

THE NATIONAL PAYMENT SYSTEMS OVERSIGHT FRAMEWORK



BANK OF GHANA

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Foreword

Globally, central banks continue to have a keen interest in the safety and efficiency of payment and settlement systems. Apart from the supply of notes and coins by the central bank, the central bank is also concerned with payments in its broader context. As a guardian of public confidence in money, the central bank is aware that this confidence critically depends on the ability of economic agents to transmit money as well as other financial instruments.

Central banks by virtue of the fact that they provide payment and settlement services to the commercial banks have always influenced payment and settlement systems. Central banks provide a safe settlement asset and in most cases they operate systems which allow for the transfer of that settlement asset.

The Bank of Ghana has a statutory responsibility for the payment and settlement systems in Ghana. This responsibility requires the Bank to promote, regulate, and supervise these systems to ensure that they are safe, reliable and efficient. Inability to make payments in any economy would have far reaching and widespread impact on society. The Bank's task is therefore to ensure that the public and businesses can make payments in a safe and efficient manner.

Currently, the country's payment and settlement landscape is made up of the following channels:

- The Real Time Gross Settlement (Ghana Interbank Settlement) for wholesale payment and settlements (2002)
- CCC and ACH (medium tier) – gaining significant use by both individuals and corporate businesses (2009 & 2010)
- National switch – gh-link (2012)
- Small value transactions systems such as the credit cards, ATM/POS cards, debit cards, e-zwich smartcards, stored valued facilities.
- Internet banking and mobile phone banking has also begun to experience stronger growth.

This document outlines the framework for performing the Central Bank's oversight function. The Bank will use as a benchmark, the 'Principles for Financial Market Infrastructures' issued in April 2012 by the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements (BIS) in collaboration with the Technical Committee of the International Organization of Securities Commissions. This will ensure that the payment systems in the country are world-class and also meet domestic and regional payment system requirements.

The effective oversight of the payment system infrastructure would ensure the safety, security and reliability of financial transactions, which are vital to monetary and financial stability.

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PAYMENT AND SETTLEMENT SYSTEMS OVERSIGHT FRAMEWORK

1. Introduction

A key role of central banks is the oversight of payment and settlement systems in their areas of jurisdiction. This role is significant because the efficient functioning of payment systems allows safe, secure and timely completion of financial transactions and therefore makes a vital contribution to overall economic performance and financial stability. A payment system is an arrangement which facilitates the transfer of funds between participants in the system and includes a set of payment instruments, regulations, rules, standards, procedures, infrastructure and institutions related to clearing and settlement of funds. It therefore incorporates the methods for transmitting payment messages between members, the means to settle claims among members and agreed rules and procedures.

Central Bank's oversight of payment and settlement systems is consequently one aspect of its broad responsibility for monetary and financial stability. According to the BIS Core principles for SIPS, "payment system oversight is a public policy activity principally intended to promote the safety and efficiency of payment systems and in particular to reduce systemic risk".

Oversight of payment systems complements the financial stability work of banking supervision. However, the scope of oversight carried out by central banks differs from that of supervision, carried out by banking supervision institutions (including direct supervision by the central bank).

Banking supervision is concerned with solvency and liquidity of individual financial institutions and requires the following:

- The supervision of banks and non-bank deposit taking financial institutions
- It is carried out by the central bank or other supervisory authority
- It is carried out on grounds of detailed legal and prudential regulations
- The performance of detailed examination in the supervised institutions

Oversight, on the other hand, seeks to promote the safety and efficiency of payment systems and requires the following:

- Analyzing and examining the design and operation of systems and products
- Ensuring efficient functioning of payment systems
- It is not limited to banks and other institutions directly supervised by the central bank
- It is carried out solely by central banks

Notwithstanding their differences, oversight and supervision share important similarities which include:

- The development and application of internationally accepted principles and standards
- Identification and management of risks in the financial system
- Promotion of fair access and competition
- Assessing internal controls and operational risks in banks
- Cooperating with other central banks and relevant international authorities in the monitoring of cross border banking and payments
- Overseeing the settlement of financial market trades

From the foregoing it is clear that whereas financial supervisors are concerned with the soundness of banks and non-bank financial institutions, the overseer of the payment and settlement system has its focus on the smooth functioning of the payment infrastructure. Oversight and supervision, however, share the same goals of ensuring safety, soundness, reliability and stability of the financial system of a given country, including the effectiveness and efficiency of monetary settlement.

The Bank of Ghana has statutory responsibility for the payment and settlement systems in Ghana, as enshrined in the Bank of Ghana Act 2002, Act 612. This act empowers the Bank of Ghana to “promote, regulate and supervise payment and settlement systems” as one of its functions. The Bank’s responsibility for payment and settlement systems is further deepened by the promulgation of the Payment Systems Act 2003, Act 662. This act, which is dedicated to payment and settlement systems, authorizes the Bank to establish, operate as well as designate payment systems for its supervision, in the interest of the public.

2. Objectives of Oversight of Payment and Settlement Systems

Oversight of payment and settlement systems has been recognized as a necessary component of central banks’ mandate for maintaining the stability of the financial system and confidence in the domestic currency. This is because of the importance of payment and settlement systems to the exchange of money for goods and services in an economy and to the transmission of monetary policy. In modern financial systems, this exchange involves the use of several financial instruments to satisfy the purchasing needs of individuals and institutions in various financial markets operating in one or more currencies. As the volume and values of financial transactions increase, central banks are compelled to ensure that payment and settlement systems operate efficiently.

Generally, central banks carry out an operational role as providers of central bank money for settlement and also as the ultimate provider of liquidity to the banking system. As a regulator, the central bank must also ensure that it oversees the payment and settlement system.

The main objectives for conducting the payment and settlement systems oversight are twofold as set out below:

- i. Containment of systemic and other payment risks in order to maintain stability of the financial system by
 - ensuring the effectiveness and reliability of the payment system and its conformity with legal provisions;
 - ensuring that critical attention is given to risks reduction and management in the design and operation of payment systems;
 - promoting the safety, security, soundness and reliability of payment systems, payment infrastructures and payment instruments used by the public;
 - maximizing the efficiency of payments clearing and settlement arrangements;
 - pursuing public interest in payment system arrangements;
 - maintaining the public’s confidence and interest in money and payment systems.
- ii. Monitoring and evaluation of payment systems performance in such areas as:
 - Payment instrument base
 - Legal framework
 - Communication and other payment infrastructure

- Institutional framework
- Competition in payment system delivery
- Criteria for fair or equitable access to payment systems
- Efficiency in value transfers like clearing cycles
- Core competencies in the different payment areas
- Consumer protection

3. Risks in Payment and Settlement Systems

The rationale for payment and settlement systems oversight is to identify and institute measures to prevent and or mitigate payment and settlement systems risks. The following categories of payment system risks will be considered:

Credit risk - the risk that a counterparty within the system will not be able to fully meet its financial obligation either when due or at any time in the future.

Liquidity risk - the risk that a counterparty within the system will not have sufficient funds to meet financial obligations as and when expected, although it may be able to do so at some time in the future.

Legal risk – when existing laws or regulations do not support the rules and arrangements of the system this could create uncertainties which could lead to unexpected losses resulting in credit and liquidity risks.

Operational risk – the risk that human error, failure of software or hardware or breakdown in communications systems may bring about financial losses.

Settlement risk: the risk that a settlement in a transfer system will not take place as expected.

Business risk: the risk of financial failure of a privately owned payment system operator.

Systemic risk – the risk that the event of one party being unable to meet its obligation may be transmitted to other participants in the payment system and so cause significant liquidity and credit crises leading to systemic disruption in the financial system.

Replacement risk: the risk that a participant in a clearing and settlement system with respect to an outstanding transaction for completion in a future date will fail to perform on the contract during the life of the transaction.

Tiered participation arrangements

An FMI should identify, monitor, and arrange the material risks to it arising from tiered participation arrangements.

Default management

An FMI should have effective and clearly defined rules and procedures to manage a participant's default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

These risks must be understood and identified by payment system operators and participants so that appropriate risk reduction methods can be implemented.

In addition to the above risk factors, the Bank of Ghana will concern itself with preventing possible market failures in payment and settlement systems among which are;

- **Coordination failures:** it is necessary to have effective coordination between competing institutions providing payment services in order to achieve optimal networking of systems and integration. This encourages the introduction of new systems that are more efficient than if there were no coordination.
- **Non-contestable monopolies:** the network effect of payment systems infrastructure often leads to monopolies which may be counter-productive. There is the potential risk of abuse of monopoly power when a payment system service provider fails to introduce cost saving measures as well as invest in new and improved technologies.
- **Information asymmetry:** lack of transparency in the design of systems and the weaknesses therein in addition to inadequate information on services for participants and customers create risks.
- **Underinvestment in safety mechanisms in payment and settlement systems:** Participants of the system may fail to internalize the effect of their own failures on other system participants, the financial system and the whole economy and therefore, not take appropriate steps to address inherent risks.

4. Benefits of Payment Systems Oversight

Implementation of a structured payment system oversight regime can lead to a number of significant benefits including the following:

- Keeping abreast with changes in the risk profile of the payment system, which could lead to proactive risk management
- Regular and periodic performance evaluation leading to timely implementation of corrective measures
- Capacity to expeditiously assess payment system development trends relative to country set goals and international trends
- Timely assessment of the extent to which payment system development objectives are being achieved.

5. Scope of Oversight Activities

The payment and settlement systems oversight activities of the Bank of Ghana will cover the following:

- Systemically important payment systems e.g. GIS and cheque clearing system;
- Securities settlement systems e.g. settlement of government bills and bonds, corporate bonds and equities in the near future;
- Providers of critical services e.g. network service providers (Ghana Telecom and other telcos, Comsys, SWIFT, Orange and GhIPSS) and Security Printers;
- Payment instruments/systems e.g. cheques, electronic cards, mobile money transfers and ACH direct credit and debits among others;

- Cross-border banking payments, especially in the area of remittances schemes;
- Markets e.g. Repo market, interbank forex market, etc.
- Other non-systemically important payment systems, as may be deemed necessary by the Bank of Ghana, taking into account their collective effect on the payment and settlement systems in Ghana, and the extent to which their operations will affect public confidence in money and payment systems.

6. Approach to Oversight Activities

The Bank will use, as a benchmark, the Principles for Financial Market Infrastructures. All identified systemically important payment and settlement systems should comply with these core principles. Further, in order to encourage payment and settlement system operators to appropriately price their risks and reduce cost to society, an underlying tenet in the Bank's approach to oversight of SIPS is that risks and costs should be appropriately identified, quantified and allocated.

The risk management framework for oversight activities will basically entail the following processes for each payment and settlement system, service provider, instrument or activity that is identified to be of significance for oversight:

- Clear identification of risks and sound objectives to manage identified risks.
- Sound governance arrangements for the payment and settlement system.
- Clear and appropriate rules and procedures which will specify the duties/responsibilities and rights of all participants.
- Adequate financial, material and human resources for carrying out the activities.
- Generation of regular reports for analysis by the central bank.

For the purpose of its oversight activities, the Bank of Ghana will use the criteria below among others to determine a systemically important payment system:

- A system's potential of creating significant credit and liquidity disruptions in the economy should it fail to perform as expected;
- A system's potential of creating large credit or liquidity exposures relative to counterparties' financial capacity;
- A system's ability to provide settlement for other systems;
- Whether the system is the only one or one of very few systems for the settlement of a given financial instrument;
- Whether the system is used in settling transactions between first tier banks and second tier banks;

- Whether the system settles time-critical transactions;
- Whether the system settles transactions for critical financial markets;
- Whether the system settle a high proportion of large-value transactions;
- Whether the system settles large volumes of small value transactions that cumulatively are of large value

For all electronic money issuance/stored value facilities, the Bank of Ghana for the purposes of carrying out its functions under this Act, shall prescribe specific Regulations and or Directives detailing licensing, approval, reporting and oversight requirements

7. Guiding Principles for Oversight Activities

The payment system's oversight activities would be guided by the following principles

- **Transparency:** the Bank will publicly declare its oversight policies and standards for the various payment systems.
- **International Standards:** relevant internationally recognized standards would be adopted for payment and settlement systems oversight activities.
- **Exercise of Statutory Authority:** the Bank of Ghana will use its authority under the relevant laws to compel participants to conduct themselves in the interest of the system.

However, the Bank will as much as possible, dialogue with participants in the various payment systems to conduct their affairs in a manner that will promote the safety and efficiency of the national payment system. The Bank of Ghana will only evoke its statutory powers to compel participants to 'good behaviour' when dialogue fails.

- **Consistency:** oversight standards would be applied consistently to comparable payment and settlement systems
- **Cooperation in oversight:** the Bank of Ghana will cooperate with other relevant central banks and other local supervisory authorities including the National Communications Authority(NCA) and relevant Departments in the Bank (e.g. BSD and ITDM) to promote safety and efficiency of the payment and settlement systems

8. Standards

In addition to system rules, user guidelines, payment product standards among others, the Bank will use internationally approved payment system standards to conduct the oversight activities. Regarding international standards, Bank of Ghana recommends that operators of designated systems comply with the **24 Principles for Financial Market Infrastructures** (April 2012) issued jointly by BIS Committee on Payment and Settlement Systems (CPSS) and the Technical committee of the International Organisation of Securities Commissions (IOSCO) where applicable. These principles are set out on the Bank for International Settlements website as in <http://www.bis.org/publ/cpss101a.pdf>. The Bank of Ghana's oversight function of the designated

systems as well as critical service providers will also be guided by the five key responsibilities for market regulators and central banks as provided by the same document.

All financial market infrastructures operating in the country are expected to comply with the applicable principles unless an operator of a designated system has reasons that the overseer of the payment system deem compelling enough for partial compliance.

Business continuity expectations

The robustness and resilience of the payment system will, among others, require the establishment of a functional business resumption system for each payment system operating in the country. Business resumption systems must comply with the minimum requirements indicated below:

- Systems should have well-defined business continuity strategies endorsed by management/board of directors. The continuity strategy should ensure recovery within same settlement day;
- Business Continuity Planning (BCP) should envisage a variety of plausible scenarios e.g. natural disasters, power outages, terrorist acts. Systems should have secondary sites from which operations can continue seamlessly when the main site is down;
- System operators should establish crisis management teams and well-structured procedures to manage crises;
- Business continuity plans should be regularly tested to assess their readiness.

9. Monitoring of Payment and Settlement Systems

For the purpose of monitoring the systems, information would be obtained from the system operators covering various areas and through the following means:

- Monitoring of system operations and their rules and procedures;
- Statistical data reporting forms
- Questionnaires to gain relevant non-financial information;
- On-site visits and inspections;
- Self assessment reports
- Cooperation with other financial regulatory authorities including BSD, Securities and Exchange Commission;
- Cooperation with other relevant bodies and stakeholders;
- Customer feedback
- Legal opinions,
- Understanding Market practices
- Minutes of meetings, audit reports of the operators and information from other financial institution regulators (like BSD).
- Bilateral and multilateral discussions

10. Analysis of Information

In the course of analyzing information on payment and settlement systems, attention would be paid to the following:

- Identification of risks and shortcomings in the design and operation of the payment systems
- Issues that require detailed analysis
- Review of systemically important payment systems against standards and policies
- Assessment of changes to a system's design
- Assessment of systems in the course of design

11. Reporting on Oversight Activities

It is envisaged that the following reports on the payment and settlement systems oversight activities would be generated

- Quarterly reports and statistics on payment and settlement systems;
- Mid- year reports on payment and settlement systems;
- End year reports on payment and settlement systems oversight activities;
- Other reports as may be determined from time to time.

12. National Payment System Governance

To effectively give policy direction to the payment system oversight function of the Bank, a Payment System Policy Board (PSPB) will be established. The PSPB will be responsible for establishing a national payment system policy that will promote the safety and efficiency of the national payment system. The PSPB should have statutory basis. However, the Payment Systems Act, 2003(Act 662) does not provide for such a body and therefore the Act will have to be amended accordingly. The payment system policy will also address the following issues;

1. Identification of risks and how they should be managed
2. Promotion of efficiency in the payment system
3. Creating conditions for innovation and development
4. Ensuring healthy competition among payment system participating institutions
5. Ensuring the existence of structures for consumer protection and dispute resolution

12.1 Membership of PSPB

Membership shall not exceed twelve and will comprise representatives each from Banking and Banking Supervision Departments and four external members with the Governor or his representative as the chairperson. The external members should be drawn from industry and commerce, finance and investment, information and communication technology and law. In addition, they should have the competence and the experience to contribute meaningfully to the deliberations of the PSPB. The PSPB shall meet quarterly.

12.2 National Payment System Oversight Office (NPSO)

The next level of the national payment system governance hierarchy will be the National Payment System Oversight Office - an office of the Banking Department. The Office will be responsible for initiating payment system policies for the consideration of the PSPB and also undertake regular payment system surveillance and oversight.

Collaboration with other Regulatory Bodies

The NPSO will collaborate with relevant regulatory bodies such as the Banking Supervision Department of the Bank of Ghana, the Securities and Exchange Commission (SEC) and the National Communications Authority (NCA) to ensure effective oversight of the national payment and settlement systems.

Collaboration with Payments and Clearing Industry Body

A payments and clearing industry body to be called the Ghana Payments and Clearing Association (GPCA) will be established. GPCA will be composed of payment industry participants and it will assist the Bank of Ghana to promote the safety and efficiency of the national payment system through self regulation, enforcing participants' compliance to rules and regulations and bringing innovations to the various interbank payment systems. The association which shall meet monthly, will have committees for each interbank payment system in the country.

The Payment Systems Act will need to be amended to accommodate the industry body since the law does not have any provision for such a body.

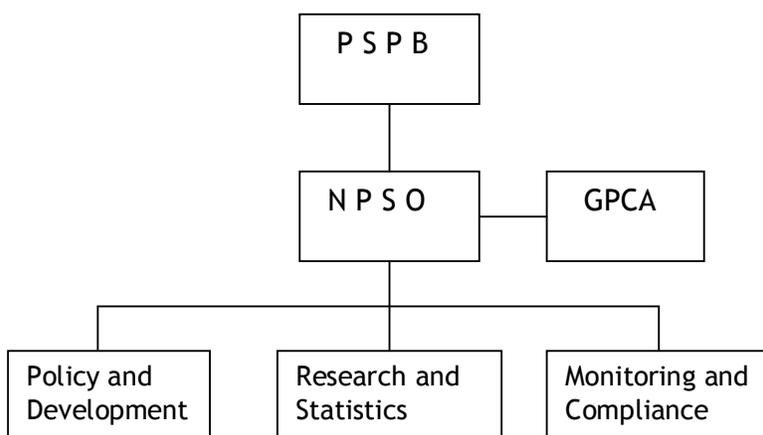
12.3 Thematic areas of oversight

These are:

1. Clearing systems: CCC, ACH and National Switch
2. Settlement systems: GIS and Central Securities Depository
3. Markets: Foreign Exchange, Repo, Securities and Derivatives
4. Service providers: GhIPSS, Telecommunication Companies and Security Printers
5. Payment Channels: ATM, POS, SWIFT, Mobile Payments and Internet Payments
6. Payment Instruments: Cards, Cheques, credit transfers, direct debits and electronic money

The following diagram depicts the governance structure:

NATIONAL PAYMENT SYSTEM GOVERNANCE STRUCTURE



13. Policy Formulation and Design

The payments landscape is dynamic and evolving. Attention will be paid to changes in the payments and settlement space. Together with statistical data and changing trends, policy will be formulated for Management's approval for the smooth and efficient management of the payment system.

14. Payment System Oversight Office

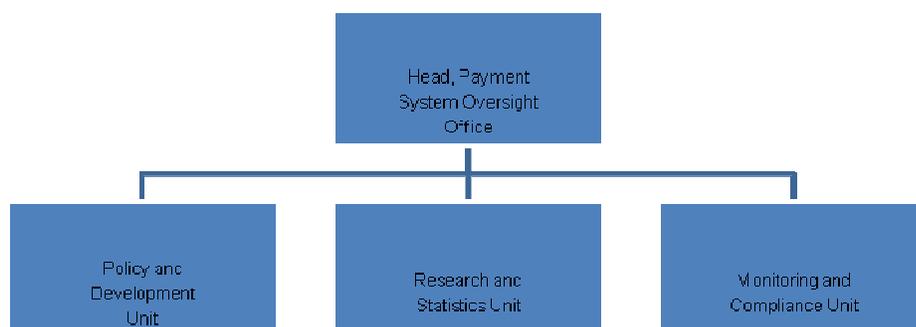
The Banking Department is responsible for implementing the payment and settlement systems oversight function of the Bank. To effectively discharge these responsibilities there is the need for the setting up of a payment systems oversight office which will be independent of all operational activities in the payment system arena in the Bank. These changes are in line with international best practice, where the policy and oversight department of a central bank is expected to apply the same stringent oversight standards to the systems that the Bank itself operates or manages directly.

The objective of the office is to promote the safety and efficiency of the national payment system. The functions of the office deriving from the objective will include:

- Ensure the existence of a sound legal and regulatory framework for the national payment system, payment streams and institutions
- Provide policy direction to the payment system
- Promote good governance for the national payment system
- Ensure that risks in the payment system are identified and appropriately priced
- Promote innovation, competition and financial inclusion in the use of payment products
- Ensure compliance to laws, regulation, rules, standards and approved market practices
- Maintain database on interbank payment streams in the country
- Promote robustness and resilience of the national payment system
- Establish relationship with international development and regulatory institutions to promote the safety and efficiency of national and cross border payments

The Office has three units, namely; policy and development, statistics and research and monitoring and compliance.

ORGANOGRAM OF PAYMENT SYSTEM OVERSIGHT OFFICE



The Policy and Development Unit is responsible for:

- Assessing on continuous basis, the adequacy of the regulatory environment and making recommendations for review and or amendments where necessary
- Scanning the global environment for developments and trends in payment systems, to assess their impact on the national payment system and make recommendations for management's consideration
- Promoting and facilitating the on-going development of the national payment system in accordance with national payment system development strategy
- Providing policy direction to the national payment system
- Evaluating system-specific rules and procedures to make recommendations to management
- Liaising with other regulatory bodies to promote the safety and efficiency of the payment system e.g. National Communications Authority
- Cooperating with international bodies such as the BIS, World Bank, IMF, WAMI and other central banks to promote the development of payment systems in general
- Drafting the National Payment System strategic plan and conduct review periodically

The Research and Statistics Unit is responsible for:

- Identify data of interest and relevance to the Bank's payment system oversight function
- Design data collection formats for the various interbank payment systems
- Establish a system for collecting data on timely basis
- Collect data on the cost of using the various interbank payment systems
- Maintain an up-to-date database on the national payment system
- Provide statistical and analytical support for policy development
- Carry out surveys on payment trends in Ghana
- Write periodic reports for Management's attention

The Monitoring and Compliance Unit is responsible for:

- Collecting and maintaining a library of information on system design and performance
- Monitoring compliance of system operators and participants to regulations, system rules and procedures
- Conducting on-site inspections of the facilities of system operators
- Ensuring the regular testing of business continuity arrangements according to approved testing calendar and all-the-time readiness of contingency systems
- Promoting the integrity of paper payment instruments through regular annual and ad hoc inspection of the facilities of accredited security printers
- Coordinating participants self assessment of interbank payment systems
- Produce compliance reports on the national payment system

The Bank will report each year on its payment systems oversight activities at the time of its Annual Report. These reports will provide a brief summary of the Bank's work over the previous year, in particular commenting on any changes in the payment system landscape and the Bank's assessment of the consequences of risks. From time to time, the Bank will also publish detailed analysis of structural and risk issues related to payment and settlement systems in its Quarterly Bulletin.