



CHEQUE PRINTER ACCREDITATION STANDARD

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Preliminary Provisions

Application of this Accreditation Standard

- 1 This accreditation standard applies to
 - (a) an accredited cheque printer;
 - (b) members of the Clearing House;
 - (c) a personalization entity;
 - (d) a prospective cheque printer or an entity that seeks to enter into the business of cheque printing.

Application of Relevant Enactments

- 2 This Standard shall be read together with applicable enactments including in particular
 - (a) the Payment Systems and Services Act 2019 (Act 987);
 - (b) the Banks and Specialised Deposit Taking Institutions Act 2016 (Act 930);
 - (c) the Electronic Transactions Act 2008 (Act 772);
 - (d) the Data Protection Act 2012 (Act 843);
 - (e) any other relevant directive issued by the Bank of Ghana.

Purpose of the Standard

- 3 The objectives of this Standard are to
 - (a) promote standardization of cheques and cheque security features,
 - (b) provide a framework for secure production and delivery of cheques,
 - (c) accredit printers of paper payment instruments,
 - (d) assess cheque printers' compliance with this Standard for reaccreditation,
 - (e) ensure a secure physical and logical environment for cheque production,
 - (f) promote the integrity of cheque production environment.

Cheque Printer Accreditation Standard

- 4 A cheque printer is required to put in place a system to address the following issues
- (a) physical and environmental security;
 - (b) human resource security;
 - (c) organization of information security;
 - (d) information security incident management;
 - (e) asset management;
 - (f) base stock security;
 - (g) validation of cheque orders;
 - (h) cheque order processing;
 - (i) sub-contracting;
 - (j) transport and dispatch;
 - (k) business continuity management;
 - (l) customer data and cheque products;
 - (m) origination work;
 - (n) data protection, data transmission, downloading of files and transaction processing.

Accreditation of Cheque Printer

Conditions for Accreditation of a Cheque Printer

- 5 (1) A body corporate which intends to operate as a security printer shall apply for accreditation from the Bank of Ghana as set out in the Second, Third and Fourth Schedules and any other requirement the Bank of Ghana may deem fit
- (2) Accreditation certificate issued to an accredited cheque printer is not transferrable

Issuance of Accreditation Certificate

- 6 An accreditation certificate shall be issued to a cheque printer when the following conditions are fulfilled:
- (a) compliance with relevant sections of the Payment Systems and Services Act 2019 (Act 987);
 - (b) adherence to the Bank of Ghana Cyber and Information Security Directive (2018);
 - (c) compliance with ISO 27001:2013;
 - (d) compliance with this accreditation standard;
 - (e) implementation of corrective actions for audit review;
 - (f) payment of accreditation fee as prescribed by the Bank of Ghana.

Renewal of Accreditation Certificate

- 7 Accreditation certificate issued by the Bank of Ghana shall be renewed annually in line with section 85 (1) and (3) of the Payment Systems and Services Act 2019 (Act 987)

Cessation and Revocation of Accreditation

Revocation of Accreditation

- 8 The Bank of Ghana may revoke accreditation of a cheque printer where
- (a) accredited cheque printer refuses to permit an inspection or provide information required by the Bank of Ghana;
 - (b) accredited cheque printer provides false or misleading information for the purpose of applying for accreditation;
 - (c) accredited cheque printer fails to comply with the terms and conditions of the accreditation;
 - (d) accredited cheque printer engages in pattern of unsafe or unsound practices that threatens the integrity of printed cheque, and payment instrument;

- (e) accredited cheque printer is insolvent under any law or as determined by a court of competent jurisdiction;
- (f) accredited cheque printer ceases to carry on the business of printing cheque or payment instrument or goes into liquidation, is wound up or is dissolved;
- (g) accredited cheque printer does not provide cheque printing business within six months from the date on which the accreditation was granted;
- (h) accredited cheque printer ceases to engage in printing of cheque or payment instrument for more than six months.

Cessation of Cheque Printing Business

- 9 (1) Accredited cheque printer which intends to cease the business of cheque printing shall
- (a) inform the Bank of Ghana in writing at least 90 calendar days before cessation of business;
 - (b) submit to the Bank of Ghana, a roadmap for the cessation of business indicating the procedure for:
 - (i) disposal of base stock,
 - (ii) disposal of Clearing Bank Specification 1 paper,
 - (iii) disposal of artwork,
 - (iv) disposal of film,
 - (v) disposal of plate,
 - (vi) disposal of machinery including plans to repurpose for other forms of printing,
 - (vii) stock of semi-finished or finished products,
 - (viii) reconciliation plan with banks on base stock,
 - (ix) disposal of ink,
 - (c) submit report on reconciliation with licensed financial institutions on base stock and financials;
 - (d) submit report on cessation activities to the Bank of Ghana;

- (e) surrender to Bank of Ghana the accreditation certificate.
- (2) The procedure for cessation of business shall be undertaken under the supervision of the Bank of Ghana.
- (3) Where an accredited cheque printer ceases the business of printing cheque, the Bank of Ghana shall within five working days following the date of cessation, publish a notice of cessation in the gazette, a newspaper of national circulation and on the website of the Bank of Ghana.
- (4) Accredited cheque printer shall give six months' notice to the Bank of Ghana on planned temporary suspension of operations
- (5) Accredited cheque printer shall give four weeks' notice to the Bank of Ghana on changes in arrangement which may affect accreditation status.

Examination of Accredited Cheque Printer

- 10 (1) The Bank of Ghana shall carry out examination the operations and affairs of an Accredited cheque printer as set out in the First Schedule
- (2) The Bank of Ghana shall carry out the examination at the times and with such frequency as the Bank of Ghana considers appropriate

Governance Arrangement

11. Accredited Cheque Printer shall have a Board of Directors and meet requirement set out in Schedule Four

Applicable Sanctions

12. Accredited cheque printer that fails to meet sections of this standard shall be liable to sanctions as set out in Schedule Eight of this Standard.

Information Security Management System

- 13 Accredited cheque printer shall establish, implement and maintain Information Security Management Systems in line with sections of ISO 27001:2013 identified in this Standard.

Security Policy

- 14 (1) Accredited cheque printer shall put in place a security policy to prevent theft, compromise or unauthorized use of
- (a) customer information held in paper format or on electronic media;
 - (b) customer data used for personalising cheque;
 - (c) cheque, including finished item; partly processed cheque; cheque waste;
 - (d) origination material, including: security background plate; film; and digital file.
- (2) A Security measure shall include the following:
- (a) physical access control;
 - (b) logical access control;
 - (c) audit trail.

Security Obligation

- 15 Accredited cheque printer shall provide;
- (a) education and training for employee on security obligation
 - (b) detailed information on specific security obligation for effective functioning of job on need-to-know basis.
 - (c) code of ethics for employee

Cyber and Information Security

16 (1) Accredited cheque printer shall establish cyber and information security policy that is approved by the Board of Directors.

(2) The approved information security policy shall address the following:

- (a) security of the cyber space;
- (b) maintenance of backups of information technology systems;
- (c) periodic testing of backups;
- (d) periodic assessment of information technology system for detection of vulnerability, unauthorized use, intrusion and penetration.

(3) Accredited cheque printer shall comply with technology, security and control requirements under section 20 of the Payment Systems and Services Act 2019 (Act 987)

Risk Management

17 Accredited cheque printer shall put in place enterprise risk management policy that covers at least the following:

- (a) identification, measurement and monitoring of risk;
- (b) risk acceptance criteria and responsibility for the management of risk;
- (c) risk assessment of internal process and system;
- (d) assessment of risk pose by external or other related party;
- (e) risk assessment at planned intervals or when significant change is proposed or has occurred.

Operational Procedure

18 Accredited cheque printer shall establish and document internal process and operational system approved by the Board.

Document Control

- 19 Accredited cheque printer shall ensure that documented information is appropriately controlled by:
- (a) identification and description including title, date, author, version or reference number;
 - (b) format including language, software version, graphics and media;
 - (c) approving authority.

Internal Audit

- 20 Accredited cheque printer shall put in place internal control system that covers the following:
- (a) an audit plan providing the frequency, method, scope, objective, and a report of the audit activity;
 - (b) internal audit at planned intervals to assess adequacy of internal control and system;
 - (c) follow up on previous audit concern.

Service Level Agreement

- 21 Accredited cheque printer shall put in place Service Level Agreement with a service provider.

Disaster Recovery Site

- 22 Accredited cheque printer may put in place the following business continuity management arrangement:
- (a) reciprocal arrangements with another accredited cheque printer;
 - (b) maintenance of a back-up site;
 - (c) use of a third-party site;

Eligibility Criteria for Third Party Disaster Recovery Site

23 A company that intend to provide secure business continuity or disaster recovery facility shall meet the following requirement:

- (a) ISO27001:2013;
- (b) compliance with requirements of this Standard;

Minimum Paper Payment Instrument Standard

Magnetic Ink Character Recognition Code Line and format

24 (1) A licensed financial institution shall keep a reference copy of a payment instrument approved for printing.

(2) The Magnetic Ink Character Recognition code line shall meet the following specifications:

Field	Characters
(a) The Serial Number,	6
(b) The Bank Sort Code,	6
(c) The Account number, and	13
(d) The Transaction Code	2

(3) The maximum number of characters of the Magnetic Ink Character Recognition code line shall be forty-seven (47), comprising of the following:

Field	Characters
(a) Document Serial Number	6
(b) Bank Sort Code	6
(c) Account Number	13
(d) Transaction Code	2
(e) Amount Field	13
(f) Field Separation symbols	6

(g) Tolerance Space 1

Total Character Contents 47

- (4) The maximum number of code line characters shall be prescribed by the Bank of Ghana.
- (5) The Magnetic Ink Character Recognition code line shall be printed in E 13 B font and located 6 millimeters from the bottom reference edge.
- (6) A cheque printer shall meet the British Association for Payment Clearing Services paper specification, Clearing Bank Specification 1
- (7) A Clearing Bank Specification 1 paper when tested under Ultra-Violet light shall not show fluorescence or brightness.

Clearing Bank Specification 1 Paper

25 Accredited cheque printer shall comply with the following Clearing Bank Specification 1

Property	Requirement	Test Method	Source
Grammage <i>grams/meter²</i>	95.0g/m ² (+/-5%)	ISO 536	Verify manufacturer's label
Thickness <i>micrometers</i>	Minimum 105 micrometers	ISO 534	Obtain manufacturer's/supplier's file
Smoothness <i>Milliliters/minute</i>		ISO 8791-2	Obtain manufacturer's/su

Property	Requirement	Test Method	Source
Wire side	150ml/m maximum		supplier's file and ascertain the smoothness of paper
Felt side	150ml/m maximum		
Stiffness <i>millinewton</i> Machine Direction (Taber) Cross Direction	Minimum 0.33 mN Min 0.13 mN	ISO 2493 (10mm length) test	Obtain manufacturer's/supplier's file and ascertain the stiffness of paper
Internal Tearing Resistance <i>millinewton</i> Machine Direction mN/Sheet Cross Direction	705 mN 705 mN	ISO 1994	Obtain manufacturer's/supplier's file and ascertain the internal resistance of paper
Porosity <i>milliliters/minute</i>	450 max	ISO 5636-3	Obtain manufacturer's/supplier's file and ascertain the porosity of paper

Imaging Surface

26 Accredited cheque printer shall use the equipment supplier's recommended side of the paper for printing.

Sub-contracting

27 Accredited cheque printer which intends to outsource or sub-contract any part of the cheque printing business shall in writing inform the Bank of Ghana

Printing of Paper Payment Instrument

- 28 (1) A paper payment instrument shall reveal damage to the background or visible discoloration of the instrument upon application of eraser or chemical means to alter information on the surface of the instrument
- (2) An accredited cheque printer may be liable where an attempt to erase the payment details by chemical means fails to result in damage to the background of the payment instrument, or visible discoloration of the paper

Approval of Paper Payment Instrument

- 29 (1) A licensed financial institution shall submit to the Bank of Ghana new design of cheque or paper payment instrument for approval.
- (2) Accredited cheque printer shall obtain a copy of the Bank of Ghana approval of new design of cheque or paper payment instrument before printing final copy
- (3) A licensed financial institution shall print cheque in Ghana with accredited cheque printer

Cheque Reference Edge

- 30 (1) A cheque horizontal dimension shall be measured from the right- hand edge of the trimmed document.
- (2) A cheque vertical dimension shall be measured from the bottom edge of the trimmed document.

Perforations and Trimming.

- 31 (1) A perforated cheque shall show a tear and provide retention of the document.
- (2) Accredited cheque printer shall detach sprocket hole, pin wheel feed perforation, and separate voucher before submission of a printed cheque to the licensed financial institution

Standard Layout Requirement

Cheque Design and Layout Rules

- 32 (1) Accredited cheque printer shall conform to the item positions on a Cheque as set out in Schedules Five, Six and Seven.
- (2) A request for a corporate customized cheque shall not be at variance with the Bank of Ghana approved cheque layout specification.

Clear Band Zone

- 33 (1) A cheque or a paper payment instrument shall contain a clear band zone which shall be protected with an inscription "Do not write below this line".
- (2) Accredited cheque printer shall not print on the face or the reverse of the payment instrument in the clear band zone other than the approved standard code line.

Restraint Area

- 34 (1) Accredited cheque printer shall be guided by the following rules regarding the restraint area;
- (a) provide an imaginary rectangle on the right hand side of the cheque.
 - (b) print only the specified content and background design within the restraint area.
 - (c) pre-printed characters in the restraint area shall be printed in an ink
 - (d) extend the height of the restraint area from the bottom reference edge to the top of the cheque
 - (e) print the sort code number, account number and serial number in characters that meet the Optical Character Recognition, British Standard BS 6616: 1986 specifications and other combination of fonts.
 - (f) ensure that the character pitch or font size is 2.54millimeters.
- (2) Accredited cheque printer shall print the date line within the restraint area and below the line, day, month and year printed.

Sort Code Number

- 35 (1) Accredited cheque printer shall print within the restraint area, a sort code number in Optical Character Recognition with a Print Contrast Signal greater than sixty percent.
- (2) Accredited cheque printer shall ensure the Optical Character Recognition B1 font with the base of characters positioned 67millimeters from the bottom reference edge of the cheque with the closest right-hand digit of the sort code number at 5millimeters from the vertical edge
- (3) A corporate cheque shall be located 76 millimeters from the bottom reference edge.
- (4) A printed cheque shall have each pair of digits in the sort code separated by hyphens.
- (5) A sort code number shall appear in the top position, with the serial or cheque number on the next line and date below.
- (6) A sort code number shall be identical to the sort code encoded in the code line
- (7) A sort code number shall be printed in the Magnetic Ink Character Recognition code line.

Amount Box

- 36 (1) The amount box shall be printed with an Average Background Reflectance value greater than sixty percent.
- (2) Accredited cheque printer may print outside the amount box area, or the amount box with different shades of colour to make the amount box visible
- (3) The Print Contrast Signal of a printed cheque background of the amount box area shall be less than thirty percent
- (4) The border of the amount box of a cheque shall not be printed in

black

- (5) The amount box shall be positioned within the restraint area with the lower edge of the box 35 millimeters and the upper edge of the box 44 millimeters from the bottom reference edge of the cheque.
- (6) The left-hand edge of the amount box shall be 57 millimeters from the vertical reference edge with the right-hand edge of the amount box 5 millimeters from the vertical reference edge.
- (7) The amount box of a corporate cheque may be located with the lower edge at 44 millimeters, and upper edge at 54 millimeters from the bottom reference edge.

Currency Symbol

- 37 (1) A currency symbol shall be printed in black.
- (2) A currency symbol shall conform to the Optical Character Recognition B1 character style with a height of 4 millimeters and appear within the restraint area, outside the amount box to the left and centered vertically on the box.

Drawee Bank Name

- 38 (1) A bank name and a branch shall be shown outside the restraint area and in the top half of the cheque.
- (2) A bank may introduce a digital address on a cheque

Crossing

- 39 (1) Accredited cheque printer shall cross a corporate cheque which consists of two parallel lines printed bolder than the adjacent lines on the cheque, placed vertically or diagonally across the center of the cheque
- (2) A band of distinctive colour or shade may be incorporated in the crossing and shall not extend into the clear band zone
- (3) Accredited cheque printer shall not cross a cheque to extend into the clear band zone and any wording associated with the crossing shall be

placed between the parallel lines

Personalization

- 40 Accredited cheque printer shall conform to the Bank of Ghana requirement for printing of cheque while personalizing a bank cheque.

Identification of Printer

- 41 The name of the accredited cheque printer shall appear on the face of a cheque written across, perpendicular to the bottom reference edge of the instrument, near the left edge.

Standard Features of Cheques

Paper Security Features

- 42 (1) Accredited cheque printer shall use Clearing Bank Specification 1 Paper, Ultra Violet dull, which is free of contamination by fluorescent and or visible spots and fibers.

Design Features

- 43 The design features of a cheque shall permit Optical Character Recognition processing and shall not be strong in the restraint area.

Watermark Paper

- 44 (1) Accredited cheque printer shall ensure that a payment instrument that passes through a customer has a patterned density watermark.
- (2) The watermark shall not prevent processing of a cheque by a Magnetic Ink Character Recognition code line
- (3) Accredited cheque printer shall obtain property right for a watermark design.
- (4)The accredited cheque printer shall ensure that the Magnetic Ink Character Recognition code line is in E13-B fonts.

Ultra Violet Feature

- 45 (1) Accredited cheque printer shall print ultra violet bright feature on sensitive area of a cheque including payee line, amount in words line and amount in figures box.

(2) The ultra violet feature shall be a separately designed feature which will fluoresce and be visible under low ambient light levels when illuminated under an Ultra Violet lamp.

(3) The design of the ultra violet feature shall deter counterfeiting

(4) Accredited cheque printer that uses a combinative ink with solvent sensitive and water fugitive properties shall use a separate Ultra Violet ink to achieve Ultra Violet bright feature

Hologram on cheque

- 46 (1) Accredited cheque printer shall;
- (a) emboss a hologram of dimension not greater than 25millimeter by 25millimeter on a cheque;
 - (b) position a hologram at the top left corner of a cheque;
- (2) A presenting bank shall put in place a system to verify or test the authenticity of a hologram on a cheque

Additional Security Feature

47 A licensed financial institution or accredited cheque printer shall seek prior approval from the Bank of Ghana before additional security feature is introduced on cheque.

Interpretation

48 For the purposes of this standard, the following terms and definitions shall apply.

Average Background Reflectance (ABR): It is the arithmetic average of the background reflectance from at least five different points on a sheet, expressed as a percent

Amount Box: This is a box located at the right side of the cheque allocated for the amount in figures to be placed

Asset: Anything that has value to the organization.

Base Stock: Clearing Bank Specification 1 paper on which the cheque security background has been printed.

Bottom reference edge: this refers to the bottom edge of the cheque

Character Pitch: This refers to the number of characters printed per inch measured horizontally.

Clear Band Zone: This is the portion along the bottom strip of the cheque, this zone holds information such as the account number and sort codes.

Clearing Bank Specification1 Paper: Special paper mandated for the production of cheques.

Cheque Security Background: The design printed on Clearing Bank Specification 1 paper to provide the required level of security against fraudulent alteration or counterfeiting. The design comprises several types of security inks.

Encoding: Printing of the Magnetic Ink Character Recognition code line, such as cheque serial number, branch sort code and customer's account number.

Fugitive Plates: Printing plates used for water-fugitive security inks.

Information Security Event: An identified occurrence of a system, service or network which indicates a possible breach of information security policy or failure of safeguards, or a previously unknown situation that may be of security concern.

Information Security: Preservation of confidentiality, integrity and availability of information. It also refers to authenticity, accountability, non-repudiation and reliability of information.

Information Security Management System (ISMS): This means the overall management of a firm's business risk to establish, implement, operate, monitor, review, maintain and improve information security.

mN: The grammage thickness bending resistance of a paper

Optical Character Recognition: This is the use of technology to distinguish printed or handwritten text characters inside digital images of physical documents

Origination Material: Origination material includes security background plates, film, digital files comprising cheque designs.

Payment Instrument: means any medium in electronic or written form used for ordering transmission or payment of money.

Personalization: Printing of one or more of the following:

- Bank details (bank name, branch name and address)
- Branch Sort Code
- Customer's account name
- Magnetic Ink Character Recognition encoding

Porosity: A measure of void spaces within a paper

Print contrast signal: The measurement of the difference in the brightness of the background and the ink used in printing on a cheque

Risk Analysis: Systematic use of information to identify sources and estimate risk

Risk Assessment: Overall process of risk analysis and risk evaluation

Risk Evaluation: The process of comparing the estimated risk against given risk criteria to determine the significance of the risk

Risk Management: Coordinated activities to identify, measure, monitor and manage a firm's risk.

Statement of Applicability: A documented statement describing the control objectives and controls that are relevant to the organization's Information Security Management System.

Taber: Taber is an instrument used to evaluate the stiffness and resilience properties of materials including paper, cardboard, plastics metals, textiles and other sheet materials

FIRST SCHEDULE
CONTROL OBJECTIVE AND MEASURE
(Section 10(1))

Accredited cheque printer is required to meet the following minimum controls.

1 Organization of Information Security

<p>Internal Organization</p> <p>Control objective: To establish a framework for information security management</p>

		Control	Source
1.1	Information security roles and responsibilities	information security responsibility shall be defined and allocated	<ol style="list-style-type: none"> 1. Organisational Chart 2. Job Description 3. Personnel files
1.2	Segregation of duties	A conflicting duty and area of responsibility shall be segregated to minimize the risk of unauthorized or unintentional modification or misuse of organization's asset.	<ol style="list-style-type: none"> 1. Organisational Chart 2. Job Description
1.3	Contact with security agencies and relevant authorities	Evidence of contact with security agencies and other relevant	<ol style="list-style-type: none"> 1. Emergency Contact List and other relevant contact list

		Control	Source
		stakeholders shall be maintained	
1.4	Information security in project management	Information security shall be addressed in project management regardless of the type of project	<ol style="list-style-type: none"> 1. Register of Projects 2. Project Risk Assessment 3. Framework for Project management in Information Security Policy
1.5	Allocation of information security responsibilities	<p>A designated official shall have overall responsibility for security measures and control procedures.</p> <p>The official shall report, and be accountable to senior management of the accredited cheque printer.</p> <p>The official shall ensure that security and operational audit standards specified in this Standard are maintained and appropriate checks of requirements carried out and evidenced.</p>	<ol style="list-style-type: none"> 1. Organisational Chart 2. Report of the responsible officer on security measures and control procedures

2 Human Resource Security

Prior to Employment

Objective: To ensure that employees and contract staff understand their responsibilities and are suitable for the roles for which they are considered.

		Control	Source
2.1	Screening	<p>Background verification checks on all candidates for employment shall be carried out in line with relevant laws, regulations and ethics.</p> <p>Verification checks on permanent staff, contractors and temporary staff shall be carried out at the time of the job application.</p> <p>Accredited cheque printer is expected to maintain a recruitment policy that ensures that suitable staff are employed.</p>	<ol style="list-style-type: none"> 1. Employee file 2. Human Resource Policy 3. Recruitment Policy 4. Employment contract 5. Labour law 6. Interview personnel in charge of Human Resource Management 7. Background verification reports from the Police and Bank of Ghana 8. Reference letter from previous employer

		Control	Source
		<p>Terms and Conditions of Employment shall include at least the following:</p> <ul style="list-style-type: none"> (a) Confidentiality clause or non-disclosure agreement (b) Authority to undertake credit references (c) Authority to undertake random personal searches <p>Personal references, references from previous employers shall be undertaken for all new entrants, and proof of identity substantiated by official documentary evidence prior to engagement of a new employee.</p> <p>A police report shall be obtained on all employees.</p>	

		Control	Source
2.2	Terms and conditions of employment	The contractual agreements with employees and contractors shall state their roles and the organization's responsibilities for information security	1. Employee files 2. Employee Offer letter

3 Asset Management

Responsibility for Assets

Objective: To identify organization assets and define appropriate protection responsibilities

		Control	Source
3.1	Inventory of assets	Assets associated with information and information processing facilities shall be identified and an inventory of these assets shall be drawn up and maintained	1. Asset Register 2. Information Asset Register

		Control	Source
3.2	Ownership of information assets	Assets maintained in the inventory shall be assigned ownership.	Information Asset Register
3.3	Acceptable use of assets	Rules for acceptable use of information and assets associated with information and information processing facilities shall be identified, documented and implemented.	Information Security Policy
3.4	Return of assets	All employees and external parties shall return organizational assets in their possession upon disengagement from employment.	<ol style="list-style-type: none"> 1. Human Resource Policy 2. Exit Interview Report 3. Information Asset Register 4. Disengaged Staff Record

4 Stock Management

Control of Stock

Objective: To define appropriate protection and control for production stock

		Control	Source
4.1	Stock control	<p>All finished stock stored for customers shall be reconciled monthly by an authorized personnel.</p> <p>There shall be a full audit trail for finished stock and other sensitive materials.</p>	<ol style="list-style-type: none"> 1. Stock Reconciliation Report 2. Store inventory report 3. Way bill
4.2	Cheque security background	<p>Only accredited cheque printer shall undertake origination of cheque security features</p>	<ol style="list-style-type: none"> 1. Verification of design files both hard and soft 2. Verify from samples of cheques whether designs conform with printed cheque
4.3	Films and plates	<p>Film and background security</p>	<ol style="list-style-type: none"> 1. Verify storage of films and plates

		Control	Source
		plates shall be stored within a secure environment under the control of a senior member of staff.	2. Logs of films and plates
4.4	Digital files	Access to digital files comprising cheque security background designs, and print order details shall be controlled to prevent unauthorized use, theft or loss of data.	1. Information Security Policy 2. System Access logs 3. Print Order details

5 Media Handling

Media Handling

Objective: To prevent unauthorized disclosure, modification, removal or destruction of information stored on media.

		Control	Source
5.1	Management of removable media	Procedures shall be put in place for management of removable media in line with the classification scheme adopted by the organization.	1. Information Security Policy 2. Policy on Management of removable media
5.2	Disposal of media	Media shall be disposed of when no longer required using established procedures	1. Information Security Policy 2. Policy on Management of removable media
5.3	Physical media transfer	Media containing information shall be protected against unauthorized access, misuse or corruption during transportation.	1. Information Security Policy 2. Policy on Management of removable media

			3. Media transfer log book
5.4	Waste bins	Waste Management system should be put in place for cheque waste produced	Shredding records
5.5	Storage of waste	Cheque waste awaiting shredding shall be stored within secure confines of the factory so that it is covered by the CCTV and alarm systems.	Physical verification
5.6	Destruction of waste	Waste destruction should be properly authorized, accounted for and supervised. Evidence of waste destruction must be properly filed.	Shredding records

6 Physical and Environmental Security

Physical and Environmental Security

Objective: To prevent unauthorized physical access, damage and interference to the organization's information and information processing facilities.

		Control	Source
6.1	Physical security	<p>Security perimeters shall be defined and used to protect areas that contain sensitive or critical information and information processing facilities.</p> <p>The print works and offices shall have external security and members of the public should not gain unauthorised access to the company's building.</p>	Physical verification
6.2	Physical entry controls	Secure areas shall be protected by appropriate entry	1. Access control logs

		Control	Source
		controls to ensure that only authorized personnel are allowed access.	2. Physical verification CCTV logs
6.3	Securing offices, rooms and facilities	Institute physical security for offices, rooms and other facilities	Physical verification
6.4	Intruder alarm system	Fire exits should be clearly marked and intruder alarm system shall be installed on the factory premise.	1. Physical verification of intruder alarm system. 2. Physical Security Policy
6.5	Protection against external and environmental threats	Physical protection against natural disaster, malicious attack or accidents shall be designed and applied.	1. Physical Security Policy 2. Business Continuity Policy
6.6	Working in secure areas	Procedures for working in secure areas shall be designed and applied.	1. Physical Security Policy 2. Physical verification
6.7	Staff Access control	System access control shall be in	Access control logs

		Control	Source
		<p>place to enable management or security staff to control and monitor the following:</p> <p>a)Staff entering and leaving the premises;</p> <p>b)Access to sensitive areas within the premises</p> <p>Issuance of passes shall be controlled, managed, recorded with audit trail.</p>	
6.8	Visitors Access control	<p>a)A system shall be put in place to enable management or security staff to control and monitor the following:</p> <ul style="list-style-type: none"> • Visitors entering and leaving the premises • Access to sensitive 	<p>1. Visitors log book</p> <p>2. CCTV logs</p>

		Control	Source
		<p>areas within the premises</p> <p>b) Visitors shall be issued with pass and their movement restricted to non-sensitive areas, and properly logged.</p>	
6.9	Secure storage for vault and security of cage	A vault or security cage, to which access is restricted shall be used to store sensitive materials	<ol style="list-style-type: none"> 1. Physical verification 2. Access log book
6.10	secure production area	Sensitive materials shall be stored either in a vault, security cage, or in a secure production area to which access is restricted.	<ol style="list-style-type: none"> 1. Physical verification 2. Access logs
6.11	Secure storage of customer data	Data relating to customers' cheque orders shall be secured	Physical verification of data security
6.12	Delivery and loading areas	Access points including delivery and loading areas	Physical verification

		Control	Source
		and other points where unauthorized persons could enter the premises shall be controlled and isolated.	
6.13	CCTV surveillance coverage	<p>CCTV systems shall be installed in all production, packaging, storing and delivery areas of the cheque printing.</p> <p>Management shall undertake a risk assessment of other areas relevant to cheque production to ensure that potential risks are minimized.</p> <p>CCTV recordings shall be viewed, monitored continuously by</p>	<p>Physical verification</p> <p>CCTV logs</p>

		Control	Source
		authorized personnel.	
6.14	CCTV management	CCTV recordings shall be retained securely for at least two years	CCTV storage device
6.15	CCTV system maintenance	Systems shall be tested and maintained by certified contractors, at least once a year	<ol style="list-style-type: none"> 1. Maintenance reports 2. Contractors' certification
6.16	Fire drills	When carrying out fire drills, management shall ensure that entrances and exits are kept under surveillance to ensure that no unauthorized persons enter the factory.	<ol style="list-style-type: none"> 1. Fire Drill Report 2. Interview with staff 3. Fire Extinguisher 4. Certificate from the Ghana National Fire Service

7 Information Security Incident Management

Reporting Information Security Events and Weaknesses
Objective: To ensure a consistent and effective approach is applied to the management of information security incidents, including communication on the security events and weaknesses.

		Control	Source
7.1	Responsibilities and procedures	<p>Management responsibility shall be to ensure a quick, effective and orderly response to information security incident.</p> <p>Accredited Cheque Printer shall have contingency procedures in place to escalate to management any incident involving fraud, missing or stolen consignment.</p> <p>Procedures shall be defined to report all incidents relating to fraud, missing or</p>	<ol style="list-style-type: none"> 1. Incident management policy 2. Business Continuity Plan 3. Incident report 4. Shipping document 5. Stock reconciliation report

		Control	Source
		stolen consignment to the Bank of Ghana.	
7.2	Reporting information security events	Channels for reporting information security events shall be defined	Incident Management Policy
7.3	Reporting information security weakness	Employees and contractors using the organization's information system and services shall be required to note and report any observed or suspected information security weakness.	<ol style="list-style-type: none"> 1. Incident reports 2. Incident logs 3. Security log books 4. Training manual 5. Training report 6. Evidence of training including training attendance record
7.4	Assessment of information security events and management decision	Information security event shall be assessed, classified when identified by management as an incident	<ol style="list-style-type: none"> 1. Criteria for classification of incident 2. Incident Management policy 3. Minutes of management meeting 4. Incident reports
7.5	Response to information security incident	Information security incident shall be responded to in line with documented procedures.	<ol style="list-style-type: none"> 1. Incident reports 2. Incident Management Policy

		Control	Source
7.6	Lesson from information security incident	Knowledge gained from analyzing and resolving information security incident shall be used to reduce the likelihood or impact of future incident	<ol style="list-style-type: none"> 1. Incident management report 2. Change management 3. Documented lessons learnt from incident 4. Interview 5. Management representation 6. Training Manual
7.7	Collection of evidence	Accredited cheque printer shall define and apply procedures for identification, collection, acquisition and preservation of information which can serve as evidence.	<ol style="list-style-type: none"> 1. Incident Management Policy 2. Incident report 3. Records on evidence collected from incident

8 Business Continuity Management

Aspects of Business Continuity Management

Objective: Information security continuity shall be embedded in the organization’s business continuity management system.

		Control	Source
8.1	Planning information security continuity	Accredited cheque printer shall determine requirements for information security and the continuity of information security management in adverse situations, for instance, during a crisis or disaster. There shall be a process to ensure business continuity.	1. Business Continuity Policy 2. Disaster Recovery Plan 3. Business Continuity Plan 4. Defined Responsibility for continuity management
8.2	Implementing information security continuity	Accredited cheque printer shall establish, document, implement and maintain processes, procedures and controls to ensure	1. Business Continuity Policy 2. Disaster Recovery Plan 3. Business Continuity Plan

		Control	Source
		<p>the required level of continuity for information security during an adverse situation.</p> <p>Accredited cheque printer must adopt one of the alternatives specified in Section 22 of the standard.</p>	<p>4. Defined responsibility for continuity management</p> <p>5. Business continuity test report</p>

9. Cheque order processing

Secure production of cheque

Objective: To ensure that licensed financial institutions orders are processed as authorized, and to produce secure and verifiable production audit trails.

		Control	Source
9.1	Print order processing audit controls	The print order processing system used shall provide a full audit trail to allow an order to be tracked through all operations from	<p>1. System logs</p> <p>2. Cheque order requests</p> <p>3. Way Bill</p> <p>4. Base stock request</p>

		Control	Source
		initial receipt and delivery to a licensed financial institution.	5. Destruction of personalisation waste 6. Accounting for the output in relation to requisition 7. Authorisation of requests 8. Reconciliation of orders with delivery

10. Sub-contracting

Procedure for Sub-Contracting

Objective: To ensure that any sub-contracted cheque-related processes are handled securely in order to prevent loss, misuse, theft or unauthorized access.

		Control	Source
10.1	Approved sub-contractors	Accredited cheque printer shall use other accredited cheque printer when sub-contracting cheque printing.	1. Service Level Agreement 2. Accreditation certificate

		Control	Source
		<p>Accredited cheque printer who sub-contracts all cheque printing work shall have the accreditation terminated.</p> <p>Accredited cheque printer shall not sub-contract more than fifty percent of cheque printing to another accredited cheque printer other than in Business Continuity Management or Disaster Recovery situation.</p>	
10.2	Sub-contracting of origination work	Under no circumstance should origination work including artwork; data files; film be sub-contracted or released to any third party, other than another accredited cheque printer.	<ol style="list-style-type: none"> 1. Service Level Agreement 2. Oath of secrecy 3. Disciplinary committee report 4. Code of ethics

		Control	Source
10.3	Sub-contracting printing plates	Manufacture of fugitive plates may be sub-contracted to a specialist plate maker. The printer remains responsible for the end-to-end process.	Service Level Agreement

11 Transport/Dispatch

Protection of consignment

Objective: To ensure adequate controls are in place for protection of consignments in transit.

		Control	Source
11.1	Audit trail	There shall be an auditable dispatch system which provides a full audit trail of all consignments. Procedures shall be in place to ensure that orders are checked against work tickets before being dispatched.	1. Dispatch logs 2. Way bill 3. Dispatch Procedures Manual

		Control	Source
11.2	Cheques awaiting dispatch	<p>a) Security Packaging: Boxes or packages containing cheque books, fanfold cheques and sheet cheques, shall be secured.</p> <p>b) Reels shall be film-wrapped.</p> <p>c) Consignments of cheques awaiting dispatch shall be kept under supervision within a secure area.</p>	<ol style="list-style-type: none"> 1. Physical verification 2. CCTV logs 3. Assessment of security of cheques 4. Examine cheques awaiting dispatch to ascertain security
11.3	Delivery of consignments	<p>Labels of consignment shall not indicate that it contains cheques.</p> <p>A reputable carrier shall be used when the printer's own delivery transport is not used.</p>	<ol style="list-style-type: none"> 1. Physical verification 2. Service Level Agreement with transport company 3. Examine the seal of the printer 4. Way bill

SECOND SCHEDULE

APPLICATION REQUIREMENTS FOR ACCREDITATION OF PRINTER OF PAYMENT

INSTRUMENT

(Section 5(1))

No.	List of Requirements
1.	<p>Company Profile</p> <ul style="list-style-type: none">(a) overview of the Company including its history, date it was founded, registered address (including digital address), registration documents from the Registrar General’s Department,(b) a synopsis of the service to be offered;(c) details of External Auditors, Accountants, Bankers and all third party payment service providers(d) tax clearance certificate
2.	<p>Governance</p> <ul style="list-style-type: none">(a) profile of shareholders indicating respective percentage shareholding and nationality;(b) submission of copies of share certificate of the company;(c) attestation from a notary public confirming ultimate beneficial owner(s) with ten percent or more of total share ownership and voting rights;(d) number and profile of Board Directors and key management personnel as required by section 18 of the Payment Systems and Services Act, 2019 (Act 987);(e) organisational structure;(f) profile of promoters where applicable.

No.	List of Requirements
3.	<p>Business Plan</p> <ul style="list-style-type: none"> (a) covering business overview, market analysis, products and services to be offered; (b) three years financial projections for the proposed business. (c) endorsement by banks or committed parties
4.	<p>Systems and Technology</p> <ul style="list-style-type: none"> a. Information, Communication and Technology Systems indicating; <ul style="list-style-type: none"> Hardware Types of servers, workstations, printers, network switches and routers to be deployed Software Types of Operating System, mail management service, antimalware and firewall protection to be deployed b. Information, Communication and Technology Architecture diagram highlighting Security and Control; c. Information, Communication and Technology policy framework; d. Business Continuity Policy including Disaster Recovery Plan; e. Data Protection Certificate; f. secure channel for transmitting customer information g. type of encryption and security
5.	<p>Enterprise Risk Management</p> <ul style="list-style-type: none"> (a) Risk and Mitigation Measures

No.	List of Requirements
6.	Consumer Protection Policy (a) Review Service Level Agreement to ascertain complaint management procedures and liability sharing

PUBLIC

THIRD SCHEDULE

APPLICABLE FEES

(Section 5(1))

The following fees are proposed for accreditation of the business of cheque printing;

Processing fee	Accreditation Fee	Annual Renewal
GH¢ 1,000	GH¢ 3,000.00	GH¢ 500.00

PUBLIC

FOURTH SCHEDULE
 MINIMUM GOVERNANCE AND SYSTEM REQUIREMENT
 (Section 5(1))

Minimum Governance Requirements

	Accreditation
Dedicated Physical Office Space	Yes
Verified Board of Directors	Yes
Clear Balanced and Adequate Organizational Structure	Yes
Data Protection Policy	Yes
External Audit	Tier 3 to Tier 1 Audit Firm
Procedures Manual	Yes
Risk Management Framework	Yes
Compliance Framework	Yes
Registered Ghana Business	Yes
Data Protection Certificate	Yes

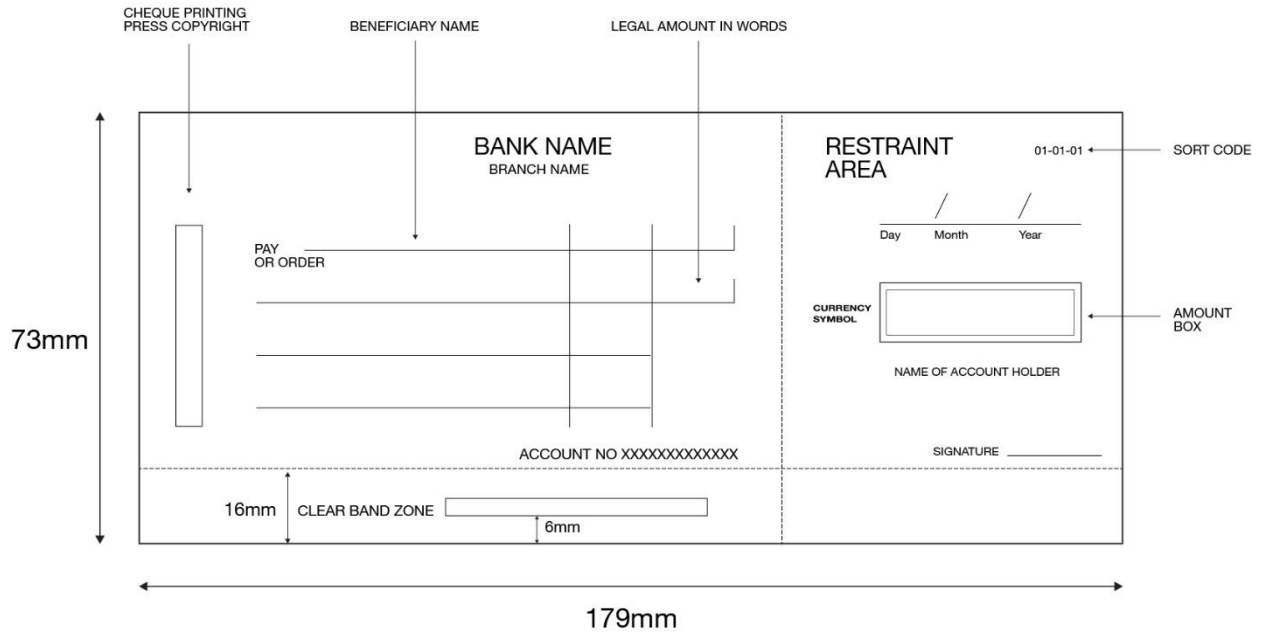
Minimum System Requirements

	Accreditation
ISO 27001:2013	No
Back-up Policy	Yes
Evidence of Back-up setup	Yes

FIFTH SCHEDULE

PHYSICAL CHARACTERISTICS OF PERSONAL CHEQUE

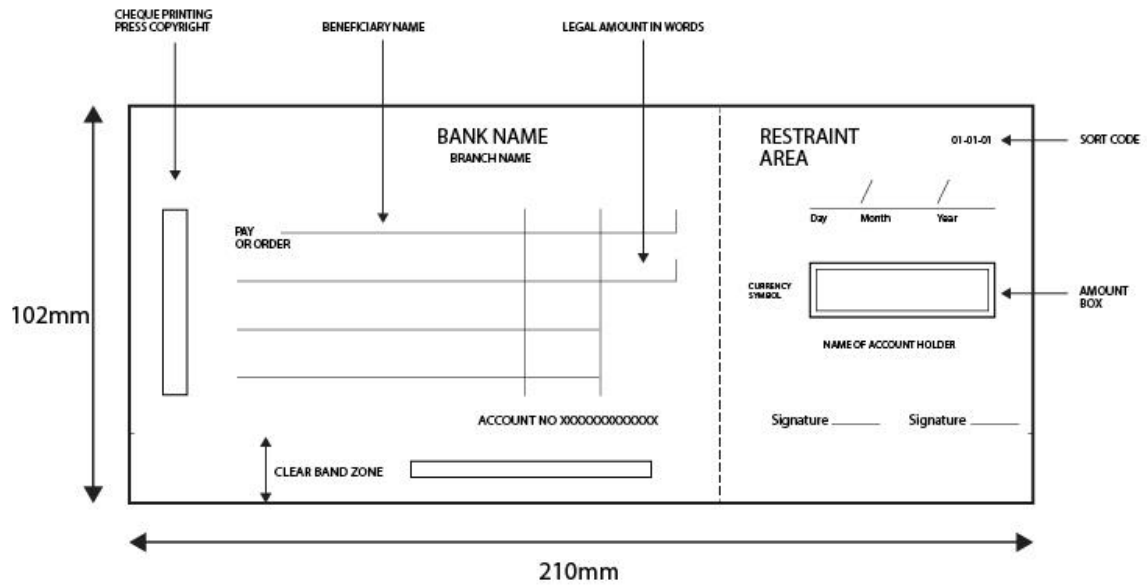
(Section 32(1))



SIXTH SCHEDULE

PHYSICAL CHARACTERISTICS OF CORPORATE CHEQUE

(Section 32(1))



SEVENTH SCHEDULE
CHEQUE MEASUREMENTS
(Section 32(1))

	<u>Length</u>	<u>Height</u>
Minimum (Personal)	179 millimeters	73 millimeters
Maximum (Corporate)	210 millimeters	102 millimeters

PUBLIC

EIGHTH SCHEDULE
 APPLICABLE SANCTIONS
(Section 12)

ID	OFFENCE	RESPONSIBILITY	SANCTION
1	Failure or refusal to submit new cheque design for testing and approval	Licensed financial institution	Fine of GH¢ 3,000
2	Engagement of unaccredited cheque printer	Licensed financial institution	1. Withdrawal of cheques from circulation 2. GH¢ 5,000 fine for a repeated offence
3	Failure to encode cheque or meet the mandatory security and quality standards.	Accredited cheque printer	1. GH¢ 50 per cheque book
4	Non-validation of order before commencement of cheque printing job.	Accredited cheque printer	1. Warning. 2. Penalty of GH¢ 2,500 in case of repeated offence
5	Introduction of unapproved security feature.	Licensed financial institution and Accredited cheque printer	1. GH¢ 5,000 per security feature. Penalty will be shared equally by the licensed financial institution and accredited cheque printer.

ID	OFFENCE	RESPONSIBILITY	SANCTION
6	Failure to submit fraud report	Accredited cheque printer	1. GH¢ 1,000 fine.
7	Sub-contracting of job above fifty percent to another accredited cheque printer other than in Business Continuity Management or Disaster Recovery situation.	Accredited cheque printer	1. Warning 2. GH¢ 5,000 fine 3. Termination of accreditation.
8	Failure to produce or personalise cheques that conform to Bank of Ghana accreditation standard.	Accredited cheque printer	1. Reprint or personalise at own cost.
9	Failure to set up or execute a Business Continuity or Disaster Recovery with another accredited cheque printer.	Accredited cheque printer	1. Warning 2. Suspension of accreditation.
10	Subcontracting cheque printing to a non-accredited printer.	Accredited cheque printer	1. Warning 2. A fine of GH¢ 2,000 for a repeated offence
11	Failure to provide documented evidence for shipment of raw material	Licensed financial institution, Accredited cheque printer	1. Warning. 2. Penalty of GH¢ 2,000 in case of a repeated offence

ID	OFFENCE	RESPONSIBILITY	SANCTION
12	Failure to conduct training for employees on cheque fraud related issues	Accredited cheque printer	1. Warning 2. Fine of GH¢ 2,000
13	Failure to notify Bank of Ghana on cessation of printing	Accredited cheque printer	1. Blacklist the accredited cheque printer in Bank of Ghana database
14	Failure to give the mandatory six months' notice of planned temporary suspension of operations to the Bank of Ghana.	Accredited cheque printer	1. Warning. 2. Penalty of GH¢ 5,000 in case of a repeated offence
15	Failure to give the mandatory four weeks' notice of changes in current arrangement which may affect accreditation status to the Bank of Ghana	Accredited Cheque Printer	1. Warning. 2. Penalty of GH¢ 500 in case of a repeated offence
16	Failure of Cheque Printer to respond to queries arising from infractions, from Bank of Ghana examination.	Accredited cheque printer	1. Warning 2. Penalty to be determined by Bank of Ghana where response is not received within a specified period stated in the letter dispatched to the accredited cheque printer