

The Chairman and Managing Director / Chief Executive Officer
All Scheduled Commercial Banks including RRBs /
Urban Co-operative Banks / State Co-operative Banks /
District Central Co-operative Banks

Madam / Dear Sir,

Standardisation and Enhancement of Security Features in Cheque Forms

Paper-based cheque clearing continues to be one of the popular modes of initiating payment transactions in the country. During the period April-December 2009, clearing houses in the country have processed on an average around 4.5 million cheques every day. Several measures have been initiated by Reserve Bank of India to ensure that this retail payment product functions in a safe and efficient manner.

2. Introduction of Magnetic Ink Character Recognition (MICR) technology during the mid-eighties has been the single-most important development responsible for making the cheque clearing popular and efficient – volume-wise, speed-wise and convenience-wise. At the banks' end too, cheques in MICR format have facilitated post-processing ease in operations, affording credit to customer accounts and reducing reconciliation issues, thus improving customer service. 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.

3. 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) at New Delhi for image-based cheque processing, increasing popularity of Speed Clearing for local processing of outstation cheques, etc., are a few aspects that led to looking into the need, if any, for prescription of certain minimum security features in cheques printed, issued and handled by banks and customers uniformly across the banking industry.

4. Against the above backdrop, a Working Group was set-up by the Reserve Bank of India for examining further standardisation of cheque forms and enhancement of security features therein. The Working Group comprised various stakeholders viz. commercial banks, paper manufacturers, security printers, etc., apart from Reserve Bank of India. Recommendations of the Working Group were discussed internally as also forwarded to Indian Banks' Association (IBA), National Payments Corporation of India (NPCI) and select banks for their views. The feedback from these institutions has been received and duly considered.

5. It has since been decided to prescribe certain benchmarks towards achieving standardisation of cheques issued by banks across the country. These include provision of mandatory minimum security features on cheque forms like quality of paper, watermark, bank's logo in invisible ink, void pantograph, etc., and standardisation of field placements on cheques. In addition, certain desirable features are also being suggested which could 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.

6. The benchmark prescriptions shall be known as "**CTS-2010 standard**", specifications of which are annexed. Effective date of implementation of the standard will be advised to you in due course. It is our intention that the revised cheque standard is implemented by banks before the roll-out of CTS at Chennai. IBA and NPCI will be co-ordinating and advising banks on introduction of additional security features on cheques as also other aspects relating to implementation of the standard across the country.

7. Please acknowledge receipt of the circular and indicate your readiness for implementing the "**CTS-2010 standard**".

Yours faithfully

(G Padmanabhan)
Chief General Manager

Encl. : **CTS-2010 Standard** Specifications

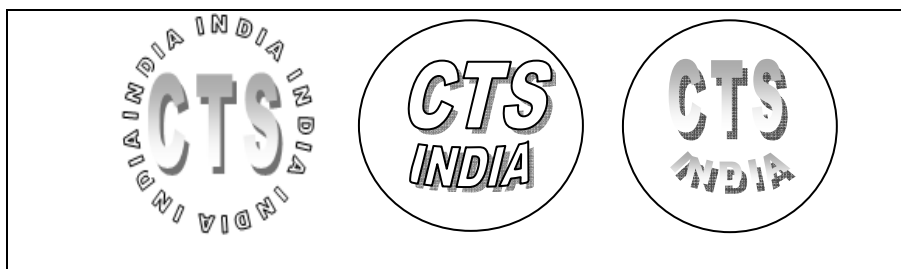
Annexure to Circular DPSS.CO.CHD.No.1832/04.07.05/2009-2010 dated February 22, 2010

"CTS-2010 Standard" for Cheque Forms – Specifications

1. Mandatory features

1.1 **Paper (At Manufacturing Stage)** : Status quo shall be maintained in relation to paper specifications as it exists currently. Details of current specifications are contained in the document '*Mechanised cheque processing using MICR technology - Procedural Guidelines*', available at - <http://www.rbi.org.in/scripts/PublicationsView.aspx?id=4551>. Additionally, paper should be image friendly and have protection against alterations by having chemical sensitivity to acids, alkalis, bleaches and solvents giving a visible result after a fraudulent attack. CTS-2010 Standard paper should not glow under Ultra-Violet (UV) light i.e., it should be UV dull. This shall ensure that the feel of cheques is uniform across banks.

1.2 **Watermark (At Manufacturing Stage)** : All cheques shall carry a standardised watermark, with the words "CTS-INDIA" which can be seen when held against any light source. This would make it difficult for any fraudster to photocopy or print an instrument since this paper would be available only to security printers handling cheque printing. The watermark should be oval in shape and diameter could be 2.6 to 3.0 cms. Each cheque must hold atleast one full watermark. Sample watermarks that would be used in CTS will be finalised in consultation with Indian Banks' Association (IBA) / National Payments Corporation of India (NPCI) and could (illustratively) appear as under -



1.3 **VOID pantograph (At Printing Stage)**: Pantograph with hidden / embedded "COPY" or "VOID" feature shall be included in the cheques. This feature should not be visible on the scanned image at the resolution specified in CTS but should be clearly visible in photocopies and scanned colour images as resolution used in such cases would be above the prescribed CTS standards. This would act as a deterrent against colour photocopy or scanned colour images of a cheque.

1.4 Bank's logo printed with invisible ink (ultra-violet ink) (At Printing Stage) :

Bank's logo shall be printed in ultra-violet (UV) ink. The logo will be captured by / visible in UV-enabled scanners / lamps. It will establish genuineness of a cheque.

1.5 Field placements of a cheque :

Placement of significant fields on the cheque forms shall be mandated. However, placement of additional fields shall be left to banks. This will enable data capturing by Optical / Image Character Recognition (OCR / ICR) engines in off-line mode and help banks in automating their payment processes. A sample cheque with recommended field placements is placed at 4 below.

1.6 Mandating colours and background :

Light / Pastel colours shall be mandated for cheques so that Print / Dynamic Contrast Ratio (PCR / DCR) is more than 60% for ensuring better quality and content of images. The colours will be finalised in consultation with IBA / NPCI.

1.7 Clutter free background :

Background of cheques shall be kept as clutter free as possible for improving quality and clarity of images.

1.8 Prohibiting alterations / corrections on cheques :

No changes / corrections should 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), etc., fresh cheque forms should be used by customers. This would help banks to identify and control fraudulent alterations.

1.9 Printing of account field :

All cheques should, as far as possible, be issued with the account number field pre-printed. This should be considered must for current account holders and corporate customers.

1.10 Use of UV feature on cheque images :

Though bank's logo in UV ink is a strong deterrent for forgery and duplicate cheques, there are challenges in terms of increased image size, stabilisation of UV technology in CTS environment, availability of UV-enabled scanners, etc., in implementing this feature. However, the benefits outweigh the limitations and hence this feature shall be incorporated. Presenting banks can subject instruments beyond a threshold value to UV verification using the UV lamps currently available for currency note verification. In case UV technology stabilises in future, the UV image view could be incorporated in CTS as an additional image view or by dropping one of the existing image views.

2. Desirable features

2.1 In addition to the mandatory security features as above, banks can consider including additional security features as per their risk perception like (i) supplementary watermark containing their own logo, (ii) embedded fluorescent fibres, (iii) fugitive ink, (iv) secondary fluorescent ink, (v) micro-lettering, (vi) toner fusing, (vii) check-sum, (viii) patterns, (ix) floral designs, (x) bleeding ink, (xi) structural magnetics, (xii) security thread, (xiii) hot stamped holograms on multi-city cheques and demand drafts, (xiv) auto-detection tools, (xv) use of UV band on sensitive and key areas of interest on a cheque such as Legal Amount Recognition (Amount in Words), Courtesy Amount Recognition (Amount in Figures), Signature, Beneficiary Name, (xvi) pre-encoding of amount field on the MICR band for demand drafts / pay orders (above a self-decided cut-off) before issue to customers, (xvii) use of check-sum on the face of demand drafts / pay orders (other than the MICR band), etc.

2.2 Use of additional features by banks will be subject to the features being compatible with CTS requirements. While incorporating additional features, banks should take care that –

- i. The additional security features do not overlap or be very close or clash against the prescribed minimum security features.
- ii. The features are compatible with CTS specifications.
- iii. The features are not image heavy, i.e., increase the image size.
- iv. They should not block any important data on images or hinder payment processing.
- v. Presenting banks are not expected to verify the additional features.

3. Implementation modality

3.1 IBA and NPCI shall be jointly vested with the task of certifying additional / optional security features. IBA and NPCI would ensure that the additional / optional features are compatible with CTS and MICR clearing schemes before releasing them to banks.

3.2 IBA and NPCI shall be entrusted with the responsibility for empanelment of vendors with capability to provide the new security standards.

3.3 Use of UV image view in CTS is being kept on hold for the present. The decision would be revisited in future once UV technology stabilises.

4. Layout of a sample cheque leaf

4.1 The layout of a cheque leaf and location of various security features as prescribed above would appear as under –

Sample Cheque Leaf

