Payments Newsletter

Digitisation of toll payments

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Foreword

Dear Readers,

It is my pleasure to bring to you the latest edition of our payments newsletter, where we take a closer look at the electronic toll collection programme in India while drawing parallels to global trends. We also bring to you key considerations for the way ahead in light of digital payment technologies and changing market dynamics.

I hope you will find this to be a good and insightful read.

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In this issue

Digital toll payments evolution

In the present scenario, tolling-related technologies have gained momentum for enabling acceptance of digital payments in lieu of cash at toll plazas. With emphasis on implementing an effective and efficient toll collection system, electronic toll collection (ETC) emerged as the key solution to enable a fast, efficient and cashless payment option for collection of toll fare. One of the essential requirements of ETC is to provide an integrated centralised system that provides an interoperable solution across all the National Highway toll plazas of the country.

The concept of ETC was proposed long back in the year 1959. During 1960s and 1970s, free flow tolling was tested with transponders fixed under the toll booths on highways. Later, there were continuous developments in e-tolling which most of the countries adopted to establish a fully automated and advanced tolling service.

In Japan, the ETC program started in the year 2001, and has achieved a usage ratio of 90% with a volume of approximately 70 – 80 lacs of daily transactions. ETC operations in China started in the year 2014 and majorly accept card based payment mode. Some European regions such as Norway, have been pioneers in the field of urban tolling. The world's first toll plaza was opened at Bergen (in Norway) in the year 1986. With the advancement of ETC technology in most of the European and US regions as well as smart cities such as Dubai, most of the toll booths are unmanned. All the vehicle related details are captured by high end RFID readers and cameras which are mounted at the toll booths. These data points are gathered in a centralised system and monitored by a centralised governing body.

India is at the cusp of digital transformation. There has been a great advancement in the technology being adopted in the country for digital payment ecosystem in the toll and transit space. One such instance is when the Ministry of Road Transport & Highways (MoRTH) decided to embrace advanced technology in national highways for toll fare collection. One of the leading private sector bank was the pioneer to implement ETC pilot program. The bank partnered with **Ministry of Road Transport and Highways (MoRTH), NHAI** and **IHMCL** for launch of ETC on National Highways. In April 2013, the first ETC was set up on Mumbai-Ahmedabad highway with six toll plazas and 3 logistic providers. This was a closed loop solution with FASTags implemented exclusively working on the bank's acquired toll plazas.

The implementation of a pan-India electronic toll collection system on national highways may help save approximately **87,000 crore INR annually**, according to a joint study by the Transport Corporation of India and the Indian Institute of Management Calcutta. Implementation of e-tolling would help the vehicle users reduce the fuel cost and cut the average waiting time by around **10 minutes** at the toll plazas.

The journey so far…

The National Highways Authority of India (NHAI) and the National Payments Corporation of India (NPCI) have set up an interbank clearing house to implement national electronic toll collection (NETC) at around 405 national highways' toll plazas in India. The platform would also be responsible for handling offline clearing, settlement, disputes, fraud and master data management. NPCI along with participating banks have created a robust and scalable platform, capable of handling millions of transactions through real-time processing using standard interfaces and protocols.

*As per the data provided by NPCI, in April 2018 FASTag usage rate at the toll plazas is approximately **16%** to **18%** of the total number of transactions. The average number of e-toll transactions per month at all the toll plazas in the month of **April 2017** was around **7.5 million**. Within a span of one year, in the month of **April 2018** the number of e-toll transactions reported is around **18 million**.*

Growth drivers and key opportunities for stakeholders

It is further expected that the transaction volume will increase by around **25 - 30%** year-on-year considering the following key growth drivers:

- Government's mandate to affix FASTags on all new vehicles (4-wheelers) manufactured from 1st December, 2017
- Increase in the production of automobiles, the production volume in India grew at a CAGR of **4.43 percent** from **FY 2012** to **FY 2018**
- Awareness campaign launched by NHAI to make road users aware of the FASTag and its benefits like cashback amount customer receives on performing e-toll transactions

Opportunities exist for concessionaires, participating banks (issuing and acquiring) and OEMs/dealers

Concessionaires: The Toll Plazas system or Toll Management system should be capable in capturing vehicle images and vehicle registration number. Based on the data models developed from relevant data sources and **'Vahan'** database, there would be a potential for concessionaires to tie up with the participating banks in the ETC program to cross sell products such as vehicle insurance and loans.

The concessionaires would be able to partner with fuel stations, food malls, 3PL logistic companies, car OEMs/dealers and taxi aggregators to target key corporate and retail customers. For partnerships, the data demonetisation model for a particular concessionaire would be different from other concessionaires based on the location of toll plazas and the volume of transactions.

Acquiring banks: By improving the infrastructure between toll plazas and acquiring, banks will be able to leverage on the transactional data aggregated at acquiring system. The data will be further used for fraud analytics (tracking vehicles which may be critical for transport agencies and taxi aggregators), predicting fuel consumption for a particular vehicle and by pattern analysis; banks will be able to create leads for other cross banking products and for OEMs/dealers.

Issuing banks: Currently, the tag issuance is a hassle process and it takes around 7 to 10 days for delivery of FASTag to end customer (both retail and corporate). Issuing banks can leverage the existing alternate digital modes such as tab banking which can be used for scanning and sending the documents to the branch or relevant relationship manager (RM) within few minutes. This will help in seamless tag issuance and enhance the customer experience while getting on boarded as FASTag user.

OEMs/dealers: All original equipment manufacturers (OEMs) and dealers in the existing NETC value chain have a huge opportunity to tie-up with concessionaires and banks to increase the uptake of FASTag issuance. OEMs and dealers will receive commission on each FASTag sold to end customer from issuing bank.

The way ahead

NETC program envisages toll collection in the country to be completely migrated from cash towards electronic means. While the overall toll collection in India is about **400 crore INR** per month, the ETC program was successful in taking up nearly **22%** of this share in a very short span of time. Despite that, there is much to achieve in terms of offering more convenience, additional benefits and a hassle free journey to the commuters. Rationale behind all this is **demonetisation** and **FinTech** evolution in India, through which every vehicle owner user can have multiple payment options to go cashless.

1 Upcoming payment options:

Commuters can now pay their toll fare via different online modes like **credit/debit cards, wallets, QR codes** and many more. A couple of technological innovations in the payments industry is giving way to advanced modes of payment like **'Tap n Go'** using NFC enabled POS terminals, mobile payments using **Bluetooth/Wi-Fi** technology integrated with AVI sensors and application based payments using **Unified Payments Interface (UPI).**

2 Adoption of NETC on state highways:

NETC facilitated seamless payment options and uninterrupted movement of traffic in the national highways which further needs to be extended to all the state highways across India. The state highways account for the maximum local traffic congestion with restrictions of movement and time. Moreover, vehicles crossing check posts at every state border highways are halted multiple times which might result in a long waiting queue. In order to facilitate a barrier free ride, the national and the State Highways can jointly work on creating a common platform for NETC wherein, the

Infrastructure of the state highways need to be at par with the national highways to standardise its technical and functional layout and maintenance. Additionally, in line with the government's less cash payment drive, online modes of payment can be used and promoted for paying all the toll charges across the Indian highways.

3 FASTag linked to vehicle insurance policy:

As an additional benefit, the existing FASTags can be linked to the insurance policies of the commuters. Not merely the FASTags will help the commuters do away with the urgency of carrying the policy documents but also facilitate a seamless, hassle free journey. Blacklisted vehicles should be mandated to pay the outstanding fine amount first before their vehicle's insurance policy is renewed.

4 E-way bill:

With the latest proposal from Union government of linking FASTags with GST e-way bill, this move will effectively prevent chances of vehicles transporting goods to places other than those declared in the e-way bill challan. The details of the e-way bill embedded in the FASTag will update the GSTN and other state enforcement authorities of the route that the vehicle is taking on the particular national highway. This will also be an advantage for the supplier, if the vehicle is stuck mid-way for some reason, an application for extension of time can be expected in advance.

E-toll will be the next game changer in digitisation and cashless payments. Though near 100% achievement of NETC will take time but faster technology adoption, government's push for a cash-free society and enhancement in the infrastructure at the toll plazas can help achieve the target soon.

Digital e-toll payment updates

Electronic toll collection on national highways in fast lane

Business-Standard

According to estimates provided by a payments processor, Worldline, which works on FASTag implementation with eight participating banks, a little more than 1.5 million tags have been issued already, 0.8 million in the past four months starting January 2018. Revenue collection through FASTag clocked a cumulative sum of 25 billion INR last month. (Read more)

Highways ministry aims to e-collect 50% toll charges

The Economic Times

The Ministry of Road Transport and Highways has set a target to collect 50% of total daily toll charges through FASTag and other electronic means. The government gets about 51 crore INR as toll fare on an average per day on national highways. (Read more)

How National Electronic Toll Collection will revolutionise transport in India

Money Control

NHAI has mandated implementation of the National Electronic Toll Collection program for all national highways, which will help reduce the congestion, time taken to process toll at highways and enable reduction in revenue leakages. (Read more)

NHAI FASTags introduced; congestion at toll plazas set to end, give you unforgettable rides

Financial Express

FASTags can be bought online and offline through common services centers (CSCs) near toll plazas. (Read more)

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