TATA COMMUNICATIONS

MOBILE CUSTOMER ENGAGEMENT AND THE RISE OF THE APP-BASED BANKING LANDSCAPE

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A NEW GOLDEN AGE OF MOBILE BANKING?

The ubiquity of mobile phones has made them an ideal channel for mobile banking services. Research from Ovum indicates that retail bank investment into digital banking technology will achieve 5.2% CAGR (2018-2022)[1], It is to be assumed that a significant portion of this will target mobile banking applications and related services, and the growth rate is significantly higher than comparable investment in other IT areas, such as ATM, contact centre services or even fraud and security spending[1]. Emerging markets have proven particularly open to mobile banking services as the mobile infrastructures in these regions is often more advanced (and less expensive to deploy) than the fixed-line alternative.

Traditionally SMS-based services have been the mainstay of mobile banking, but this has changed in developed markets with the advent of smartphones and the rise of the app economy. As mobile apps become ever more sophisticated, mobile banking is being touted as a more convenient alternative to online banking. The Bank of America was one of the first banks to catch on to mobile banking. Its iPhone app lets its customers pay bills, transfer funds and locate ATMs and banking centers across the country. Due to the functionalities offered by such apps, there is a high degree of confidence within the industry that they will continue to have widespread use. This trend is of course associated closely with Smartphone adoption. While Smartphone adoption is well documented, what is significant is the use of SMS based communications channels do not require Smartphones and can also deliver quite sophisticated interaction options for end consumers. As such mobile messaging represents an excellent complement to app based mobile banking services, particularly in markets where Smartphone penetration continues to lag, such as Latin America, Africa and other developing regions.

Despite the convenience of mobile banking, concerns still remain, placing a restraining influence on adoption. The most important of these are questions over how secure mobile banking really is. Online security breaches can garner high profile publicity which not only heightens consumer concerns but also highlights to banks the significant reputational damage that can result from a security breach.

Despite concerns over mobile security, there's evidence to show that consumers are gaining confidence in mobile financial services. While banking apps and online transactions are growing in popularity, a significant market remains for messaging-based banking services, both among smartphone and non-smartphone owners.

[1] Ovum: Retail Banking Technology Spending Through 2023 (pub March 2019)

CREATING THE RIGHT SERVICE DELIVERY CHANNEL

The rise of mobile apps-based approaches to mobile banking is to be welcomed if it can stimulate the use of this highly beneficial channel. However, SMS will continue to play a very important part in the structure of mobile banking services. Indeed, when twinned with mobile apps, SMS makes for a much more useful and secure solution.

Most mobile banking applications require a high level of pro-activity from the user. In general, users have to log-on to the app in order to access the mobile services. While this is suitable for services such as balance checks, money transfers and the like, it does mean that some of the more useful services cannot be mobilized. For example, with SMS a bank can send alerts to their customers when they are approaching their overdraft limits, thereby helping them avoid charges for exceeding this limit. With a mobile app, the user would only know this if they had been lucky enough to log-in at the correct time. It is clear that for the mobile channel to be used to its full potential, even an apps-based system needs to have an SMS platform integrated with it to ensure that banks can proactively contact their customers as well as allowing them to access their account services while on the move.

SMS has a major benefit over apps in that it is a service that is virtually as ubiquitous as mobile phones themselves –Unlike the developed markets, in developing markets Smartphone ownership is not yet so widespread. SMS based services are available to all levels of mobile subscribers, regardless of whether they have a standard feature phone or Smartphone, or whether their contract is prepaid or postpaid. SMS also has the benefit of having a wider appeal to more segments of society than apps, particularly in developing markets for those customers without a mobile data subscription.

A further limiting factor of apps-based mobile banking services is the lack of standardization across mobile platforms. Currently, if a bank wishes to offer an app-based mobile money service they would need to tailor their offerings based on different phone operating systems or platforms. This requires re-engineering the app for each platform in order to maximize the potential reach of the services. SMS is compatible with even the most basic of phone platforms, so banks and their technology partners can engineer one solution to cover the entirety of their mobile-phone owning customer base.

SMS also goes a long way towards solving the challenge of securing mobile banking services. While apps may be a convenient and feature rich way of interacting with your bank account, the levels of security are equivalent to that of online banking. The rise in instances of smartphone hacking and a new age of malware written specifically for smartphones has thrown this issue into the spotlight.

In March 2018, the US Federal Reserve published its most recent annual survey of consumer use of mobile financial services[2]. In this survey more than half of mobile bank task respondents (54%) said that they considered mobile banking was either very unsafe or only somewhat unsafe. This indicates that many customers continue to be put off using mobile financial services because they were concerned about the security of mobile banking, thus a combination of public awareness together with enhanced security can help to unlock this significant group of consumers who prefer not to use financial services on their mobile device.

At the same time a constant stream of stories about mobile hacking, cyber-crime in general and question marks over Smartphone operating system and App security continues to indicate to consumers that more needs to be done to fully secure mobile services. With SMS based banking processes the sorts of security concerns associated with mobile apps and mobile banking are removed, thus helping to encourage users to interact with their bank via mobile.

WHAT ROLE WILL TRADITIONAL SMS SERVICES HAVE TO PLAY IN A NEW BANKING LANDSCAPE?

SMS has the potential to make mobile banking much more secure. SMS technology can be used in two main ways to ensure that a banking service is secure – both in terms of mobile banking and regular online banking. Firstly, SMS alerts can be employed as a type of early warning system to alert account holders to potentially fraudulent activity on their accounts. An early warning in the form of SMS can drastically reduce the high annual cost of fraud and improve the bottom line as it allows banks to identify fraud much earlier than has been possible in the past. Secondly, SMS can be used to turn the mobile device into another security level, for authenticating account holders.

In the financial sector, mobile passwords are best known as One Time Passwords (OTPs) or mobile TANs, which enable consumers to authenticate banking transactions. OTPs offer second-level authentication for online banking, in order to guarantee that the transaction is being carried out by the legitimate account holder. OTPs are dynamic, session-based and time-restricted passwords that make unauthorized access to restricted assets more difficult than with common static passwords. By using OTP via SMS to authorize transactions, companies ensure a two-factor authentication and avoid malicious attacks from phishing emails and destructive software such as pharming and Trojans. SMS, therefore, has the power to make mobile a truly secure channel for online and app based banking – a claim that cannot yet be made by app-based banking services on their own.

[2]Federal Reserve **Mobile Banking: A Closer Look at Survey Measures, March 2018**
https://www.federalreserve.gov/econres/notes/feds-notes/mobile-banking-a-closer-look-at-survey-measures-20180327.htm

FINDING A WAY FORWARD

Despite the apparent strengths of SMS-based mobile banking services, the technology has yet to live up to its potential in some developed markets. For banks, as well as consumers, barriers remain. Perhaps the most powerful barrier is the question mark around who controls the relationship with the customer in a mobile banking environment: is it the bank, the technology solution provider, the handset manufacturer or the communications service provider? The traditional model requires banks to hand over at least some control of the customer to a partner, be they an app platform provider or the communications service providers managing the SMS platform. Unsurprisingly, many banks are loath to share this relationship, preferring instead to retain complete control of the customer interaction.

There is, however, no longer a need for this barrier to remain. By skipping out the SMS middleman (i.e. a mobile network operator or SMS Aggregator) banks can now go straight to a Global Messaging Carrier and run their own services over a 3rd party transaction network. While this is an outsourced model the Global Messaging Carrier has no interest in 'owning' a portion of the customer, and the financial relationship is strictly that of a service provider to a customer. Moreover, this model removes much of the complexity banks encounter when setting up an SMS mobile banking service.

To ensure that they can reach all of their customers, banks have been required to set up working relationships with all of the potential mobile network operators and MVNOs that their customers might subscribe to. As well as adding operational costs for the banks to set up and manage this multitude of relationships, it takes them away from managing their core competencies. By working with a global messaging specialist, banks can effectively outsource this complexity. Instead of having multiple relationships with multiple network operators, they have just one relationship to manage with a partner that can immediately provide connections to all of their customers in one go. As well as reducing costs, this frees the banks to concentrate on their core business without having to worry about the management of multiple mobile network operator and MVNO relationships.

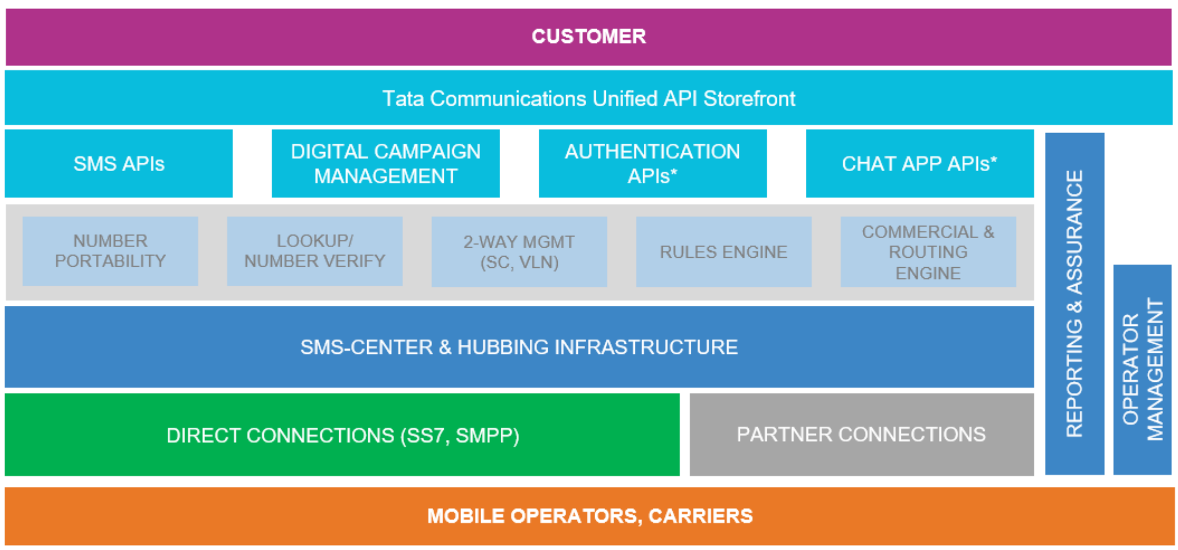
WORKING WITH TATA COMMUNICATIONS FOR MOBILE CUSTOMER ENGAGEMENT IN THE BANKING INDUSTRY

Tata Communications Mobile Messaging Exchange is a dedicated A2P mobile messaging hub, with access to global, secure messaging routes. It makes the most of our commercial relationships with hundreds of Mobile Network Operators (MNOs) and delivers A-Z network reach.

The way Mobile Messaging Exchange works is simple:

1. You buy capacity to terminate SMS into mobile networks from Tata Communications.
2. Tata Communications provides comprehensive rates for each destination.
3. You connect via Mobile Messaging Exchange and send A2P SMS to Tata Communications for agreed destination network termination.
4. A user portal gives you control and access to online information about sent and delivered messages.
5. Tata Communications raises an invoice for the settlement based on the number of mobile messages sent and rates agreed at the end of an agreed cycle.

ROBUST PRODUCT STACK BUILT ON CARRIER-GRADE NETWORK



* FY20 Roadmap

Adopting Mobile Messaging Exchange for A2P messaging means working with a single party for global message distribution. This makes it easier to gain access to secure global routes, along with more commercial flexibility through payment options that include per SMS charging, as well as pre-paid and post-paid charging models.

You can choose per destination pricing and send to as few, or as many destinations as required. There is a three day standard price change advance notice, as well as fixed duration price options, offering pricing stability as required.

Because we manage our own signalling network, it means you gain direct, global destination reach, secure quality routing and termination – you maximize the advantage of our trusted service provider relationships. Mobile Messaging Exchange offers a transparent A2P mobile messaging only business model with no blending of P2P and A2P messaging traffic.

You can access APIs, which can be used to integrate between the mobile messaging platform and your CRM or other customer engagement systems. You can also use our integrated campaign management platform, to help manage all customer marketing campaigns online.

We connect with MNOs around the world. We extend our direct global connectivity via peering agreements, ensuring all licensed MNOs and MVNOs are reachable. Well established relationships with hundreds of global MNOs and MVNOs means reduced time to market, to get your mobile customer engagement activity up and running quickly and efficiently.