Cheque Truncation System

1. What is Cheque Truncation?

Truncation is the process of stopping the flow of the physical cheque issued by a drawer at some point with the presenting bank en-route to the drawee bank branch. In its place an electronic image of the cheque is transmitted to the drawee branch by the clearing house, along with relevant information like data on the MICR band, date of presentation, presenting bank, etc. Cheque truncation thus obviates the need to move the physical instruments across branches, other than in exceptional circumstances for clearing purposes. This effectively eliminates the associated cost of movement of the physical cheques, reduces the time required for their collection and brings elegance to the entire activity of cheque processing.

2. Why Cheque Truncation in India?

As explained above, Cheque Truncation speeds up the process of collection of cheques resulting in better service to customers, reduces the scope for clearing-related frauds or loss of instruments in transit, lowers the cost of collection of cheques, and removes reconciliation-related and logistics-related problems, thus benefitting the system as a whole. With the other major products being offered in the form of RTGS and NEFT, the Reserve Bank has created the capability to enable inter-bank and customer payments online and in near-real time. However, as cheques are still the prominent mode of payments in the country and Reserve Bank of India has decided to focus on improving the efficiency of the cheque clearing cycle, offering Cheque Truncation System (CTS) as an alternative. As highlighted earlier, CTS is a more secure system vis-a-vis the exchange of physical documents.

In addition to operational efficiency, CTS offers several benefits to banks and customers, including human resource rationalisation, cost effectiveness, business process re-engineering, better service, adoption of latest technology, etc. CTS, thus, has emerged as an important efficiency enhancement initiative undertaken by Reserve Bank in the Payments Systems area.

3. What is the status of CTS implementation in the country?

The Reserve Bank has implemented CTS in the National Capital Region (NCR), New Delhi and Chennai with effect from February 1, 2008 and September 24, 2011. After migration of the entire cheque volume from MICR system to CTS, the traditional MICR-based cheque processing has been discontinued in these two locations. Based on the advantages realised by the stakeholders and the experienced gained from the roll-out in these centres, it has been decided to operationalise CTS across the country. Accordingly, Grid based CTS clearing has since been started in Chennai by including a few banks from Coimbatore and Bengaluru with effect from March 2012. It has also been envisaged to bring all the bank branches in the states of Tamilnadu, Kerala, Karnataka, Andhra Pradesh and the Union Territory of Puducherry under Chennai Grid in a phased manner

4. What is the new approach to CTS implementation in the country?

The new approach envisioned as part of the national roll-out is the grid-based approach.

Under this approach the entire cheque volume in the country cleared across numerous locations will be consolidated into a much fewer number of grids. The concept of region wise grids will be replaced and operational freedom will be given to the operator in deciding the number of grids required to expand the reach of CTS Pan-India and also on choosing the locations for each grid for optimum use of the resources.

Source: ***http://www.rbi.org.in***

Each grid will provide processing and clearing services to all the banks under its jurisdiction,. Banks, branches and customers based at small / remote locations falling under the jurisdiction of a grid would be benefitted, irrespective of whether there exists at present a formal arrangement for cheque clearing or otherwise.

5. Is it possible to briefly explain the entire process flow in CTS?

Yes. In CTS, the presenting bank (or its branch) captures the data (on the MICR band) and the images of a cheque using their Capture System (comprising of a scanner, core banking or other application) which is internal to them, and have to meet the specifications and standards prescribed for data and images.

To ensure security, safety and non-repudiation of data / images, end-to-end Public Key Infrastructure (PKI) has been implemented in CTS. As part of the requirement, the collecting bank (presenting bank) sends the data and captured images duly signed and encrypted to the central processing location (Clearing House) for onward transmission to the paying bank (destination or drawee bank). For the purpose of participation the presenting and drawee banks are provided with an interface / gateway called the Clearing House Interface (CHI) that enables them to connect and transmit data and images in a secure and safe manner to the Clearing House (CH).

The Clearing House processes the data, arrives at the settlement figure and routes the images and requisite data to the drawee banks. This is called the presentation clearing. The drawee banks through their CHIs receive the images and data from the Clearing House for payment processing. The drawee CHIs also generate the return file for unpaid instruments, if any. The return file / data sent by the drawee banks are processed by the Clearing House in the return clearing session in the same way as presentation clearing and return data is provided to the presenting banks for processing. The clearing cycle is treated as complete once the presentation clearing and the associated return clearing sessions are successfully processed. The entire essence of CTS technology lies in the use of images of cheques (instead of the physical cheques) for payment processing.

6. What type of cheques can be presented for clearing through CTS?

All types of cheques can be presented for clearing through CTS. It is no different from the use of traditional clearing infrastructure for clearing paper cheques. Cheques presented as part of Speed Clearing are handled in CTS as well (for more details on Speed Clearing, the related FAQs may be referred to). Incidentally, given the fact that images of cheques (and not the physical cheques) alone need to move in CTS, it is possible for the removal of the restriction of geographical jurisdiction normally associated with the paper cheque clearing. For reaping this benefit , the concept of Grid-CTS clearing is being envisaged as part of roll-out of CTS at Chennai. Under the grid clearing, cheques drawn on centres included in the grid will be cleared as part of local clearing.

7. Will there be any change in the process for the customers?

No. There is no change in the clearing process for customers. Customers continue to use cheques as at present, except to ensure the use of image-friendly-coloured-inks while writing the cheques. Of course, such of those customers, who are used to receiving the paid instruments (like government departments) would also receive the cheque images. Cheques with alterations in material fields (explained in detail later) are not allowed to be processed under the CTS environment.

8. What are the benefits of CTS to customers of banks?

The benefits are many. With the introduction of imaging and truncation, the physical movement of instruments is stopped. The electronic movement of images of cheques speeds up the process of

settlement and can facilitate reduction in the clearing cycles as well. Moreover, there is no fear of loss of instruments in transit. Further, limitations of the existing clearing system in terms of geography or jurisdiction can be removed, thus enabling consolidation and integration of multiple clearing locations managed by different banks with varying service levels into a nation-wide standard clearing system with uniform processes and practices.

CTS also benefits issuers of cheques. Use of images obviates the need to handle and move physical cheques at different points. The scope for frauds inherent in paper instruments is, thus, greatly reduced. The Corporates if needed can be provided with images of cheques by their bankers for internal requirements,if any. As only the images move, the time taken for receipt of paid cheques is reduced which also gives an early opportunity to the issuers of cheques to detect frauds or alterations, if any, in terms of what (and to whom it) was issued and what (by whom it) was realised.

CTS brings elegance to the entire activity of cheque processing and clearing. Cheque frauds can be greatly reduced with introduction of minimum security features prescribed under CTS Standards 2010, such as embedded verifiable features such as bar-codes, encrypted codes, logos, watermarks, holograms, etc., for early interception of altered / forged instruments. Obviating the need to move the physical cheques is extremely beneficial in terms of cost and time savings.

The benefits from CTS could be summarized as follows –

- Shorter clearing cycle
- Superior verification and reconciliation process
- No geographical restrictions as to jurisdiction
- Operational efficiency for banks and customers alike
- Reduction in operational risk and risks associated with paper clearing

9. If a customer desires to see the physical cheque issued by him for any reason, what are the options available?

Under CTS the physical cheques are retained at the presenting bank level and do not move to the paying banks. In case a customer desires, banks can provide images of cheques duly authenticated. In case, however, a customer desires to see / get the physical cheque, it would need to be sourced from the presenting bank, for which a request should be made to his/her bank. An element of cost / charge may also be involved for the purpose. To meet legal requirements, the presenting banks which truncate the cheques need to preserve the physical instruments for a period of 10 years.

10. How would be the uniqueness of a physical cheque be captured and imparted to the cheque image?

CTS in India mandates the use of prescribed image specifications only. Images that do not meet the specifications are rejected. As the payments are made on the basis of the images, it is essential to ensure the quality of the images. To ensure only images of requisite quality move in the CTS processing cycle, there is a rigorous quality check process at the level of the Capture Systems and the Clearing House Interface (of the presenting bank). The solution encompasses Image Quality Assessment (IQA) at different levels. The presenting bank is required to perform the IQA during the capture itself. Further IQA is done at the gateway before onward transmission to clearing house. The images are captured with digital signatures of the presenting bank and thereafter transmitted to the Clearing House and then to the paying banks. Further, the paying banks, if not satisfied with the

image quality or for any other reason, can ask for the physical instrument to facilitate payment processing.

Further, the new cheque standard "CTS-2010" prescribes certain mandatory and optional security features to be available on cheques, which will also add to the uniqueness of the images.

11. What are the image specifications in CTS in the Indian context ?

Imaging of cheques can be based on various technology options. The cheque images can be Black & White, Gray Scale or Coloured. These have their associated advantages and disadvantages. Black & White images are light in terms of image-size, but do not reveal all the subtle features that are there in the cheques. Coloured images are ideal but increase storage and network bandwidth requirements. Gray Scale images are mid-way. CTS in India uses a combination of Gray Scale and Black & White images. There are three images of each cheques that need to be taken - front Gray Scale, front Black & White and back Black & White.

12. How are the images of cheques taken ?

Images of cheques are taken using scanners. Scanners also function like photo-copiers by reflecting the light passed through a narrow passage on to the document. Tiny sensors measure the reflection from each point along the strip of light. Reflectance measurements of each dot is called a pixel. Images are classified as black and white, gray-scale or colour based on how the pixels are converted into digital values. For getting a gray scale image the pixels are mapped onto a range of gray shades between black and white. The entire image of the original document gets mapped as some shade of gray, lighter or darker, depending on the colour of the source. In the case of black and white images, such mapping is made only to two colours based on the range of values of contrasts. A black and white image is also called a binary image.

13. How the image and data transmitted over the network is secured ?

The security, integrity, non-repudiation and authenticity of the data and image transmitted from the paying bank to the payee bank are ensured using the Public Key Infrastructure (PKI). CTS is compliant to the requirements of the IT Act, 2000. It has been made mandatory for the presenting bank to sign the images and data from the point of origin itself. PKI is used throughout the entire cycle covering capture system, the presenting bank, the clearing house and the drawee bank. The PKI standards used are in accordance with the appropriate Indian acts and notifications of Controller of Certifying Authority (CCA).

14. What is Cheque Standardisation and what does CTS 2010 Standard mean?

Standardisation of cheque forms (leaves) in terms of size, MICR band, quality of paper, etc., was one of the key factors that enabled mechanisation of cheque processing. Over a period of time, banks have added a variety of patterns and design of cheque forms to aid segmentation, branding, identification, etc., as also incorporated therein a number of security features to reduce the incidence of cheque misuse, tampering, alterations, etc. Growing use of multi-city and payable-at-par cheques for handling of cheques at any branches of a bank, introduction of Cheque Truncation System (CTS), increasing popularity of Speed Clearing, etc., were a few aspects that led to prescription of certain minimum security features in cheques printed, issued and handled by banks and customers uniformly across the banking industry. A Working Group was set-up by RBI for examining further standardisation of cheque forms and enhancement of security features therein. Accordingly, certain benchmarks towards achieving standardisation of cheques issued by banks across the country have been prescribed like – quality of paper, watermark, bank's logo in invisible ink, void pantograph, etc., and standardisation of field placements on cheques. In addition, certain

Source: ***http://www.rbi.org.in***

desirable features have also been suggested to be implemented by banks based on their need and risk perception.

The set of minimum security features would not only ensure uniformity across all cheque forms issued by banks in the country but also help presenting banks while scrutinising / recognising cheques of drawee banks in an image-based processing scenario. The homogeneity in security features is expected to act as a deterrent against cheque frauds, while the standardisation of field placements on cheque forms would enable straight-through-processing by use of optical / image character recognition technology. The benchmark prescriptions are collectively known as "CTS-2010 standard". Indian Banks Association (IBA) and National Payments Corporation of India (NPCI) are co-ordinating with the banks on implementation of the new standard. Accordingly, the cheques issued are tested and certified by NPCI and only after such certification the cheques would be issued to the customers.

All banks providing cheque facility to their customers have been advised to issue only 'CTS-2010' standard cheques not later than April 1, 2012 on priority basis in northern and southern region which will be part of the northern and southern CTS grids respectively and across the country by September 30, 2012 through a time bound action plan.

15. What is the prescription relating to alterations / corrections on cheque forms?

The prescription on prohibiting alterations / corrections on cheques has been introduced to curtail cheque frauds on account of alterations in the various fields of cheques and to give protection to customers as well as banks. No changes / corrections can be carried out on the cheques (other than for date validation purposes, if required). For any change in the payee's name, courtesy amount (amount in figures) or legal amount (amount in words), fresh cheque leaves should be used by customers. This would help banks in identifying and controlling fraudulent alterations. This prohibition is applicable to cheques cleared under the image based Cheque Truncation System (CTS) only and is effective from December 1, 2010. It is not applicable to cheques cleared under other clearing arrangements for the present.

16. What are the precautions required to be taken by the banks / customers to avoid frauds

Banks / Customers should use "CTS 2010" cheques which are not only image friendly but also have more security features. Customers may request/insist their banks for cheque forms that are compliant with the "CTS 2010" standard. They should preferably use dark coloured ink while writing cheques and avoid any alterations / corrections thereon. Preferably, a new cheque leaf may be used in the event of any alterations / corrections as the cheque may be cleared through image based clearing system as enumerated in 15 above. Banks should exercise care while stamping the cheque forms, so that it does not interfere with the material portions such as date, payee's name, amount and signature. The use of rubber stamps, etc, should not overshadow the clear appearance of these basic features in image. It is necessary to ensure that all essential elements of a cheque are captured in an image during the scanning process and banks / customers have to exercise appropriate care in this regard.

17. What are the modes in which banks can participate in CTS?

There are two modes in which banks may participate in CTS –

Direct membership: Banks may participate as direct member provided they have a settlement account with the settlement bank and have put in place necessary infrastructure for participating in CTS.

Source: ***http://www.rbi.org.in***

Indirect / Sub-membership: Banks may become sub-members / indirect members of the direct members by using the infrastructure and / or settlement services of the direct members. The settlement for such indirect / sub-member could be done either directly (if such banks have settlement accounts with the settlement bank) or through the direct member through whom they are participating.

18. Is the infrastructure requirement for participating the CTS the same for all banks?

The infrastructure required at the banks' end for participating in CTS are dedicated connectivity from the bank's gateway to the Clearing House, prescribed hardware and software for the CTS application.

RBI provides member banks with the CHI (software). Banks need to procure hardware and other software such as operating system; database and a bouquet of third party software for the CHI. They also need to procure the application software for their capture systems.

The hardware requirement / sizing is based on the volume of cheques processed by banks. Based on the volume the CHI is categorised into four types and the hardware requirement is different for each category.

The bandwidth requirement for each bank is calculated based a number of factors like the peak inward and outward volume of the bank, average size of an image, efficiency factor of the network, etc. In addition, future requirements have been taken into consideration while calculating the bandwidth requirement.

19. Whether the Cheque Truncation System has legal sanction?

With amendments in the Sections 6 and 1(4), coupled with the introduction of 81 A to the Negotiable Instruments Act, 1881, truncation of cheques is now legalized.

20. In case of need for any further clarifications, who can be approached for guidance?

For any further clarifications the Contact Persons are –

The General Manager, National Clearing Cell, Reserve Bank of India, 7th Floor, Tower 1, Jeevan Bharati Building, Connaught Place, New Delhi – 110 001.

The Chief Executive Officer, National Payment Corporation of India, C-9,8th Floor, RBI Premises, Bandra-Kurla Complex, Bandra (East), Mumbai-400 051,