



BANK OF GHANA

GUIDELINES ON OPERATIONS OF ELECTRONIC PAYMENT CHANNELS IN GHANA

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Preamble

In exercise of the powers conferred on the Bank of Ghana (BOG) by Section 4 (e) of the Bank of Ghana Act, 2002 Act 612, the Bank and Specialised Deposit-Taking Institutions Act, 2016 as well as the Electronic Transactions Act 2008, to promote and facilitate the development of efficient and effective systems for the settlement of transactions, including the development of electronic payment systems; the BOG hereby issue the following Guidelines on Operations of Electronic Payment Channels in Ghana.

These Guidelines supersede earlier directives on the operations of platforms for Automated Teller Machines and Point Of Sale Systems in Ghana, contained in June 2006

NOTICE NO.BG/GOV/SEC/2006/6

1.1 The Standards

1.1.1 Standards on ATM Technology and Specification:

- a. All ATM deployers/acquirers shall comply with Payment Card Industry Data Security Standards (PCI DSS)
- b. All ATMs shall be able to dispense all denominations of Ghana Cedi.
- c. For deposit taking ATMs, acceptable denominations shall be displayed by the deployer.
- d. All terminals shall be levels 1 & 2 EMV compliant at a minimum, and shall be upgraded from time to time, to comply with the latest version, within twelve months of release of the version.
- e. All ATM systems shall have audit trail and logs capabilities, comprehensive enough to facilitate investigations, reconciliation and dispute resolution.
- f. Card readers shall be identified by a symbol that:
 - i. represents the card;
 - ii. identifies the direction for which the card should be inserted into the reader
 - iii. All new ATMs shall accept card horizontally with the chip upwards and to the right or as may be in line with international best practices and standards.

- g. All ATMs deployed shall have tactile graphic symbol for the use of visually impaired customers. Locations of such ATMs are to be visibly publicized on their corporate website at the minimum. This should be complied with within five years from the release of these standards.

1.2 The Guidelines

ATM deployment

- a. All Banks and Specialised Deposit-Taking Institutions under Act 930 as well as Independent ATM deployers may own ATMs; however such institutions must enter into an agreement with a card scheme or a scheme operator or their designated settlement agent for acceptance and settlement of all the transactions at the ATM.
- b. All ATM transactions in Ghana shall be processed by a Ghanaian company operating in Ghana as acquirer-processor.
- c. No card or payment scheme shall compel any issuer or acquirer to send any transaction outside Ghana for the purpose of processing, authorization or switching, if the transaction is at an ATM or at any acceptance device in Ghana and the issuer is a Ghanaian bank or any other issuer licensed by BOG.
- d. All transactions at an ATM in Ghana shall, where the issuer is a Ghanaian bank or any other issuer licensed by BOG be settled under a domestic settlement arrangement operated by a Ghanaian Company. All collaterals for such transactions shall be in Ghanaian National Currency and deposited in Ghana.
- e. No card scheme shall discriminate against any ATM owner or acquirer. Every card-scheme must publish for the benefit of every ATM owner or acquirer and the Bank of Ghana, the requirements for acquiring ATM transactions under the card scheme.
- f. No ATM owner or acquirer shall discriminate against any card scheme or issuer.
- g. Stand-alone or closed ATMs are not allowed.

- h. ATMs should be situated in such a manner as to permit access at reasonable times. Access to these ATMs should be controlled and secured so that customers can safely use them.
- i. Lighting should be adequate for safe access and good visibility. It should provide a consistent distribution and level of illumination, particularly in the absence of natural light.
- j. ATMs should be sited in such a way that direct or reflected sunlight or other bright lighting is prevented from striking the ATM display, for example, through the use of overhead sun shelter
- k. Privacy shall be provided by the design and installation features of the ATM so that in normal use the cardholder does not have to conspicuously take any protective action.
- l. All ATMs shall accept all cards issued in Ghana under BOG regulations for any card-based value added service made available on the machine.

1.3 ATM Operations:

All Banks and Specialised Deposit-Taking Institutions under Act 930 as well as Independent ATM deployers that deploys an ATM for the use of the public shall ensure that:

- a. The ATM downtime (due to technical fault) is not more than seventy-two (72) hours consecutively, where this is not practicable, customers shall be duly informed by the deployer;
- b. The helpdesk contacts are adequately displayed at the ATM terminals. At the minimum, a telephone line should be dedicated for fault reporting and such telephone line shall be functional and manned at all times that the ATM is operational.
- c. All ATM charges are fully disclosed to customers.
- d. The ATMs issue receipts, where requested by a customer, for all transactions, except for balance enquiry, stating at a minimum, the amount withdrawn, the terminal identity, date and time of the transaction.

- e. Receipt prints and screen display are legible. The dispensing deposit and recycling component of the machine is in proper working condition.
- f. Cash retraction shall be disabled on all ATMs.
- g. There is appropriate monitoring mechanism to determine failure to dispense cash.
- h. There is online monitoring mechanism to determine ATM vault cash levels.
- i. ATM vault replenishment is carried out as often as necessary to avoid cash-out.
- j. ATMs are not stocked with unfit notes.
- k. Cash is available in the ATMs at all time. The funding and operations of the ATM deployed by non-bank institutions should be the sole responsibility of the bank or institutions that entered into agreement with them for cash provisioning. In this regard, the Service Level Agreement (SLA) should specify the responsibilities of each of the parties.
- l. Change of PIN is provided to customers, free of charge.
- m. Acquirers monitor suspicious transactions and report same to BOG, based on the agreed format and timeframe.
- n. Back-up power (inverter) is made available at all ATM locations, in such a way that the machine would not cease operation while in the middle of a transaction.
- o. Paper disposal basket is provided at all ATM locations
- p. A register of all their ATMs in Ghana with location, identification, serial number of the machines, etc is maintained.
- q. Provision is made for extending the time needed to perform a specific step by presenting a question, such as, "Do you need more time?"
- r. Information sufficient to construct a usable card is not displayed on the screen or printed on a transaction record. This will guard against the possibility that such information may become accessible to another person should the cardholder leave the ATM while a transaction is displayed, or abandon a printed transaction record.
- s. Precautions are taken to minimise the possibility of a card being left, by a message or voice, alerting the customer to take his card.

- t. Card out first before cash is out of the ATM is adopted, to minimise the possibility of customers losing their cards at ATM terminals
- u. ATM acquirers shall disable cash-retract and display such notice at the ATM or on the screen.
- v. Acquirers shall reconcile and refund all funds in their possession, belonging to customers as a result of ATM's non-dispense and partial dispense errors.
- w. Acquirers shall also install appropriate mechanism to immediately initiate refunds without the prompting of the issuing bank or the customer.

1.4 ATM Maintenance

All Banks and Specialised Deposit-Taking Institutions under Act 930 as well as Independent ATM deployers that deploys an ATM for the use of the public shall ensure that:

- a. Notice is displayed at the ATM for planned maintenance period and disruption to service, due to maintenance for public.
- b. An ATM maintenance register or log is kept properly.
- c. All ATMs and cash in the machines are insured.
- d. ATMs are physically inspected at least fortnightly.

1.5 ATM Security

- a. Every ATM shall have cameras, which shall view and record all persons using the machines and every activity at the ATM, including but not limited to: card insertion, transaction selection, cash withdrawal, card taking, etc. However, such cameras should not be able to record the key strokes of customers using the ATM.
- b. Where a surveillance camera is used, it should be kept secret to avoid illegal removal or damage or compromise.
- c. Networks used for the transmission of ATM transactions must be demonstrated to have data confidentiality and integrity

- d. All ATMs must be located in a manner that guarantees safety and security of users and confidentiality of their transactions.
- e. ATMs should not be placed outside buildings, unless such ATM is bolted to the floor and surrounded by structures, to prevent removal.
- f. Additional precaution must be taken to ensure that any network connectivity from the ATM to the bank or switch is protected, to prevent the connection of other devices to the network point.
- g. Where the user of an ATM blocks his image for camera capture, the ATM shall be capable of aborting the transaction.
- h. ATM key management processes must ensure that keys are changed regularly (every year) and the same keys must not be used at multiple ATMs.
- i. ATMs shall be installed with Anti-Skimming devices that would ensure effective mitigation against fraud incidents.

1.6 Dispute Resolution

In the event of irregularities in the account of an ATM cardholder, arising from unauthorised use of card on ATM, the following shall apply:

- a. All cardholders' complaints should be treated within T + 3 from the date of receipt of the complaints; Acquirer must respond to Issuer's request within 2 days.
- b. Where records are falsified by any party, appropriate sanctions shall apply.

1.7 Regulatory Monitoring

- a. Any institution which operates an automated teller machine shall file an updated list of such ATMs, including the institution's digital address with the Director, Payments System Department of Bank of Ghana for compliance monitoring.
- b. The Bank shall conduct onsite checks of ATMs with a view to ensuring compliance with cash and service availability.

- c. Acquirers shall report volume and value of transactions on monthly basis to the Director, Payment Systems Department, BOG.
- d. Acquirers shall submit report on service downtimes or service interruptions due to scheduled maintenance on monthly basis to the Director, Payment Systems Department, BOG.

1.8 Penalties

Sanctions, in the form of monetary penalties / or suspension of the acquiring/processing service(s) or both, would be imposed on erring institutions for failure to comply with any of the provisions of this Guidelines, or any other relevant Guidelines, issued by BOG from time to time.

2.0 GUIDELINES ON POINT OF SALE (POS) CARD ACCEPTANCE SERVICES

2.1 Objectives

These guidelines have been developed to provide minimum standards and requirements for the operation of POS card acceptance services.

2.2 Point of Sale Card Acceptance Services Stakeholders

POS Card Acceptance Services Stakeholders include, but not limited to:

- i. Merchant Acquirers
- ii. Card Issuers
- iii. Merchants
- iiii. Cardholders
- v. Card Schemes
- vi. Switches
- vii. Payments Terminal Service Aggregator (PTSA)
- viii. Payments Terminal Service Providers (PTSP)
- ix. Non-card Schemes

2.3 Minimum Standards

All industry stakeholders who process and/or store cardholder information, shall ensure that their terminals, applications and processing systems comply with the minimum requirements of the following Standards and Best Practices. In addition, all terminals, applications and processing systems, should also comply with the standards specified by the various card schemes. Each vendor must provide valid certificates, showing compliance with these standards, and must regularly review status of all its terminals, to ensure they are still compliant, as standards change. There will be a continuous review and recertification on compliance with these and other global industry standards, from time to time.

2.3.1 PA DSS –Payment Application Data Security Standard.

2.3.2 PCI PED – Payment Card Industry Pin Entry Device

2.3.3 PCI DSS – Payment Card Industry Data Security Standard.

2.3.4 Triple DES – Data Encryption Standards should be the benchmark for all data transmitted and authenticated between each party. The triple DES algorithm is the minimum standard.

2.3.5 EMV – The deployed infrastructure must comply with the minimum EMV requirements.

2.4 Roles and Responsibilities of:

2.4.1 Merchant Acquirers

2.4.1.1 Only BOG licensed institutions shall serve as Merchant Acquirers.

2.4.1.2 Merchant Acquirers can own POS Terminals, but shall only deploy and support POS terminals through a BOG licensed Payment Terminal Services Provider (PTSP). However, exceptions can be granted by the BOG, where PTSP services are not available.

2.4.1.3 Merchant Acquirers shall ensure that POS terminals purchased and deployed at merchant/retailer locations through BOG licensed Payment Terminal Services Provider shall accept all cards (card agnostic) as well as Near Field Communication (NFC) enabled devices.

2.4.1.4 Merchant Acquirers shall enter into agreements/contracts with merchants for accepting payment by means of electronic payment instrument. All agreements /contracts shall clearly spell out the terms and conditions, including roles, responsibilities and rights of the acquirer and the merchant. The contract should also clearly spell out requirements for the merchant's responsibilities in ensuring proper upkeep of the POS terminal.

2.4.1.5 Every Merchant Acquirer shall connect all its POS terminals or other acquiring devices directly to a Payments Terminal Service Aggregator.

2.4.1.6 Merchant Acquirers shall switch all domestic transactions through the preferred local switch of their choice for purpose of seeking authorization from the relevant Issuer and shall not under any circumstance be routed outside Ghana.

2.4.1.7 To achieve interoperability, all POS terminals deployed in Ghana shall accept all transactions arising from any card issued by any Ghanaian bank. Accordingly, Acquirers and other service providers shall be card neutral entities that have no reason to promote or favour any card brand over the other.

2.4.1.8 Every acquirer must be able to accept all cards issued by Ghanaian banks, whether through a direct license or via an arrangement with any other acquirer that is licensed under the relevant card scheme/association.

2.4.1.9 Merchant Acquirers, in conjunction with their Payment Terminal Service Providers, shall be responsible for ensuring that merchants are trained and made to put in place, reasonable processes and systems, for confirming cardholder identity and detecting suspicious or unauthorized usage of electronic payment instruments, where customer/card is physically present at point of sale.

2.4.1.10 Merchant Acquirers shall be required to undertake measures to prevent the use of their networks for purposes associated with money laundering and other financial crimes.

2.4.1.11 Merchant Acquirers shall conduct proper KYC on all their merchants with POS.

2.4.1.12 Merchant Acquirers shall set merchant limits, based on the volume of business/type of commercial activities. In addition, Merchant Acquirers shall provide guidelines to merchants on payment procedures for large ticket transactions e.g. review of Identification, etc.

2.4.1.13 Merchant Acquirers shall, in conjunction with banks, switches and other stakeholders, ensure resolution of disputed transactions between the merchant and the cardholder within T + 5 days. All transactions from POS devices shall be routed through the PTSA to the relevant acquirer or its appointed third party processor.

Merchants shall provide evidence to dispute requests from the Acquirers within 3 days, failure of which their accounts shall be debited for the value of transaction.

2.4.1.14 There shall be no exclusivity arrangements that bundle third party switching activities. Each acquirer shall be free to process transactions on its own, or leverage the services of a third party processor; and these services shall be independent of the switch used to facilitate such exchange.

2.4.1.15 Banks shall maintain and reconcile merchant accounts on behalf of the Merchant.

2.4.2 Payment Terminal Services Provider (PTSP)

2.4.2.1 To ensure effectiveness of POS operations and a proper support/maintenance infrastructure, only BOG licensed Payments Terminal Service Providers shall deploy, maintain and provide support for POS terminals in Ghana. PTSPs shall offer services to acquirers, covering all aspects relating to terminal management and support, including, but not limited to purchase and replacement of spare parts, provision of connectivity, training, repairs, and development of value-added services, amongst other things.

2.4.2.2 BOG shall license a limited number of Payments Terminal Service Providers, to enable the PTSPs build scale and maximize efficiency. Criteria for PTSPs shall be defined by BOG, and the performance of licensed PTSPs shall be reviewed annually, to confirm they meet defined performance targets. Licences of PTSPs that fail to meet performance expectations shall be withdrawn and fresh licences issued to qualifying companies.

2.4.2.3 PTSPs can identify merchant opportunities and market potential merchants on behalf of acquirers.

2.4.2.4 Only licensed PTSPs shall be allowed to deploy POS terminals. Any party, other than a PTSP that deploys POS terminals, shall be fined 500 Ghana Cedi per each day that the terminal remains deployed. PTSPs shall clearly agree SLAs on deployment timelines with acquirers, to ensure efficient deployment of POS terminals.

2.4.2.5 PSTPs shall ensure that their deployed POS terminals are functional at all times. Appropriate mechanism must be put in place to remotely detect failures, which shall be rectified or replaced within 48 hours.

2.4.2.6 All terminals deployed by PTSPs must have stickers with the PTSP's support service contact information. In addition PTSPs must have a support infrastructure that ensures support coverage for merchants, 7 days a week.

2.4.2.7 PTSPs will be required to enter into contracts/SLAs with the acquirers that will clearly state the terms and conditions of their support services.

2.4.2.8 PTSPs shall work with the PTSA to ensure all POS terminals deployed by them meet all required certifications and the minimum POS specifications, defined in these Guidelines.

2.4.2.9 PTSPs shall work with acquirers and the terminal manufacturers to ensure that terminals are phased out/replaced/upgraded as appropriate, as their certifications become obsolete.

2.4.3 POS Terminal Owner

2.4.3.1 Banks, Merchants, Acquirers, and PTSPs can be POS Terminal Owners.

2.4.3.2 POS Terminal Owners shall ensure all POS terminals procured by them are compliant with the minimum POS specifications.

2.4.3.3 POS Terminal Owners shall cover the costs of repairs and replacements of parts for their terminals.

2.4.4 Payments Terminal Service Aggregator (PTSA)

2.4.4.1 Ghana Interbank Payment and Settlement Systems (GhIPSS) – wholly owned subsidiary of the Bank of Ghana, shall act as the Payments Terminal Service Aggregator for the financial system.

2.4.4.2 As the Payments Terminal Service Aggregator for the industry, GhIPSS shall establish communication network for reliable POS data traffic that shall satisfy the service and availability standards and expectations of the industry, on a cost effective basis.

2.4.4.3 As the Payments Terminal Service Aggregator for the industry, GhIPSS shall, on an annual basis, or more frequently, as may be required, on behalf of the industry, certify POS Terminals that meet the POS Terminal standards, approved for the industry.

2.4.4.4 As the Payments Terminal Service Aggregator, GhIPSS shall, participate on a joint committee of industry stakeholders, to negotiate a price list with 2–3 terminal equipment providers for bulk purchase of POS terminals for the Ghana market. It is expected that a bulk purchase agreement will enable cost reduction on POS terminals, as well as the ability to define special requirements for the Ghanaian market, and ensure a sufficient support infrastructure from the terminal manufacturers. Any Terminal Owner may subscribe to the negotiated global price list for the purchase of POS Terminals to take advantage of these benefits.

2.4.4.5 As the Payments Terminal Service Aggregator, GhIPSS shall be the only entity permitted to operate a Terminal Management System. All POS terminals operating in Ghana must be connected to the Payments Terminal Service Aggregator. This is to ensure comprehensive oversight, reporting/performance monitoring, and also in line with agreed objectives of shared industry infrastructure and best practice. GhIPSS shall provide Acquirers and Payments Terminal Service Providers and their merchants (where required) the ability to view transactions and monitor performance of their devices.

2.4.4.6 All POS Terminals deployed shall be technically enabled to accept all cards (including contactless/cardless) issued by Ghanaian banks.

2.4.4.7 The Payments Terminal Service Aggregator shall route all transactions from POS terminals to the relevant Acquirer or its designated third party processor. This enables Acquirers who are Issuers handle On-Us transactions appropriately and all Acquirers to manage their risks and accept responsibility for such transactions in line with Charge-back Rules of relevant Card Schemes. This does not preclude any Acquirer from using the services of Third Party Processor (TPP) or the Acquirer's in-house processing services to process its acquired transactions.

2.4.4.8 All domestic transactions, including, but not limited to POS and ATM transactions must be switched, using the services of a local switch, and shall not, under any circumstance, be routed outside Ghana for switching.

2.4.4.9 The Payments Terminal Service Aggregator shall monitor the availability and transaction traffic on all POS terminals on a continuous basis.

2.4.4.10 The Payments Terminal Service Aggregator shall as well provide analysis and reporting on POS terminal performance and transaction trend to Bank of Ghana and the industry.

2.4.4.11 The Payments Terminal Service Aggregator (PTSA) shall ensure all merchants and other relevant parties are settled within the T+1 settlement period, upon receipt of settlement reports from all card schemes or the switches that PTSAs have appointed to provide such reports on their behalf. Failure to execute the T+1 settlement cycle shall result in a sanction to the PTSA, including, but not limited to refunding the entire Merchant Service Charge for that day's transactions.

2.4.4.12 The Payments Terminal Service Aggregator shall have clear Service Level Agreements for certifying terminals quickly and efficiently, as well as for integrating new value-added services on behalf of acquirers, PTSPs, or Third party application developers.

2.4.5 Merchants

2.4.5.1 A merchant shall enter into agreement with Merchant Acquirer, specifying in clear terms, the obligations of each party.

2.4.5.2 Merchant shall accept cards and other payment tokens as methods of payment for goods and services.

2.4.5.3 The POS shall display the amount to be authorised on the screen requesting PIN entry, so that the customer can see the amount being paid before authorization.

2.4.5.4 The merchant shall be held liable for frauds with the card arising from its negligence, connivance etc.

2.4.5.5 A merchant shall under no circumstance, charge a different price, surcharge a cardholder or otherwise discriminate against any member of the public who chooses to pay with a card or by other electronic means.

2.4.6 Cardholders

2.4.6.1 A cardholder shall:

- a) Store the payment card and protect his/her PIN with due care
- b) Not keep his payment card together with the PIN
- c) Notify the issuer without delay, about missing, stolen, damaged, lost or destroyed card
- d) Not make the payment card available to unauthorized persons.

2.4.6.2 The cardholder may withdraw from the contract for payment card without prior notice to the issuer, provided he does not owe for any charges or transactions on the payment card.

2.4.6.3 The cardholder shall present, when required by a merchant, a document confirming his identity.

2.4.6.4 The cardholder shall receive value for the operations performed by means of a payment card, and by so doing, the holder commits himself to pay the amount of the operations, together with charges due to the issuer, from a specified account.

2.4.6.5 The cardholder shall be held liable for fraud committed with his card, arising from the misuse of his PIN or his card.

2.4.6.6 The cardholder shall be entitled to receive a receipt, or any other form of evidence at the time a transaction is performed with his/her card.

2.4.6.7 The cardholder shall be entitled to receive, within a reasonable period, at least monthly, a statement of all transactions performed with his/her card.

2.4.6.8 If a cardholder notifies his bank that an error involving his card has occurred, the institution must investigate and resolve the claim within T + 5 days.

2.4.6.9 A cardholder shall be given reasonable notice before changes are made to the terms and conditions of his card contract and shall be given the option to opt out of the card contract, without penalty.

2.4.7 Card Schemes

2.4.7.1 All card schemes in Ghana are bound by these Guidelines and other relevant BOG Guidelines, Notices and Circulars.

2.4.7.2 The Bank shall reserve the right to assess the rules to confirm objectivity, vis-a-vis international standards/best practice. Any Card Scheme that wrongfully denies membership or unnecessarily delays the process of certification to potential players would be penalized by BOG – including, but not limited to paying a fine, equivalent to the expected revenue of the payment services provider for that period, suspension and/or revocation of licence, and BOG licensing new schemes.

2.4.7.3 No Card Scheme shall engage in the business of acquiring; neither shall any entity that has a management contract with a Card scheme engage in the business of acquiring. In addition, no entity in which a Card Scheme, its subsidiary, or the majority shareholder of a card scheme, has 20% shareholding or more, shall engage in the business of acquiring.

2.4.7.4 No Card Scheme shall engage in any antitrust activity or any act that will lead to abuse of dominant position, monopoly or unfair competition.

2.4.7.5 There shall not be any form of arrangement or collusion between two or more Card Schemes, or Payment Schemes in respect of Issuing, Acquiring, Processing or Switching.

2.4.8 Switching Companies

2.4.8.1 All local switches in Ghana shall ensure that transactions relating to all cards issued by Ghanaian banks are successfully switched between Acquirers and Issuers.

2.4.8.2 To achieve the interconnectivity of all new and existing switching companies, all switching companies shall open their networks for reciprocal exchange of transactions/messages with the Ghana Central Switch and Payment Terminal Service Aggregator.

2.5 Settlement Mechanism

2.5.1 The settlement for domestic POS transactions must be done to the merchant account on T+1 basis, where T is the date the transaction is performed. Failure to execute the T+1 settlement cycle shall result in a sanction to the GHIPSS.

2.5.2 Card schemes or their appointed switches shall provide their settlement reports to GHIPSS daily by 10am, for the previous day. The settlement information should contain sufficient details, to enable GhIPSS credit merchant accounts directly, and shall be provided in a format as advised by GhIPSS.

2.5.3 Failure to provide this information in the required format or by the required timeline will result in a sanction, including, but not limited to the offending party solely refunding the entire Merchant Service Charge for that day's transactions.

2.5.4 GhIPSS shall also directly credit the accounts of other parties with their share of the Interchange.

2.5.5 GhIPSS will be paid by the banks for the settlement done to the merchant account, in line with the National Electronic Funds Transfer (NEFT) fee transaction charges.

2.6 Fees and Charges

2.6.1 Fees and charges for POS Card Acceptance services are to be agreed between the service providers and banks / entities to which the services are being provided, subject to the following limits:

- a. The maximum total fee that a merchant shall be charged for any POS transaction shall be subject to negotiation between the acquirer and the merchant after taking into account, the provisions of the Interchange Guidelines.
- b. The fees and charges stated above are applicable to only POS transactions performed with Ghana Cedi denominated cards. POS transactions done with cards issued in foreign currencies will still follow the pricing arrangement put in place by the relevant international card scheme.

2.7 Transition to Achieve Interoperability

All commercial switches, processors or entities driving PoS terminals in Ghana shall ensure full and secure connection to the Central Switch and all transactions in respect of any card that the switch, processor or other entity is not licensed to process or switch shall be routed through the NCS to a licensed switch or processor for purpose of processing such transaction on behalf of the relevant Acquirer, and for seeking authorisation from the relevant Issuer.

All terminals must be plugged to the PTSA.

2.8 Exclusivity Agreements

There shall be no form of exclusivity in any area of payment service, including, but not limited to Issuing, Acquiring, Processing, and Sale and Maintenance of hardware and software. Any payment scheme, operator, processor, infrastructure provider, switching company, service provider or bank that contravenes this policy may be suspended for a minimum of one (1) month by the BOG as a payment service or payment infrastructure service provider in the first instance, to be followed by stricter sanctions if the practice persists.

2.9 Minimum POS Terminal Specifications

Parameters	Specifications
Card Readers	EMV Chip/Smart cards, Magnetic stripe. <u>Optional</u> : Contactless reader, 2 SIM Slots
Communications	GPRS, Ethernet, Dial-up Modem. <u>Optional</u> : CDMA, Wi-Fi
Certifications	EMV levels 1 & 2, PCI DSS, PA-DSS, PCI PED online & offline (All PCI certifications should be Level/Version 2.1 minimum)
CPU	ARM9/11, 32Bits. <u>Optional</u> : Dual processors
Memory	16MB Flash, 32MB SDRAM
Keypad	PCI PED Approved, Backlit
Display	TFT LCD graphics, 128/64 pixel, Backlit. <u>Optional</u> : Colour screen
Power	100-240V, 50-60Hz; 24hrs battery power (operating) <u>Optional</u> : DC support, Car jack charger, Docking fast charger
Printer	15 -18 lines per sec Thermal printer
Multi-Application	Supports Multiple Applications
Customization / Others	<u>Optional</u> : Coloured or branded housing, Labelling/embossing, RS232 & USB interfaces, Protocol implementation

2.10 Compliance

All parties shall comply with the provisions of these Guidelines and other relevant Guidelines issued by the Bank. This guideline shall prevail, in the case of conflict with any prior Guidelines. Non-compliance with these Guidelines shall attract appropriate sanctions from the Bank.

3.0 GUIDELINES ON MOBILE POINT OF SALE (mPOS) ACCEPTANCE SERVICES

3.1 Objectives

These Guidelines have been developed to:

3.1.1 Provide minimum standards and requirements for the operation of mPOS.

3.1.2 Promote safety and effectiveness of mPOS, and thereby enhance user confidence in the service.

3.1.3 Identify the roles and responsibilities of stakeholders.

3.2 Minimum Standards

All industry stakeholders who process and/or store cardholder information shall ensure that their applications and processing systems comply with the following minimum requirements and standards:

3.2.1 All applications and processing systems shall comply with the standards specified by various card schemes. The minimum requirements shall be PCI DSS certification.

3.2.2 Acquirers shall be required to provide mPOS solutions that utilize Payment Card Industry PIN Transaction Security (PCI PTS) in accordance with the PCI Point-to-Point Encryption (P2PE) Solution Requirements.

3.2.3 Each solution provider shall provide valid certificates, showing compliance with the standards in 3.1 and 3.2; and shall regularly review the status of its applications, to ensure they are in compliance with the following:

- i. PA DSS –Payment Application Data Security Standard.
- ii. PCI PED – Payment Card Industry Pin Entry Device.
- iii. PCI DSS – Payment Card Industry Data Security Standard.
- iv. Triple DES – Data Encryption Standards should be the benchmark for all data transmitted and authenticated between each party.

- v. EMV – The deployed infrastructure must comply with the minimum EMV requirements.

3.2.4 Merchants shall use MPOS solutions that utilize P2PE solutions in accordance with the PCI Point-to-Point Encryption Solution Requirements.

3.3 MPOS Stakeholders

The parties involved in payments acceptance and processing for MPOS shall include:

- i. Acquirer
- ii. Issuer
- iii. PTSA
- iv. Merchant
- v. Cardholder/User
- vi. Card Schemes
- vii. Switches/Processors
- viii. PTSP

3.4 Roles and Responsibilities of:

3.4.1 Acquirers

3.4.1.1 Only BOG licensed institutions shall serve as Acquirers.

3.4.1.2 Either Acquirer or Merchant may own an MPOS device

3.4.1.3 Acquirers shall ensure that MPOS devices purchased and deployed at merchant/retailer locations accept all cards (card agnostic).

3.4.1.4 Acquirers shall enter into agreements with merchants for the acceptance of payments by means of electronic payment instruments. All agreements shall clearly spell out the terms and conditions, including roles, responsibilities and rights of the Acquirer and the merchant.

3.4.1.5 Every Acquirer shall connect all its MPOS devices directly to the Payment Terminal Service Aggregator.

3.4.1.6 The Acquirers shall switch all domestic transactions through the preferred local switch of their choice for the purpose of seeking authorisation from the relevant Issuer.

3.4.1.7 The Acquirers shall be required to undertake measures to prevent the use of their networks for purposes associated with money laundering and other financial crimes and shall conduct proper KYC on all their merchants.

3.4.1.8 The Acquirers shall set merchant limits based on the volume of business/type of commercial activities. In addition, Acquirers shall provide guidelines to merchants on payment procedures for large ticket transactions (e.g. review of Identification, etc)

3.4.1.9 There shall be no exclusivity arrangements that bundle third party processing with switching activities. Each Acquirer shall be free to process transactions on its own, or leverage the services of a third party processor; and these services shall be independent of the switch used to facilitate such exchange.

3.4.1.10 The Acquirers shall maintain and reconcile merchant accounts.

3.4.1.11 The Acquirer shall provide the merchant with a PTSA certified card reader and the MPOS application for the handheld device; and where the card reader is in-built, the Acquirer shall ensure that the device is certified by the PTSA.

3.4.1.12 The Acquirer shall ensure that the MPOS application is PA-DSS certified.

3.4.1.13 The Acquirer shall assess and determine the suitability of MPOS for a merchant, with consideration for the merchant's control environment and other additional responsibilities for using MPOS.

3.4.1.14 An Acquirer shall not acquire transaction through MPOS for a merchant it assesses as having a weak control environment, for managing MPOS devices.

3.4.1.15 The Acquirer shall ensure an effective patch and version control management for the mobile application on the merchant's MPOS devices.

3.4.1.16 The Acquirer shall ensure that it does not acquire transactions from an MPOS device whose payments processing application is not updated with most recent patches, anti-virus and upgrades.

3.4.1.17 The Acquirer shall ensure the implementation of an enterprise mobility management system for the MPOS devices of the merchants it is acquiring.

3.4.1.18 The Acquirer shall ensure that payments data are transmitted using secured communication channels and protocols with end-to-end encryption, as specified in POS guidelines.

3.4.1.19 The Acquirer shall be responsible for the back-end payment processing. The back-end payments processing and settlement shall comply with extant POS guidelines.

3.4.1.20 The Acquirer shall be responsible for sensitizing/educating the merchant on security measures required for the MPOS device.

3.4.1.21 The Acquirer shall ensure that the MPOS is capable of issuing receipts either in electronic or paper form upon consummation of a transaction.

3.4.1.22 The Acquirer and the merchant shall be responsible for the maintenance of the card reader.

3.4.1.23 The Acquirer shall ensure that card readers are configured as merchant-specific.

3.4.1.24 The Acquirer shall ensure that MPOS applications are lockdown, such that other mobile applications on the MPOS devices of the merchants do not interact, store or transmit payment data.

3.4.2 Issuers

The responsibilities of Issuers shall be as stipulated in the extant POS Guidelines.

3.4.3 Payments Terminal Service Aggregator (PTSA)

3.4.3.1 Ghana Interbank Payment and Settlement Systems (GhIPSS) shall act as the Payments Terminal Service Aggregator for the financial system.

3.4.3.2 As the Payments Terminal Service Aggregator for the industry, GhIPSS shall establish communication network for reliable data traffic that shall satisfy the service and availability standards and expectations of the industry on a cost effective basis.

3.4.3.3 As the Payments Terminal Service Aggregator for the industry, GhIPSS shall on an annual basis or more frequently as may be required, certify MPOS devices that meet the industry standards.

3.4.3.4 All payment transactions shall be routed through the Payment Terminal Service Aggregator.

3.4.3.5 The Payments Terminal Service Aggregator(s) shall route all transactions from MPOS devices to the relevant Acquirer or its designated third party processor. This enables Acquirers who are Issuers to handle On-Us transactions appropriately and all Acquirers to manage their risks, and accept responsibility for such transactions in line with Charge-back Rules of relevant Card Schemes. This does not preclude any Acquirer from using the services of any Third Party Processor (TPP) or the Acquirer's in-house processing services to process its acquired transactions.

3.4.3.6 All MPOS transactions in Ghana must be switched, using the services of a local switch and shall not under any circumstance be routed outside Ghana.

3.4.3.7 The Payments Terminal Service Aggregator(s) shall monitor the availability and transaction traffic on all MPOS S devices on a continuous basis and shall provide analysis and report on performance and transaction trend to Bank of Ghana.

3.4.3.8 The Payments Terminal Service Aggregator shall have clear Service Level Agreements for certifying devices quickly and efficiently, as well as for integrating new value-added services, on behalf of Acquirers and third party application developers.

3.4.5 Merchants

3.4.5.1 A merchant shall enter into agreement with the Acquirer, specifying in clear terms, the obligations of each party.

3.4.5.2 Merchant shall accept cards as a method of payment for goods and services.

3.4.5.3 The merchant shall display the payment device conspicuously for the cardholder/user to observe the amount entered into the device before the cardholder/user enters his/her PIN.

3.4.5.4 The merchant shall be held liable for frauds involving the use of MPOS device due to its negligence, connivance etc.

3.4.5.5 The merchant shall under no circumstance, charge a different price, surcharge a cardholder/user or otherwise discriminate against any member of the public who chooses to pay with a card or by other acceptable electronic means.

3.4.5.6 The merchant shall ensure that it complies with the minimum security guidance provided by the Acquirer.

3.4.5.7 The merchant shall determine the location and condition of the MPOS device at all times and shall inform the Acquirer immediately it is unable to do so.

3.4.5.8 The Merchant shall be responsible for determining and maintaining inventory of other applications that co-exist on MPOS devices.

3.4.5.9 The merchant and the Acquirer shall be responsible for the maintenance of the MPOS device.

3.4.5.10 Merchant shall be responsible for restricting physical and logical access to the MPOS device.

3.4.6 Cardholders/Users

3.4.6.1 A cardholder/user shall:

- i. Protect the payment card, mobile device and PIN with due care.

- ii. Notify the issuer immediately a PIN is compromised.
- iii. Notify the issuer without delay about missing, stolen, damaged, lost or destroyed card and/or mobile device.

3.4.6.2 The cardholder may withdraw from the contract for payment card without prior notice to the issuer, provided he does not owe any charges for transactions on the payment card.

3.4.6.3 The cardholder shall present, when required by a merchant, a document confirming his identity.

3.4.6.4 The cardholder shall receive value for the operations performed by means of a payment card, and by so doing, the holder commits himself to pay the amount of the operations together with charges due.

3.4.6.5 The cardholder shall be held liable for fraud committed with his card arising from the misuse of his PIN or his card

3.4.6.6 The cardholder/user shall be entitled to receive a receipt or any other form of evidence at the time a transaction is performed with his/her card.

3.4.6.7 The cardholder/user shall be entitled to receive, within a reasonable period, at least monthly, a statement of all transactions performed with his/her card.

3.4.6.8 If a cardholder/user notifies his bank of a transaction error, the issuer shall investigate and resolve the claim within T + 5 days from the day of notification, irrespective of the dispute resolution process of the card scheme. Acquirer must respond to Issuer's request within 3 days, in the process.

3.4.6.9 A cardholder/user shall be given not less than 5 working days' notice before changes are made to the terms and conditions of his card contract and shall be given the option to opt out of the card contract without penalty.

3.4.7 Card Schemes

All card schemes in Ghana are bound by these Guidelines and other relevant BOG Guidelines/Circulars.

3.4.7.1 Any Card Scheme that wrongfully denies membership or delays the process of certification to potential players, would be penalized by BOG – including but not limited to paying a fine equivalent to the expected revenue of the payment services provider for that period, suspension and/or revocation of license, and shall not be eligible for further participation in BOG licensing schemes.

3.4.7.2 No Card Scheme, or any entity that has a management contract with a Card Scheme, shall engage in the business of acquiring. In addition, no entity in which a Card Scheme, its subsidiary, or the majority shareholder of a card scheme, has 20% shareholding or more shall engage in the business of acquiring.

3.4.7.3 No Card Scheme shall engage in any antitrust activity or any act that will lead to abuse of dominant position, monopoly or unfair competition. Accordingly, there shall not be any form of arrangement or collusion between two or more Card Schemes, or Payment Schemes in respect of issuing, acquiring, processing or switching.

3.4.8 Switches (Switching Companies)

3.4.8.1 All local switches in Ghana shall ensure that transactions relating to all cards issued by Ghanaian banks are successfully switched between Acquirers and Issuers.

3.4.8.2 To achieve the interconnectivity of all new and existing switching companies, all switching companies shall open their networks for reciprocal exchange of transactions/messages with the GhIPSS Switch and Payment Terminal Service Aggregator.

3.5 Settlement Mechanism

3.5.1 The settlement for all domestic MPOS transactions shall be done to the merchant account on T+1 basis, where T is the date the transaction is performed. Failure to execute the T+1 settlement cycle shall result in a sanction to the GhIPSS.

3.5.2 Card schemes or their appointed switches shall provide settlement reports to GhIPSS on daily basis by 10:00 a.m. for the previous day's transactions. The settlement information shall contain sufficient details in the required format, as advised by GhIPSS, to enable direct credit into merchant accounts. Failure to provide this information within the timeline and in the prescribed format will result in a sanction.

3.5.3 GhIPSS shall also directly credit the accounts of other parties with their share of the Interchange.

3.5.4 GhIPSS will be paid by the banks for the settlement done to the merchant account in line with the GhIPSS Electronic Funds Transfer fee transaction charges.

3.6 Fees and Charges

3.6.1 Fees and charges for MPOS Card Acceptance services are to be agreed between service providers and banks/entities to which the services are being provided, subject to the following limits:

- i. The maximum total fee that a merchant shall be charged for any MPOS transaction shall be subject to negotiation between the Acquirer and the merchant, after taking into account, the provisions of the Interchange Guidelines.
- ii. The fees and charges stated above are applicable to only MPOS transactions performed with Ghanaian issued cards. MPOS transactions done with cards issued by foreign issuers will still follow the pricing arrangement put in place by the relevant international card scheme.

3.7a Transition to Achieve Interoperability

All commercial switches, processors or entities driving MPOS devices in Ghana shall ensure full and secure connection to the Central Switch, and all transactions in respect of any card that the switch, processor or other entity is not licensed to process or switch shall be routed through the NCS to a licensed switch or processor for the purpose of processing such transaction on behalf of the relevant Acquirer and for seeking authorisation from the relevant Issuer.

3.7b All MPOS devices must be plugged to the PTSA.

3.8 Exclusivity Agreements

There shall be no form of exclusivity in any area of payment service including but not limited to issuing, acquiring, processing, and sale and maintenance of hardware and software. Any payment scheme, operator, processor, infrastructure provider, switching company, service provider or bank that contravenes this policy may be suspended for a minimum of one (1) month by BOG in the first instance, to be followed by stricter sanctions if the practice persists.

3.9 Minimum MPOS Technical Specifications

Parameters	Specifications
Card Readers	EMV Chip/Smart cards, Magnetic stripe, supporting audio jack Interface and/or Bluetooth communications interface. Optional: Contactless reader.
Communications	GPRS, Dial-up Modem. Optional: CDMA, Wi-Fi
Certifications	EMV levels 1 & 2, PCI DSS, PA-DSS, PCI PED online & offline (All PCI certifications should be Level/Version 2.1 minimum)
Printer	15 -18 lines per sec Thermal printer (optional). Means of notification should also support email/SMS notification.
Multi-Application	Supports Multiple Applications
Customization / Others	Optional: Coloured or branded housing, Labelling/embossing, RS232 & USB interfaces, Protocol implementation

3.10 Consumer Protection/Dispute Resolution

3.10.1 Acquirers shall, in conjunction with issuers, switches and other stakeholders ensure resolution of disputed transactions between the merchant and the cardholder within T + 5 days. Acquirers must respond to Issuer's request within 3 days.

3.10.2 Stakeholders/Parties may escalate complaints to BOG, where they are dissatisfied with the result of 3.10.1 above.

3.10.3 Any dispute, controversy or claim arising out of or relating to this Guidelines or the breach, termination or invalidity thereof, shall be settled in accordance with BOG's dispute resolution mechanism and if unresolved, may be referred to an

arbitral panel, as provided under the Alternative Dispute Resolution Act, 2010 (Act 798)

3.11 Compliance

All parties shall comply with the provisions of these Guidelines and other related Guidelines issued by the Bank. Non-compliance with the Guidelines shall attract appropriate sanctions by the Bank.

These Guidelines shall prevail in the case of conflict with any prior guidelines issued by the Bank.

4.0 GUIDELINES ON WEB ACCEPTANCE SERVICES

4.1 Scope of the Guidelines

These Guidelines shall include all forms of transfer of monetary value on the website of a merchant or a payment aggregator in fulfilment of consideration for the purchase of goods and services on the web (internet).

4.2 Objectives

These Guidelines shall:

4.2.1 Provide minimum standards and requirements for the processing of transactions via the web (internet) channel.

4.2.2 Promote safety and effectiveness of Web Acceptance Services and thereby enhance user confidence in the service.

4.2.3 Identify the roles and responsibilities of stakeholders.

4.2.4 Encourage the development of effective, low risk, low cost and convenient payment and financial services to customers and businesses through the internet.

4.3 Minimum Standards for Web Acquiring

All web acquirers shall only utilize the services of gateway providers that comply with the following minimum standards:

- i. PCI DSS- Payment Card Industry Data Security Standard
- ii. PA DSS- Payment Application Data Security Standard
- iii. Triple DES- Data Encryption Standards should be the benchmark for all data transmitted and authenticated between each party.
- iv. 2FA- Second Factor Authentication

4.4 Stakeholders

The following parties in a web payment scenario have responsibilities for web payments transactions:

- i. Acquirer: including a BOG licensed web payment aggregator
- ii. Issuer
- iii. Merchant (website owner)
- iv. Payments Gateway Providers
- v. Customer

4.5 Roles and Responsibilities of Stakeholders

4.5.1 Acquirer

In addition to the basic responsibilities of an acquirer as stipulated in extant guidelines, the acquirer shall:

4.5.1.1 Be responsible for engaging and managing the web payments gateway provider.

4.5.1.2 Evaluate the merchant web application, technology and control environment and ensure that it is implemented securely to accept payments.

4.5.1.3 Ensure that merchants carry out appropriate regular threat scan on the merchant's website and avail the merchant with updates on emerging threats to ensure that appropriate measures are taken by the merchant to mitigate risks.

4.5.1.4 Test website payment integration and ensure that sensitive customer data are not retained on the merchant's website.

4.5.1.5 For the minimum Web Capabilities of ecommerce websites/web portal, Acquirers and service providers shall comply with scheme rules as defined by the various card schemes, however, where there is conflict, this Guidelines supersedes.

4.5.1.6 The acquirer can also be a merchant and deploy/implement a website to accept card payments for its own services or services provided by merchants acquired by them.

4.5.1.7 The Acquirer shall assist the Merchant in setting up the accounts in the bank and any back-end processing for settlement of payments done on the merchant website using cards.

4.5.1.8 The Acquirer shall acquire all transactions done on the website of Merchants acquired by them.

4.5.1.9 The acquirer shall sign an agreement with the merchant for accepting card payment via the web channel.

4.5.1.10 The acquirer shall perform adequate Customer Due Diligence (CDD), Know-your-Customer (KYC) and Know-your-Customer-Business KYC/B on the merchant.

4.5.1.11 The acquirer shall maintain and reconcile merchant accounts on behalf of the merchant.

4.5.1.12 The Acquirer reserves the right to discontinue acquiring for a merchant at any time for proven cases of fraud, consistent failed deliveries and other situations involving the Merchant, which may impact negatively on the industry.

4.5.1.13 Acquirers shall implement a fraud management system that will detect customer usage pattern and decline/accept transaction, based on rules defined on the fraud management system.

4.5.1.14 Acquirers shall profile merchants, based on the services being offered, and define transaction limits.

4.5.2 Merchants

The merchant, in addition to the basic responsibilities as stipulated in extant guidelines, shall:

4.5.2.1 Ensure that the terms and conditions for its products and services are properly communicated and conspicuously displayed on its website.

4.5.2.2 Ensure that it cooperates with the Acquirer in implementing appropriate security measures.

4.5.2.3 Provide the customer with clear instructions on the process for making payments on its websites.

4.5.2.4 Provide information to customers on the charges applicable to each web payment option on its website.

4.5.2.5 Carry out appropriate regular threat scan on its website and ensure that appropriate measures are taken to mitigate risks

4.5.3 Issuer

The issuer, in addition to its responsibilities under the Guidelines on Card Issuance, shall:

4.5.3.1 Be responsible for the issuance of the cards. Only licensed deposit taking banks shall serve as the issuers of payment cards.

4.5.3.2 Commit to authorize the cardholder transaction made from the card linked to a specified account in the issuing bank and settles the operations performed by the means of the card.

4.5.3.3 Provide additional security measures e.g. second factor authentication to cardholders who intend to utilize their cards for transactions via the web channel.

4.5.3.4 Be held liable for card fraud in the event that payments are made with hot listed cards or where a card is reported as lost or stolen and subsequently used to make payments on any other channel.

4.5.3.5 Provide means through which cardholders can, at any time, notify the issuer of any loss, theft or fraudulent use of the card and the issuer shall take all necessary steps to stop any further use of the card.

4.5.3.6 Maintain internal records over a minimum period of seven (7) years to enable audit trails on card-related transactions.

4.5.3.7 Be responsible for setting overall transaction limits on cards per day, and transaction limits of such cards by channel, according to their card products and risk guidelines.

4.5.3.8 Acknowledge the dispute or complaints from cardholders within 24hours, and in conjunction with the Acquirer and platform provider; resolve such disputes or complaints within T + 3 days.

4.5.3.9 Furnish its cardholders with a detailed list of contractual terms and conditions prior to activation. Such terms shall include at a minimum, fees and charges, withdrawal limits (including offline transaction limits and terms where applicable), billing cycles, termination procedures, default/recovery procedures and loss/theft/misuse of card procedures.

4.5.3.10 Implement authentication at the "highly secured level" requiring 2-factor authentication

4.5.3.11 Implement behavioural monitoring and SMS/email alerts as additional controls to further protect the payer.

4.5.3.12 Not enable a card for web transactions, unless requested by the customer.

4.5.4 Payments Gateway Provider

Payment Gateway Provider (PGP) Shall:

4.5.4.1 Provide services with respect to the processing of online payment transactions related to the sale of goods and/or services.

4.5.4.2 Act as facilitator on behalf of cardholder/users:

- i. To enable Payment Transactions; and
- ii. Processing authorisation requests.

4.5.4.3 Be responsible for the security of the data related to the payment instrument that is possessed or otherwise stored, processed or transmitted on behalf of cardholders/users.

4.5.4.4 Not store card details on any server maintained by either the PGP or any third party, without first undergoing a security audit carried out by a Qualified Security Assessor (QSA).

4.5.4.5 Hold all forms of customer data securely and take responsibility for the security of the data.

4.5.5 Cardholder

The cardholder shall:

4.5.5.1 Guard his card, PIN and hardware token with utmost care.

4.5.5.4 Immediately notify the issuer if the card, PIN or token is lost/compromised.

4.6 Settlement Mechanism

4.6.1 The settlement for all WEB transactions shall be made to the merchant account on a T+1 basis, where T is the date the transaction is performed.

4.6.2 The Acquirer shall settle the funds to merchant's account.

4.7 Fees

4.7.1 Fees shall be based on BOG Interchange Guidelines.

4.7.2 The interchange will be regulated by the Bank

4.7.3 Fees and charges for Web transaction are to be agreed between service providers and banks/entities to which the services are being provided subject to the following limits:

- i. The maximum total fee that a merchant shall be charged for any Web transaction shall be subject to negotiation between the Acquirer and the merchant, after taking into account the provisions of the Interchange Guidelines.

4.7.4 Other service providers will be free to negotiate their fees with the party that service is being rendered to

4.7.5 Web transactions done with cards issued in foreign currencies will follow the pricing arrangement put in place by the relevant international scheme.

4.8 Consumer Protection/Dispute Resolution

Any dispute, controversy or claim arising out of or relating to this Guidelines or the breach, termination or invalidity thereof shall be settled in accordance with the BOG's dispute resolution mechanism and if unresolved may be referred to an arbitral panel, as provided under the Alternative Dispute Resolution Act, 2010 (Act 798)

4.9 Compliance

All parties shall comply with the provisions of these guidelines, and other related Guidelines issued by BOG. Non-compliance with the guidelines shall attract appropriate sanctions by BOG.

These Guidelines shall prevail in the case of conflict with any prior guidelines issued by BOG.

5.0 DEFINITION OF TERMS

The terms below shall have the following meaning, for the purpose of the Guidelines.

- 1) Acquirer means bank or any other legal person concluding contracts with merchants concerning acceptance of payment by means of an electronic payment token.
- 2) Card Reader is an apparatus that reads data from a payment card. It may have an audio jack that is attachable to a port or may connect via Bluetooth to the mobile device.
- 3) Card Schemes define the rules of the card system (e.g. interchanges, licenses, fraud responsibilities), and choices of technical functionalities (e.g. standards, protocols, security requirements).
- 4) Cardholder means an individual or company issued with a payment card linked to an account at a licensed financial institution
- 5) Competent Authorities include Courts, Economic and Organised Crime Office (EOCO), Financial Intelligence Center (FIC) and Regulatory Authorities such as BOG.
- 6) Contactless refers to a process of performing a transaction via an NFC antenna embedded within a mobile device.
- 7) EMV (Europay, MasterCard, and Visa) is the global standard that ensures smart (Chip-and-PIN) cards, terminals and other systems interoperate.
- 8) Ghanaian Bank refers financial institutions regulated by the Bank of Ghana under the Banks and Specialised Deposit-Taking Institutions Act 2016, Act 930.
- 9) Hot list means list of deactivated cards by the issuer, that were reported missing, stolen, lost or damaged by the card holders.
- 10) Interconnectivity means ability for reciprocal exchange of transactions/messages between two or more switching networks.

- 11) Interoperability means ability to issue cards and deploy devices in such a way that all customers (card holders, merchants and issuers) perceive operations, while obtaining service, as if the interconnected networks were one. (Refer to <http://www.bis.org/cpmi/>).
- 12) Issuer: Licenced Financial institution that issues payment tokens to customers
- 13) Merchant Acquirer means a BOG licensed institution that has agreement with the relevant card scheme to contract with merchants to accept payment cards as means of payment.
- 14) Merchant means an organization or entity that contracts with a Merchant Acquirer for accepting payment by means of payment card or any other electronic payment instrument.
- 15) Member Institutions means banks and other financial institutions that are on the network of a particular switching company.
- 16) MPR means Minimum Policy Rate.
- 17) MPOS stands for mobile Point of Sale. A device such as a tablet or any mobile phone with card accepting device attached to it that performs the functions of an electronic Point of Sale (PoS) terminal.
- 18) Near Field Communication (NFC) is the set of protocols that enables devices to establish radio communication with each other by touching each other or bringing them into proximity of a distance typically 10 cm (3.9 in) or less.
- 19) GhIPSS stands for the Ghana Inter-Bank Payment and Settlement System, it was mandated to among others, act as the Automated Clearing House (ACH), Payment Terminal Service Aggregator (PTSA) and Central Switch for Ghana.
- 20) Offline transaction means a transaction in which no direct connection is made between the device(s) involved in the transaction and a centralized computer system for the purpose of effecting settlement, or authenticating the transaction before it is executed.

- 21) Online transaction means a transaction in which there is a direct connection between the device(s) and a centralized computer system for effecting settlement or authorization or validation before a transaction can be executed.
- 22) PA-DSS stands for Payment Application Data Security Standard. PA-DSS compliant applications help merchants and agents mitigate compromises, prevent storage of sensitive cardholder data, and support overall compliance with the PCI DSS.
- 23) Payments GP Payment Gateway is an e-commerce application service provider that authorizes card payments for e-businesses, online retailers, etc.
- 24) Payment token is any electronic payment instruments provided by an issuer to initiate a payment transaction.
- 25) PCI DSS stands for Payment Card Industry Data Security Standard. It was developed to encourage and enhance cardholder data security and facilitate the broad adoption of consistent data security measures globally. (See www.pcisecuritystandards.org/documents/PCI_DSS_v3-1.pdf)
- 26) PCI PED stands for Payment Card Industry Pin Entry Device. PCI PED security requirements are designed to secure personal identification number (PIN)-based transactions globally and apply to devices that accept PIN entry for all PIN based transactions.
- 27) PCI PTS stands for Payment Card Industry PIN Transaction Security requirements. These are used primarily by ATM and point-of-sale device manufacturers to secure cardholder's details at physical point of entry.
- 28) PIN means Personal Identification Number.
- 29) Processor processes card transactions.
- 30) Point-to-Point Encryption (P2PE) is a method of protocol for data encryption ensuring secure transmission between two points.

- 31) Settlement Agents: Institutions that generates financial data and compute net settlement position for each financial institution in a payment scheme(s).
- 32) Smart phone is a phone built on advanced mobile computing platform with superior capabilities than a feature phone.
- 33) Switching means a system that captures electronic financial transactions from touch-points, applies rules, determines destinations, delivers the transactions and gives appropriate feedback.
- 34) "T" means transaction day, or the date a customer logs the complaint.
- 35) Tablet is a mobile computer that is larger than a typical smart phone, with integrated features, such as touch screen and is typically operated not by keyboard but through touching screen.
- 36) Web Acceptance is the process of accepting payments through the web channel.
- 37) Web is an information space, where documents and other web resources are identified by uniform resource identifiers, interlinked by hypertext links, and accessible via the Internet.

BANK OF GHANA

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