

Airtel's Response to TRAI's Consultation Paper on USSD based Mobile Banking Services for Financial Inclusion

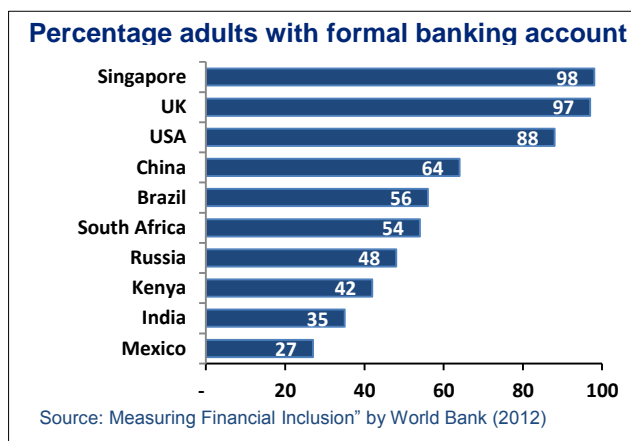
At the outset we would like to thank the Authority for initiating a consultation exercise on the issue of USSD based Mobile Banking Services. We wish to place on record our appreciation for the important issues captured in this consultation paper.

It is quite evident from the consultation paper that its purpose is to create a framework leading to financial inclusion as envisaged by the Inter-Ministerial Group in 2009. The recommendations of the IMG are primarily on enabling a framework leading to opening of Mobile Linked no frills accounts for the benefit of the unbanked.

This public policy has a very major and noble objective to enable every citizen to have access to a formal financial system. This system shall ensure access to appropriate financial products and services at an affordable cost and in a fair and transparent manner by the mainstream institutional players to those who need it the most i.e. vulnerable groups, weaker sections of the society and low-income groups.

Presently, there are 88 scheduled banks in India which have approximately 80,000 branches and a little more than 1,00,000 ATMs across India offering banking services. For financial inclusion, it would be important to have a far better penetration with more branches and ATMs to cover as many people and households. Mobile phone subscribers can offer the advantage of affordable reach since we have grown to a sizeable 873 million covering 71% of the total population.

India has a lower banking penetration as compared to the other developed and developing countries of the world as depicted in the figure below:



Convergence of mobile technologies and financial services may open up promising avenues to both the banks and the mobile operators. Mobile banking services will play a significant role in driving financial inclusion for a large section of India's population that has easy access to mobile connectivity but not to a bank account.

Airtel, as a telecom service provider wholeheartedly supports financial inclusion and is committed to work with the Authority and the Government in achieving its objectives.

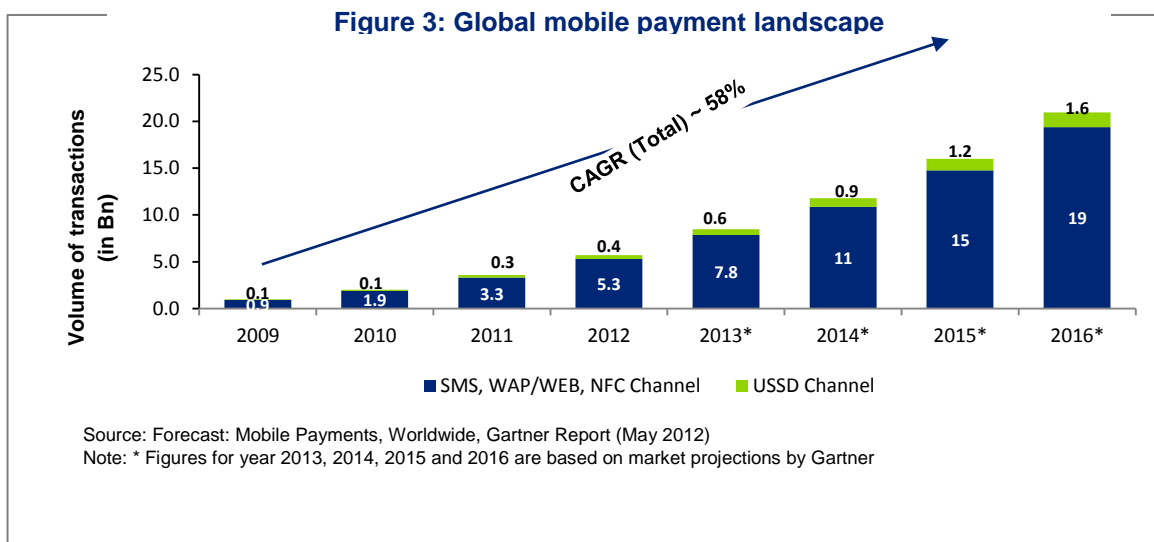
We feel that apart from creating a large telecom network for providing mobile coverage across the country, the telecom service providers (TSPs) have also established a huge distribution network in every nook and corner of the country including remote and far flung areas. Airtel alone has over more than 1.6 million retail outlets which can be used for fund/cash transfer. Moreover, TSPs have the requisite telecom infrastructure, IT systems such as USSD gateways, customer care and call centres. Overall, TSPs have all the ingredients to provide financial services to the masses on a large scale basis.

Therefore, the telecom service providers (“TSP”), as banks are in a position to facilitate inclusive growth in terms of extending financial services as a national priority. TSPs are very well equipped to offer financial services if given an opportunity to complement the activities of banks and therefore be allowed to offer cash in /cash out facilities to the unbanked.

To achieve the desired goal of financial inclusion, it is imperative that all available channels including mobile service providers be entrusted with the task of providing financial services to their vast customers especially in rural areas. It is essential to evolve a policy framework which will open doors for innovative and customer friendly applications for facilitating inclusive financial growth and remove the rural urban divide.

Global practices in mobile payments market:-

- Globally, the mobile payments market has seen a significant growth over the past few years with increased penetration of smartphones and greater access to mobile internet. In addition to mobile payments on smartphones, various countries have also made efforts to make mobile payments widely available on feature-phones as well.



- However, as per our knowledge, the Governments or Regulators have not prescribed any specific telecom service/channel for financial inclusion.

We believe that an enabling policy framework which provides clarity to the roles and responsibilities of banks and TSPs and recognize all modes of access will help to achieve the national objective of providing financial services to the unbanked. This would entail creating a compelling business case by banks and TSPs together to meet the required goals.

Presently, the mobile banking is at a very nascent stage and the eco-system is still developing, therefore it would be too premature to put up a ceiling/floor or to decide on any charges until the entire ecosystem, infrastructure requirement and the business model clarity is obtained.

We request the Authority to consider our request that financial inclusion for the mobile customers having no frill accounts be formulated on the principles of economic viability to ensure its sustainability.

Our detailed response to the specific Queries is as under:

Q1: 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 viewpoint with reasons.

Airtel Response:

Each of the modes for mobile banking like IVR, SMS, WAP, STK, USSD etc. are required modes to achieve inclusion of the unbanked and we feel that all modes of access should be given equal weightage. Available access modes to the customers differ according to handset capabilities. We feel that a comprehensive offering would go a long way to increase the uptake of mobile banking services. A comparative analysis of various communication channels is given below in Fig 2:

Application Interface	Bearer Channel	Security	Usability	Ubiquity	Cost of Ownership	Cost to Transact	Continuity of transaction	Vernacular
SMS	Standard SMS	Low	Low	High	Low	Low	Medium	Low
USSD Browser	USSD	Low	Medium	High	Low	Medium	Low	Low
SIM Tool Kit (STK)	Standard SMS	Low	High	High	Medium to High	Low	High	Medium
	Encrypted SMS	High	High	High	High	Medium	High	Medium
Java (J2Me)	Standard SMS	Low	High	Medium	Medium to High	Medium	High	High
	GPRS	Medium to High	High	Low to Medium	High	Medium to High	Medium	High
WAP Browser	GPRS	Medium to High	High	Low to Medium	Medium to High	Medium to High	Medium	High
IVR	Voice	Medium to High	High	High	Medium to High	Medium to High	High	High

Some of the challenges in adoption of USSD for mobile banking are as below:-

- **Roles and responsibility between Bank and Telco's:**
 - More clarity is required in the roles, responsibilities, liabilities of the bank viz mobile banking services. For instance, a failed transaction or query would most likely result in a customer calling the Telco's, which would entail call center charges, with no clarity on who should bear these costs.
 - Banks would need to promote this service actively to increase its uptake to justify the investment to enable these services. Banks should have a target to open no frill new accounts which provides the right economic justification for investments in enabling mobile banking services.
- **Transaction Volumes:** TSPs do not have clarity on the long-term viability of USSD in the absence of guaranteed volumes of transactions over USSD, which banks or any payment gateway would have assured. In this regard, it is imperative to state that transaction volumes conveyed to operators, at 16.6 million transactions per annum in the 3rd year of its operation is too low to attract any business investment/plan by TSPs.
- **Enable vernacular languages:** An eco-system has to be supported to create regional language menus for SMS, Web Applications and USSD. As of now, USSD mainly supports English language menus with some capability for supporting Hindi language
- **Billing system:** TSPs have the requisite billing systems for Voice, SMS, Data and WAP based products. However, for USSD services, in a B2C Model, the industry would have to implement a new Billing system in order to charge their customers. This would amount to significant capex outlay for the operators. However, enabling a B2B billing system for banks would be simpler to implement and would require lesser investments.
- **Infrastructure and bandwidth limitations :** Currently USSD consumes a small share of the total network bandwidth due to its limited use. However, this might change with the increased uptake of USSD based mobile banking services. This may result in high traffic load as USSD banking transactions have not been tested on the existing network capacity and thus telcos may need to redesign/ augment their network to cater the same.
- **Investments required:** Current QoS compliance requirement for USSD based mobile banking will require reserving one SDCCH channel and substantial capex would also be required to build the IT and IN capability to bill the customers. Further reconciliation, mediation and storage of data will also attract substantial capex outlay.

- **Commercial Testing:** USSD has not been tested as a mainstream commercial service; it has essentially been an internal signaling channel of telecom networks. So far, USSD access for financial services has remained only in pilot stages. In India, mobile banking services are currently at a very nascent stage and stakeholders including banks and TSPs have deployed various pilots to check the uptake of services via various access solutions viz. USSD. However, the customer uptake is not very promising. One of the example quoted by the Authority in the Consultation Paper is the ongoing *595# and *525# USSD based M banking services which **were provisioned on a trial basis**. As Airtel, we are not charging our customers for transactions.

In light of the above, it may be concluded that all access modes are appropriate for mobile banking services. We extend our full support to create a system for banks to access each mode and also work with them together to build additional systems required to offer M banking services for their customers.

Q2: 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.

Airtel Response:

The mobile banking eco-system is yet to develop. For the unbanked, a mobile linked no frills account would be better served by entities that are permitted to offer these services bearing in mind the obligations of the provider towards their customers for these services. Since as TSPs we are committed to working with the Authority, Government and the banks, we do not feel that there is any need to mandate TSPs to facilitate access to banks. At this stage, providing access to their agents or aggregators may impact the uptake of these services and also dilute the obligations of the financial service providers. Our submission is supported by the following:

- Mobile banking services¹ are permitted to be offered by the scheduled banks under section 18 of the Payments and Settlements Act '2007. The guidelines also entail security and risk obligations upon such banks that are permitted to offer these services. Hence, if any telecom service provider has to provide access to its systems, it should be only to those entities that are licensed to provide such services under a bilateral contract for the same clearly defining the roles, responsibilities and liabilities of each party.
- The aggregator of telecom services such as SMS, USSD etc. will have to create a telecom network and hence, would require telecom license.
- An agent by definition would be working on behalf of the principle and hence would represent a bank. By aggregating the telecom services such as SMS, USSD etc. it would itself become principle creating its own network and hence would no longer act as an agent.

¹ RBI Guidelines for Mobile Banking Services dated July 1, 2013

The objective of financial inclusion is to bring the unbanked population under the banking net. This has been supported by the IMG report. Segregation of full service accounts from no frills accounts would be required to ensure that the benefit is judiciously created for the unbanked. **Therefore, we suggest that there is no need of mandating TSPs, to facilitate the agents of banks acting as the aggregation platform providers to use SMS, USSD and IVR to provide banking services to its customers.**

Q3: 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 (App) based mobile banking? Please support your viewpoint with reasons.

Airtel Response:

We support provisioning of M-banking services on all access modes. We also believe that B2B based model will clearly define the roles and responsibilities and be economically viable to both banks and TSPs.

Some of the benefits of B2B based model for USSD based mobile banking are listed below:

- No liability of Telcos for banking transactions.
- There is no need for Telcos to sign a limited liability contract with consumers availing of such services which otherwise could be an impediment in faster adoption of this mode.
- There is no business case for investing in additional capacity and billing system for USSD. The transaction volumes proposed are too low. Hence, B2B billing could be enabled for immediate launch of services for banks.
- Banks already levy charges for bank account maintenance and transactions like Internet banking etc. hence for them there is no change whatsoever.
- Banks are the ultimate beneficiaries of migrating to a retail electronic transaction platform and have the flexibility of charging their customers directly.
- Voice (IVR) and SMS are already widely used retail products which are application agnostic, hence, the same can run on B2B basis. Currently, phone banking is not available on SMS, however SMS is used for only post transaction alerts.

The stakeholders should be encouraged and incentivised to start providing these services, followed by developing the channel/solution for provisioning of such services. This is to be eventually followed by usage of these services by the end customer. In the absence of any clarity on the structure of financial inclusion and the support pledged by various stakeholders, we suggest that USSD charges be borne by the banks. The operators may consider a time bound execution of such B2B contracts with banks to start offering these services.

Today, Telecom service providers do not collect charges for USSD access from their customers as is the case of SMS based and application (App) based mobile banking. The reason for the same is that SMS based services use SMS as a bearer and Application (App) based mobile service use the data (GPRS, HSPA etc) duly productized services by TSPs having installed the

requisite Billing System, IN and other IT systems to support provisioning of these services to the consumers while taking care of charging, billing, revenue assurance, complaints etc. It is submitted that USSD has not been productized in the same manner for offering to customers directly due to the lack of the above mentioned infrastructure. Therefore, a majority of TSPs do not offer the USSD services directly to the consumers on B2C basis.

Further, we would like to mention that while offering any service to the consumers directly the TSPs need to dimension the network in such a way that it meets the regulated standards of Quality of Service. Therefore, due to the above mentioned reasons, the provisioning of USSD service on a B2C basis should be backed by a strong business plan so that the operators are able to invest in the network for meeting the stringent QoS norms and IT systems for billing both prepaid and post-paid.

In the consultation paper it is stated that Airtel is one of the service provider having launched USSD based mobile banking services on B2C basis for SBI. We wish to submit that this was initiated on a trial basis and the mobile customers are not being charged for the USSD hits/session since we do not have the capability to bill the same.

Alternatively, if banks along with TSPs agree to bear the cost of rolling out the additional network required to meet the standards set in QoS regulation and other IT installations then USSD can be provided on B2B basis. There are instances where other telecom services are provided on B2B basis to serve the need of the unbanked customers. Some of the B2B examples are as follows:-

- **Toll Free Voice services:** which are charged to the called party/receiving party. For example Domino's provides IN Toll free number to place food orders to its customers and in turn pays a telco for every call it receives.
- **Data or Internet** services are productized, therefore they are provided on B2C basis where customers are charged. There are several corporate customers approaching operators' today to introduce a toll free data access to their customers to encourage use of their online/internet based services. Some banks have also considered this route to encourage their customers to use Internet Banking.
- **USSD on Toll Free/B2B model:** Airtel provides USSD based access service to Banks which their Business Correspondents ("BC") also use for banks' customers, the charging for which is on a B2B basis. There has been one trial for SBI's mobile banking services on USSD with a proposed retail charging mechanism; however, due to our inability to bill such customers, we as Airtel have refrained from billing customers for such usage.

We would also like to highlight that adoption of B2C model for USSD has various challenges/impediments some of which are highlighted below:-

- **Liability of banking transactions** which lies with the banks, with the intervening charge levied by a telecom service provider, the customer will have multiple parties to hold responsible for security risks, failed transactions etc.
- **Impact on signaling channel of operators:** Contrary to TRAI's assumption that the SDCCH channel is inexpensive, we would submit that signaling channel (SDCCH) is in fact costlier than traffic channel. Any overload on the SDCCH may result in voice call failures. Therefore, the radio network needs to be carefully planned to meet the needs of USSD for mobile banking. Any additional capacity required in the radio network on additional signaling channel would be prohibitively high and therefore does not justify the launch of USSD on B2C basis.
- **Impact on call centres:** For the unbanked population, the identity of the TSP is well known and therefore it is likely that B2C arrangement will affect the call centre cost of TSPs with increased no. of calls related to M banking transactions.
- **Lack of billing system:** Currently, telcos do not have capability for USSD based M banking services. Any mandate to have USSD based transaction will require new billing system to be installed at the TSPs end which will surely increase the burden on operators' accounts. Further, presently there is no promising business case to invest in such type of infrastructure.
- **Nil balance issue:** TRAI in the present consultation has defined model for routing of USSD traffic to the USSD aggregation platform provider wherein TRAI has explored the billing mechanism via AOC. In this regard, we wish to submit that the purpose of the financial inclusion is to provide banking services to the unbanked customer, however we cannot ignore the fact that most of our customers are on life time plan and generally have nil balance in their accounts. Thus B2C model will not let the unbanked population with low credit to use the M banking services.
- **Displacement of Cost for banks:** Currently banks have to bear as high as Rs 50 for serving a customer, however M banking using B2C model will be a win win situation for banks at the cost of Telcos. Any mandate on Telcos to provide USSD services with low tariff will surely cross subsidize the banks.

S.No.	Mode	Approx. Transaction cost
1	Branch	50
2	ATM	18
3	Customer Care	15
4	Cheque	3
5	Internet	4

- The investment required by TSPs to enable this service on a B2C basis will be very high. TSPs will not have any business control over mobile banking service and will be solely dependent upon the performance of the banks for recovery of their costs.

- Whereas in a B2B model, the risk of TSPs investment is shared between the banks and TSPs which would motivate banks to help spread the mobile banking services more seriously.
- **Consumers will be impacted in case of B2C model:** Most of the Banks do not charge their consumers for the mobile banking services. In fact, Banks encourage the use of mobile banking as it is one of the least cost mode of transaction as compared to other modes such as branches, cheque, ATM, internet etc. for the Banks. Thus, if B2C model is adopted for m-banking services, the same will have negative impact on consumers i.e. customers who were not charged earlier will now be charged for the mobile banking services.

In view of the above, we believe that B2B model should be followed for the USSD based Mobile Banking services where instead of the customer being charged by TSPs the banks should be charged.

Q4: Do you agree that the 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 viewpoint with reasons.

Airtel Response:

USSD based mobile banking services should be offered by banks to their customers and TSPs should extend the same to banks for their customers.

An audit trail for charge related transactions would have to be stored by TSPs for a period of 6 months preceding the request and provided by TSPs to their subscribers under the existing QoS regulations.

The charge related records per customer will also have to be maintained as accounting records by TSPs for a period of 3 years as per the terms and conditions of UASL. Further, the Law Enforcement Agencies have a right to seek the Call Data Records of LI targets for a period of 1 year preceding the date of the request.

In view of the above mentioned reasons and weak business projection from the banks, TSPs would find it difficult to invest in creation of USSD as a B2C product for Mobile Banking.

Q5: Would it be appropriate to fix a ceiling of Rs. 1.50 per USSD session for mobile banking? Please support your viewpoint with reasons.

AND

Q6: In case your response to Q5 is in the negative, please suggest an alternative methodology to fix a ceiling tariff for USSD session for mobile banking. You may also support your viewpoint with a fully developed model with associated assumptions, if any.

Airtel Response:

Presently, the Mobile banking is at a very nascent stage as the eco-system is still developing. Therefore, it would be too premature to put up a ceiling/floor or to decide on any charges until the entire ecosystem, infrastructure requirement and the business model clarity is obtained.

We believe that there is a need to create an environment to promote its usage, increase financial literacy for higher uptake of these services by the unbanked. Telcos would have to work together with banks to make an economically viable model for its success. Specifically USSD based mobile banking on a B2C model will require high investments from TSPs to enable their network to provide the service and also to meet the QoS norms set by TRAI.

As of now, a very low volume of mobile banking transactions have been projected at 16.6 million transactions by FY 2015 which do not meet the business expectation to recover costs for TSPs. Further the cost recovery at the tariff proposed by TRAI for TSPs will not be possible. The resources consumed in SMS and USSD are same and their cost structure is also same. At present the general tariffs for SMS are around Rs 1 and Rs 1.5. Therefore, the tariff for one hit of USSD should also be the same. As far as the total number of Hits in a successful transaction are concerned they would be higher due to two reasons-

- **Aborted Attempts:** A large number of customer may abort the attempt/session if not able to follow the USSD menu properly. Such failed transactional traffic however uses the network and requires the recovery of its cost.
- **No. of Hits per Transaction:** Although authenticated data is not available, however, the number of Hits per transaction (both failed and successful) should be in the range of 10 - 16 hits per successful transaction.

Mobile banking services especially on the USSD channel requires engaging the channel for a session for multiple hits (transactions between mobile device and USSD gateway and further the M Banking application server). Depending on the mobile banking service offered, these could exceed 8 'to and fro' consisting of 16 hits within our radio channel and core network. Hence, charges of around Rs. 5.50 per transaction would be more suitable for operators to offer such services.

The Authority would appreciate that any determination of charges may lead to supernormal gains to one stakeholder (Banks gaining from cost displacement) and may make the business case of other stakeholders (TSPs) unviable. This may result in de-motivating TSPs to even facilitate the services. Thus, we would request that charges for providing basic financial services may be left to market determined prices.

Notwithstanding the above, if at all TRAI decides a ceiling tariff, we propose that TSPs should be compensated adequately with a charge of around Rs 5.50 per transaction. This

should also cover the successful as well as unsuccessful transactions as signaling channel is being utilized in every hit initiated by customer during USSD transaction.

Q7: 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?

Airtel Response:

The Quality of Service (“QoS”) regulation issued by the Authority on 17th April 2012 mandates Telecom service providers to facilitate banks to provide mobile banking services. The regulation further even mandates the time frame within which the various types of telecom access channels must complete the handshake between M Banking applications and the mobile user.

These timeframes are tabulated below:

SN	Means of Communication	Time Frame	Airtel remarks
1	SMS Response time	<= 10 seconds	This traffic cannot be segregated for M banking. No priority can be achieved. It would require reserving a channel in the entire network including the radio network which is not cost feasible. Besides for USSD based offerings the time out for a session is configured at 1 minute as of now and user groups have sought for this to be increased further since their backend applications do not respond in time.
2	USSD Response time	<= 2 seconds	
3	IVR Response time	<= 10 seconds	The IVR is controlled by the banks and TSPs have no control of the IVR application hence no QoS can be guaranteed
4	WAP Response time	<= 10 seconds	Again the application is in control of the Bank.
5	STK Response time	<= 10 seconds	Any application driven outside the operators network cannot be controlled to deliver any defined time frame.

We wish to submit that the above timelines are too stringent and we do have any mechanism till date to segregate or prioritize traffic based on type of VAS or other services offered. The present network design is Voice centric and all KPIs are defined to provide the maximum, QoS compliant, uptime to the voice channels. In cases like SMS and USSD, where any such time frame is sought it may be akin to reserving one whole channel in the radio and core network to create a specialized delivery channel for just mobile banking. This may entail prohibitive costs.

COAI and AUSPI have also submitted a representation in this regard on behalf of all members vide letter dated July 3, '2012.

We further request the Authority to kindly consider our response favourably and accord us time in person to explain our submission.

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