services only – cash deposit, cash withdrawal, balance enquiry, transfer of money from one mobile- linked account to another, and transfer of money to a mobile-linked account from a regular bank account. Thus tariff ceiling, if any, should be applicable only for these transactions identified as true Financial Inclusion.

Q.7: Is there any other relevant issue which should be considered in the present consultation on the use of USSD as a bearer for mobile banking services?

The stated agenda for offering mobile banking through USSD (or any other channel as may be decided) is clearly of Financial Inclusion. This objective is accepted by TSPs as one of national progress and as such is supported by the TSPs. However, TSPs are also clear that banks should be allowed to offer only those services which have been clearly identified as constituting inclusion of the financially excluded masses. This platform should not be used to offer the entire range of commercial banking services under the ambit of Financial Inclusion. **The pricing and service delivery for the complete bouquet of financial offerings from the Banks would be governed by separate discussions between the TSPs and Banks.**

Security is one of the critical issues for successful adoption of mobile banking. The USSD sessions are unstructured and not secure due to open connection. RBI in its guidelines namely "Mobile Banking transactions in India - Operative Guidelines for Banks" have provided a set of operating guidelines for adoption of banks. These guidelines should be followed in all modes of mobile banking services to insure security issues like transaction limit (per transaction, daily, weekly, monthly), transaction velocity limit, fraud checks, AML checks etc.

Security of the transaction is of prime importance and needs detailed deliberation before the process and communication method is finalized.

In case of consumer complaints related to failed transaction or any other issue with mobile banking services, the same should be handled by banks only. For this banks should set up a help desk and disclose the details of the help desk and escalation procedure for lodging the complaints to the consumers. Banks should also disclose consumers the risks involved in mobile banking services as well as the responsibilities and liabilities of the customers as per RBI guidelines.

Keeping in view the security issues with the mobile banking services, we would like to request to the Authority that USSD, which does not provide an end to end encryption, should not be the only mode of providing mobile banking services and all other modes like IVR, WAP, SMS, Downloadable Applications etc. should be promoted equally.