



BANK OF GHANA

# PAYMENT SYSTEMS OVERSIGHT

ANNUAL REPORT, 2020





**BANK OF GHANA**

# **PAYMENT SYSTEMS OVERSIGHT**

## ANNUAL REPORT, 2020

*Payment Systems Department  
Bank of Ghana*



## Governor's Foreword

The year 2020 has been eventful for the payment service industry on account of the COVID-19 and increased technology, innovation and changes in consumer preferences. Financial institutions have adjusted to the new norm, innovated and partnered with Financial Technology Firms (FinTechs) to deliver various digital financial services.

The Bank of Ghana instituted various policy measures that promoted digital payment as a means to help curb the spread of the COVID-19 virus.

We have witnessed significant increase in digital payment in year 2020 which has reflected in all payment streams.

The Ghana Interbank Payment and Settlement System (GhIPSS) reported an increase of 103 per cent in transactions processed across all its platforms as at the end of 2020. A total of 77 million transactions were processed across all the platforms, compared to 38 million transactions

processed in 2019. The value of transactions processed in 2020 was GHC 254 billion, a 16% increase compared to the GHC 219 billion processed in 2019. Mobile Money Interoperability, GhIPSS Instant Pay and Proxy Pay also recorded significant growth.

The Payment Systems Advisory Committee was inaugurated in 2020 to advise the Bank on regulation, oversight, operational and technical stands of payment, clearing and settlement systems.

Given its mandate under the Payment Systems and Services Act 2019 (Act 987), the Committee formed five working groups with membership drawn from mobile network operators, merchants, consumers, payment service providers, Fintechs and third-party providers to support its work.

The Bank of Ghana continued to stay focused on promoting financial inclusion, protecting the payment systems landscape and collaborating

with relevant stakeholders to help preserve the gains made in digital payment.

Once again, as a central bank, we have successfully sailed through another turbulent year, and delivered on our mandate of monetary and financial stability, despite the adverse effects of the COVID-19 pandemic.

I conclude by expressing my profound gratitude to the Board of Directors, the Monetary Policy Committee, Payment Systems Advisory Committee,

Management and Staff of the Bank for their support, hard work and commitment. Together, I am hopeful that we will continue to safeguard the payment systems landscape while promoting innovation in the financial ecosystem.

**Dr. Ernest K. Y. Addison**  
Governor, Bank of Ghana

## Executive Summary

In the year 2020, the payments systems landscape witnessed significant changes mainly on account of the Covid-19 pandemic. The Bank of Ghana and the Government consciously promoted the use of digital payments to facilitate a cash-lite society to mitigate the spread of the disease through the handling of cash. The pandemic led to emergence of new forms of financial technology companies. The formal banking sector also continued to partner with mobile money operators and fintechs in the delivery of innovative financial services.

Efforts at ensuring development of the Fintech industry culminated in the establishment of a Fintech and Innovation Office. This new office is responsible for licensing and oversight of dedicated electronic money issuers (mobile money operators), payment services providers (PSPs), closed loop payment products, payment support solutions and other emerging forms of payment delivered by non-bank entities as well as the development of policies to promote FinTech, innovation and interoperability in Ghana.

Other significant development during the year was the inauguration of the Payment Systems Advisory Committee to advise the Bank on regulation and oversight of the payment systems, operational, technical stands of the payment systems and other matters affecting clearing and the settlement system.

A universal QR code payment solution was also launched during the year to promote the use of contactless payments.

The Bank in collaboration with mobile money companies also reduced mobile money charges, waived transaction fees on transactions of GHS100 and below and increased wallet limits to promote the use of mobile money during the pandemic.

Innovations in the payment system helped to minimize the impact of covid-19 and resulted in some central banks considering the issuance of central bank digital currencies.

The Bank of Ghana approved 32 products and services for financial institutions compared with 37 products and services in 2019. The approved products were mainly in-bound remittances, agency banking, mobile banking services, card issuance, digital micro loans and chat banking.

All the major payment streams (excluding cash) showed significant increases in both volume and value with the exception of Cheque Codeline Clearing (CCC) which recorded a decline in volume of transactions by 13.59 percent with a slight increase in value of transaction by 2.30 percent. The volume of Ezwich card and Gh-link transactions decreased over the 2019 position with slight increases in their respective value of transactions during the year. GhIPSS Instant Pay (GIP), a service which permits payments to be sent across financial institutions electronically from a customer's bank account to a beneficiary bank account increased in both volume and value by 257 percent and 165 percent respectively. The number of mobile money accounts increased by 18.49 percent to 38,473,724 at end of December 2020 from the 2019 position of 32,470,793. Mobile money continued to show increases in both volume and value of transactions as well as total float balances (equivalent cash of the electronic money held by the banks) during the year.

The number of cards issued by banks increased in 2020. Issued credit cards increased by 13.73 percent to 33,039 while prepaid and debit cards also increased by 53.98 percent to 573,703 and 8.7 percent to 4,813,063 respectively.

# Table of Contents

Governor’s Foreword .....	iv
Executive Summary .....	vi
<b>CHAPTER 1: GLOBAL DEVELOPMENTS IN THE PAYMENT ECOSYSTEM .....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Covid-19 Impacts .....	1
1.3 Innovations in the Payments and Services Landscape .....	1
1.4 Technology .....	2
<b>CHAPTER 2: DEVELOPMENTS IN THE GHANAIAN PAYMENT SYSTEMS .....</b>	<b>3</b>
2.1 Introduction .....	3
2.2 Enhancement of Regulatory Framework .....	3
2.3 Product Innovation and Development .....	3
2.4 Financial Inclusion .....	3
<b>CHAPTER 3: APPROVED PRODUCTS AND SERVICES .....</b>	<b>4</b>
3.1 Introduction .....	4
3.2 Agency Banking Services .....	4
3.3 Issuance of Domestic Europay, MasterCard and Visa (EMV) Cards .....	4
3.4 Digital Banking Services and USSD Mobile Banking .....	4
3.5 Virtual Card .....	4
3.6 WhatsApp Banking & Chat Banking .....	4
3.7 Micro Loans .....	4
3.8 Quick Response (QR) Payment Solution .....	4
3.9 Remote Account Opening .....	4
3.10 Remittances .....	4
3.11 GhQR Code .....	5
3.12 ACH Near Real Time (NRT) .....	5
3.13 Proxy Pay .....	5
3.14 GhDual Card .....	5
<b>CHAPTER 4: PAYMENT SYSTEMS TRANSACTIONS .....</b>	<b>7</b>
4.1 Introduction .....	7
4.2 Ghana Interbank Settlement (GIS) System .....	7
4.3 Cheque Codeline Clearing (CCC) .....	8
4.4 Ghana Automated Clearing House (GACH) .....	8
4.4.1 Direct Credit .....	8
4.4.2 Direct Debit .....	9
4.5 E-Zwich Transactions .....	10
4.6 Gh-LinkTm (National Switch) .....	11
4.7 GhIPSS Instant Pay (GIP) .....	12
4.8 Internet and Mobile Banking .....	13
4.9 Automated Teller Machines (ATMs) and Points of Sales (POS) .....	14
4.10 Electronic Payment Cards (Debit, Credit and Prepaid Cards) .....	14



# CHAPTER 1: GLOBAL DEVELOPMENTS IN THE PAYMENT ECOSYSTEM

## 1.1 Introduction

Alternative payments such as electronic wallets, mobile and digital currencies continued to play an important role in the global payment space. These developments were driven by emerging and developing economies. Card transactions however remained the most popular means of payment in some countries. Some jurisdictions have not only adopted these alternative payment methods but view them as trusted and preferred choice of payment. In Africa, for example, users of mobile payment continued to outnumber bank account holders while in China, alternative payment method such as Alipay continued to dominate the market, and has overtaken PayPal to become the largest global mobile payment platform with over 300 million registered users.

Mobile money continued to enable Ghanaians to transfer funds, pay bills and fees. It has therefore become the most convenient means of payment in Ghana.

## 1.2 Covid-19 Impacts

The outbreak of the covid-19 pandemic late 2019 in China and its subsequent spread to other parts of the world in 2020 had a significant and widespread effect on global payments. The pandemic led to an unprecedented level of economic uncertainty and impacted severely on economic growth. According to the 2020 McKinsey Global Payment Report for the payments sector, global revenue declined by an estimated 22 percent in the first six months of the year under review compared with the same period in 2019. Similarly, the impact of the pandemic on businesses and individuals was evident across the globe. Businesses had to evolve to survive, whilst consumers adapted to restrictions and changes in their purchasing patterns and methods. Globally, how consumers shopped, how merchants sold goods and services, and how payment service providers supported businesses changed during this period. Amidst the restrictions on movement of persons associated with the pandemic,

the use of digital payments increased; and impacted positively on financial inclusion, particularly in developing countries.

## 1.3 Innovations in the Payments and Services Landscape

Some of the major innovations that took place in 2020 in the global payment systems were as follows:

- **Iceland** - The Central Bank of Iceland (CBI) launched a new Real Time Gross Settlement System (RTGS) and instant payment platform.
- **United Kingdom** - SWIFT announced activation of the world's first live SWIFT GIP instant connection. This new service enabled consumers and businesses to send payments in seconds across borders, around the clock through their financial institutions.
- **South Africa** - The South African Reserve Bank (SARB), Financial Sector Conduct Authority (FSCA), Payments Association of South Africa (PASA) and the Banking Association South Africa (BASA) jointly issued a notice to the public on cessation of acceptance and collection of cheques effective December 31, 2020. The Standard Bank (South Africa) supported mass rollout of contactless cards across 15 African countries including Ghana, Kenya, Lesotho, Swaziland, Namibia, Tanzania, Uganda and Zimbabwe.
- **India** - Mastercard and SBI Cards and Payments Services Limited (SBI Card) have announced the launch of contactless payments on SBI Card application. This is the first-ever application of a credit card issuer in India to use Mastercard's tokenization platform.
- **USA** - The world's leader in digital payments, VISA and the world's foremost provider of virtual payments technology, Conferma Pay announced strategic partnership to launch Visa Commercial Pay.

This B2B payment solution helped to improve cash flow for businesses and eliminate outdated manual processes and also offer businesses better control over their finances.

## 1.4 Technology

With the rapid advent of e-commerce globally, especially due to the covid-19 pandemic, digitization of payments continue to accelerate with technological innovations such as Artificial Intelligence (AI) and Distributed Ledger Technology (DLT). Technology continued to play a critical role in the payment ecosystem. Across multiple jurisdictions, existing technologies were applied to new use cases and relatively new technology were tested and implemented. Emerging technologies such as Artificial Intelligence (AI) and Distributed Ledger Technology (DLT) were explored in the payments landscape. AI in payment systems was used for payment processing, identity and access management and data analytics. DLT also gained some traction in the global payment ecosystem as Central Banks considered issuance of Central Bank Digital Currency as an alternative to paper notes and coins.

## CHAPTER 2: DEVELOPMENTS IN THE GHANAIAN PAYMENT SYSTEMS

### 2.1 Introduction

Key developments in the payment and settlement systems included the following:

- Enhancement of Regulatory Framework;
- Product Innovation and Development
- Financial Inclusion

### 2.2 Enhancement of Regulatory Framework

Pursuant to Section 4 (1) of the Payment Systems and Services Act 2019 (Act 987) the Bank in 2020, established the Payment Systems Advisory Committee (PSAC) in advisory capacity on regulation, oversight, operational and technical standards of payment, clearing and settlement systems. The broad-based participation of stakeholders in the governance of the Payments Industry Working Groups established on thematic lines provided technical support to the Committee in the discharge of its responsibilities.

As part of measures to promote broad-based acceptance of digital payments, a tiered Know Your Customer (KYC) merchant account categories document was published. This was to ensure that micro, small and medium size enterprises are able to access digital merchant accounts that are appropriate to their needs.

The Bank in collaboration with stakeholders, published measures to promote the use of mobile money as an alternative to cash, in order to facilitate adherence to social distancing norms and assist in curbing the spread of COVID-19. The measures included:

- Use of GSM KYC registration data to activate minimum KYC accounts;
- A maximum fee free daily Person-to-Person funds transfer of GH¢100 (on-net and off-net through Mobile Money Interoperability);
- Increased daily transaction limits;
- Increased aggregated monthly transactional limits; and
- Increased Maximum Account Balance limits.

### 2.3 Product Innovation and Development

In 2020, the Bank approved thirty-two (32) products and services for various financial institutions compared with a total of thirty-seven (37) and twenty-seven (27) products and services approved in 2019 and 2018 respectively. The approved products and services included in-bound remittances, agency banking, micro loans, card issuance, mobile banking, chat banking and Whatsapp banking.

The Ghana Interbank Payment and Settlement Systems (GhIPSS) launched the GhQR code, Ghana's standard for QR codes and the Proxy Pay platform, to create a standardized format for the use of QR codes.

### 2.4 Financial Inclusion

During the review period, the Bank initiated the following policy measures to promote inclusive finance:

- Increase in mobile money transactions and aggregate limits.
- Relaxation of Know Your Customer (KYC) requirements for the minimum account opening.
- Moratorium on payment of interest on digital credit.
- Introduction of Universal QR code.
- Three months' moratoria for bank credit borrowers.

## CHAPTER 3: APPROVED PRODUCTS AND SERVICES

### 3.1 Introduction

On account of COVID-19, Payment Service Providers (PSPs) provided various value-added digital services to meet the needs of all the segments of the population. Key innovative payment products and services made available to consumers of the payment ecosystem included the following:

### 3.2 Agency Banking Services

Agency banking services expanded during the period under review. Banks engaged various retailers as agents to extend banking services to the unbanked and the underserved. The banking services offered were cash deposits and withdrawals, account opening, airtime purchases, and bill payments.

### 3.3 Issuance of Domestic Europay, MasterCard and Visa (EMV) Cards

Some financial institutions issued the domestic EMV Gh-Link cards and upgraded their Automated Teller Machines (ATMs) and Point of Sale (POS) terminals to accept Gh-Link cards.

### 3.4 Digital Banking Services and USSD Mobile Banking

To reach the unbanked, financial service providers continued to leverage digital banking services especially USSD platform to offer digital credit and savings.

### 3.5 Virtual Card

Virtual card issuance increased in 2020 and generated interest among card users. This is a non-physical card with randomly generated numbers which expires once used. It is issued instantly through internet banking or mobile banking applications and serves the same purpose as prepaid and debit plastic cards.

### 3.6 WhatsApp Banking & Chat Banking

Banks also introduced WhatsApp and Chat banking as a way of providing financial services to customers remotely. These services enabled customers to make enquiries through any of their banks' digital platforms and perform basic financial services.

As part of measures to promote broad-based acceptance of digital payments, a tiered Know Your Customer (KYC) merchant account categories document was published. This was to ensure that micro, small and medium size enterprises were able to access digital merchant accounts that were appropriate to their needs.

### 3.7 Micro Loans

Banks partnered with other financial technology firms to provide mobile credit products and savings to individuals through the use of Unstructured Supplementary Service Data (USSD) short codes.

### 3.8 Quick Response (QR) Payment Solution

Quick Response (QR) Codes continued to provide alternative form of payment for customers who scanned designated bar codes linked to the accounts of vendors, using their mobile banking applications to make payments.

### 3.9 Remote Account Opening

Some banks also introduced remote account-opening platforms that allowed individuals to open bank accounts directly from their smartphones using the bank's mobile application, or the bank's USSD banking channel.

### 3.10 Remittances

During the year under review, financial institutions intensified termination of inward remittances into mobile money wallets.

Inward remittances constituted 37.5% of the total number of approved products and services in 2020.

The designated national switch operator (GHIPSS) also launched the following products and services:

### 3.11 GhQR Code

The GhQR Code which is an interoperable Quick Response (QR) code solution allows customers of financial institutions, Fintechs and mobile money operators, to either send or receive payments by scanning a QR code with a smartphone or by dialing a USSD number. QR codes constituted 3.13 percent of the thirty-two products approved by the Bank of Ghana in 2020.

### 3.12 ACH Near Real Time (NRT)

Banks used the ACH NRT channel to credit beneficiary customer accounts for transferred funds within 15 minutes. Both presentment and return sessions were merged into a single session.

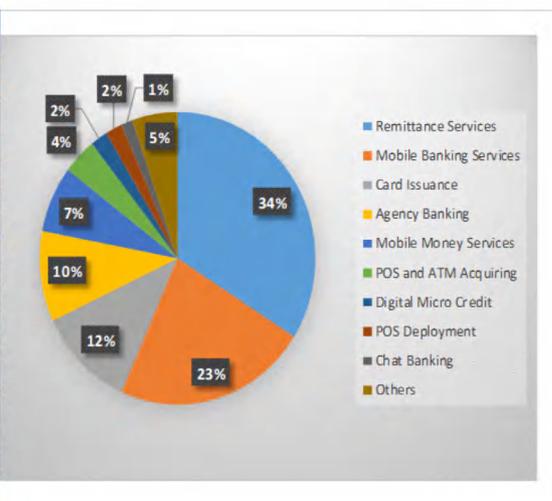
### 3.13 Proxy Pay

Proxy Pay which is an overlay on the Ghana Instant Pay infrastructure allowed customers to register an alias; email address, nickname or social media handle as part of their account details. Payments made to proxy identifiers such as the email, were credited to the linked bank accounts.

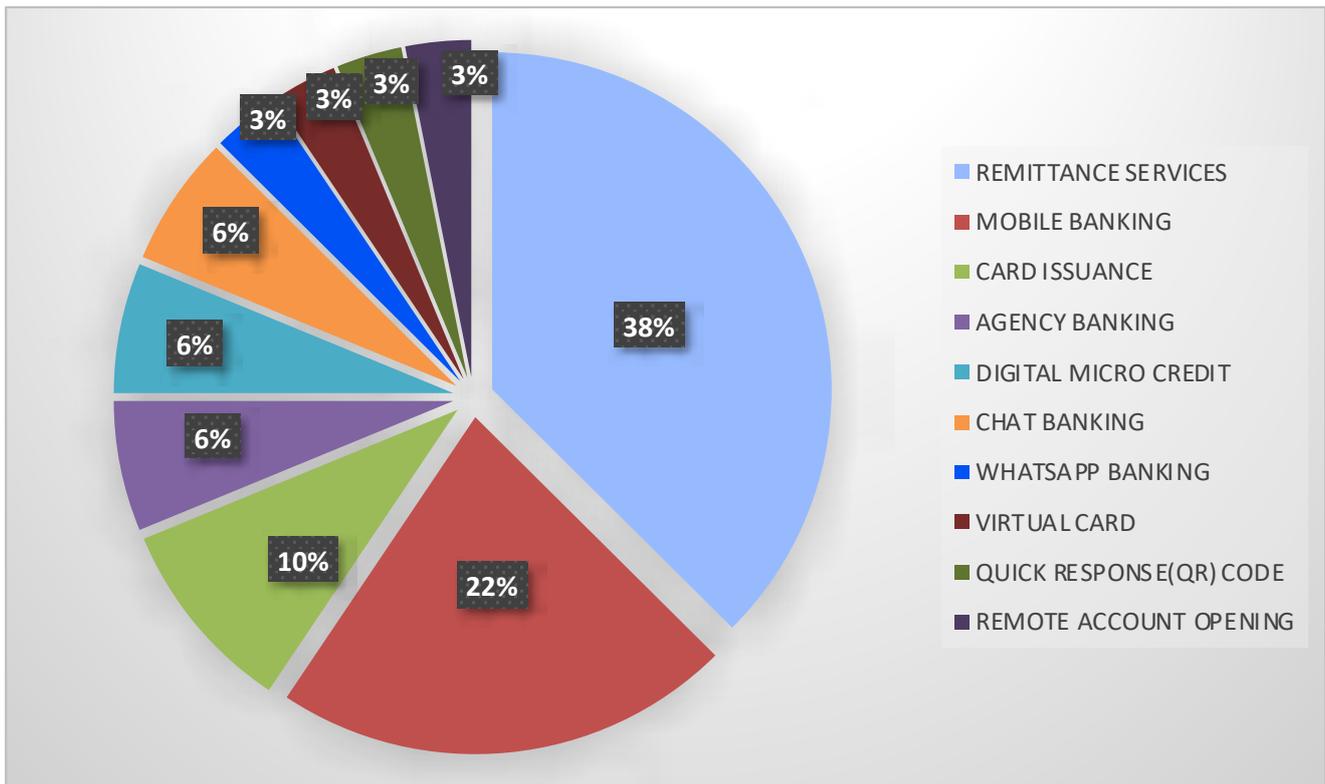
### 3.14 GhDual Card

The GhDual Card is a two-in-one payment card that has both the e-zwich and gh-link applications. It was designed to simultaneously give card holders access to their funds both on e-zwich cards and bank accounts.

Products/Year	2016	2017	2018	2019	2020	Grand Total
Remittance Services	1	6	13	19	12	51
Mobile Banking Services	8	11	2	6	7	34
Card Issuance	4	3	3	4	3	17
Agency Banking	2	5	4	2	2	15
Mobile Money Services	0	5	4	2	0	11
POS and ATM Acquiring	1	3	0	2	0	6
Digital Micro Credit	0	0	0	1	2	3
POS Deployment	0	3	0	0	0	3
Chat Banking	0	0	0	0	2	2
Cheques Clearing Services	0	0	0	1	0	1
Aggregation Service	0	1	0	0	0	1
ATM Deployment	0	1	0	0	0	1
Digital Micro Pension	0	0	1	0	0	1
Remote Account Opening	0	0	0	0	1	1
Whatsapp Banking	0	0	0	0	1	1
Virtual Card	0	0	0	0	1	1
Quick Response(QR) Code	0	0	0	0	1	1
<b>Grand Total</b>	<b>16</b>	<b>38</b>	<b>27</b>	<b>37</b>	<b>32</b>	<b>150</b>



**Chart 1: Products and Services Approved in 2020**



A total of thirty-two (32) products/ services were approved for banks and specialized deposit-taking institutions compared to thirty-seven (37) in 2019. The various forms of remittance services represented 37.5 percent of the total

products and services approved for 2020. Remote account opening, WhatsApp banking, QR code and virtual card representing 3% each were the least approved products and services.

## CHAPTER 4: PAYMENT SYSTEMS TRANSACTIONS

### 4.1 Introduction

The Bank of Ghana exercised oversight responsibility over the major payment system infrastructures comprising Ghana's Real Time Gross Settlement (RTGS) system, Cheque Codeline Clearing (CCC) system, Ghana Automated Clearing House (GACH) system, National Biometric Smartcard Payment System - e-zwich<sup>TM</sup>, National Switching and Processing System - gh-link<sup>TM</sup>, GhIPSS Instant Pay (GIP), retail payments interoperability system, Ghana's Paper Payment Instrument Accreditation Scheme, and the Mobile Money sub-sector. Highlights of transactions processed on these major payment system platforms are as follows:

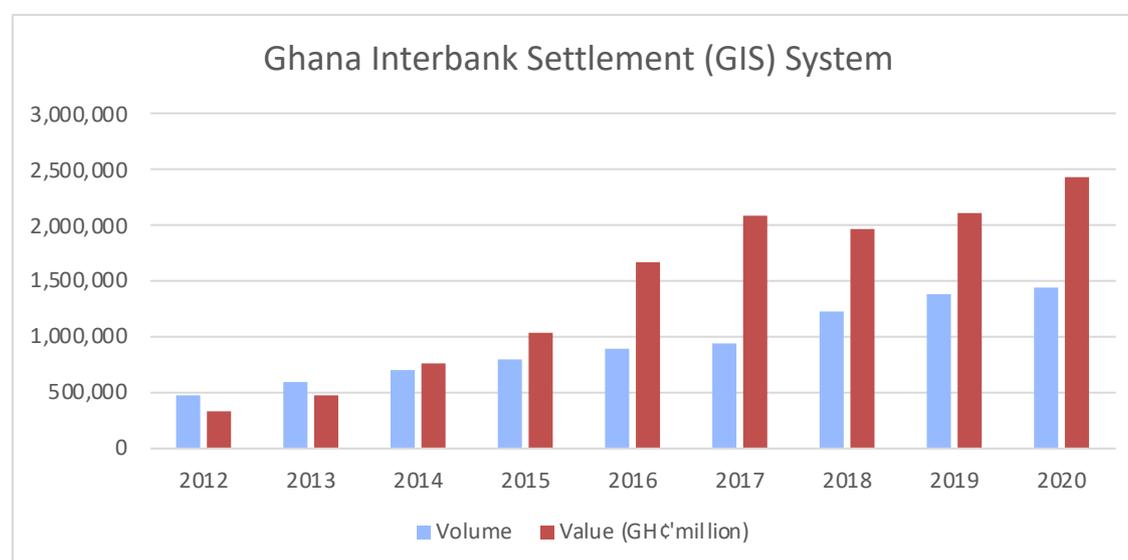
### 4.2 Ghana Interbank Settlement (GIS) System

The total volume of Ghana Inter-bank Settlement (GIS) transactions as at the end of December, 2020 increased by 4.80 percent to 1,442,182. Total value of transactions also went up by 15.55 percent to GH¢2,433,537.47 million. In 2020, average value per transaction was GH¢1,687,399.70 compared with GH¢1,530,504.36 in 2019. (See Table 2 and Chart 2)

**Table 2: Ghana Interbank Settlement Transactions**

Indicators	2017	2018	2019	2020	2020 change	2020 Growth(%)
Volume	934,234	1,221,650	1,376,094	1,442,182	66,088	4.80
Value (GH¢'million)	2,083,846.27	1,963,465.27	2,106,117.85	2,433,537.47	327,419.62	15.55
Average value per transaction GH¢	2,230,539.96	1,607,224.06	1,530,504.35	1,687,399.70	156,895.35	10.25

**Chart 2: Ghana Interbank Settlement Transactions**



### 4.3 Cheque Codeline Clearing (CCC)

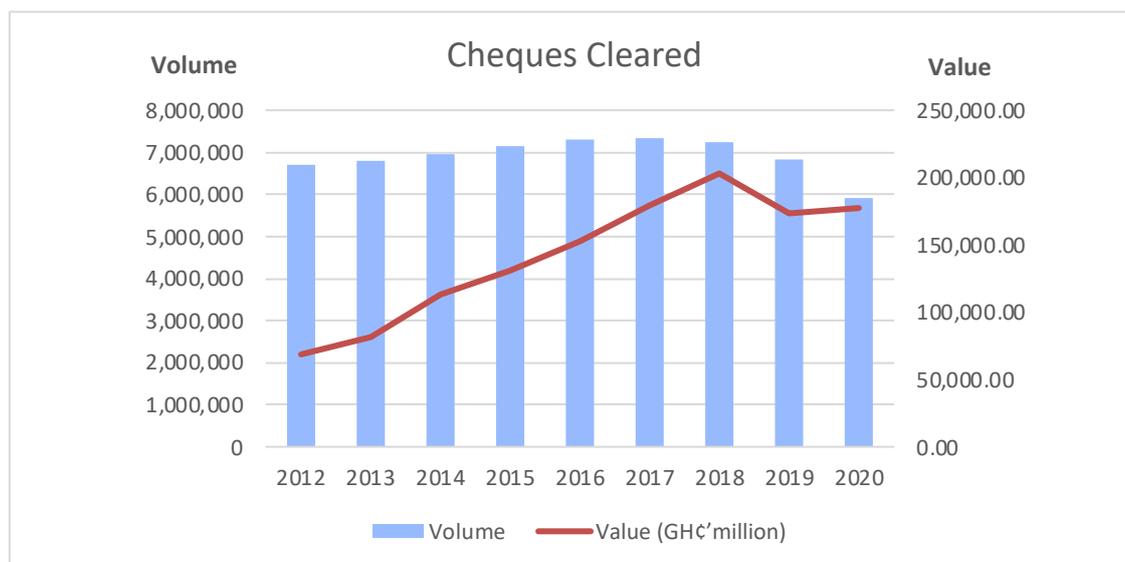
In 2020, the total volume of inter-bank cheques cleared declined by 13.59 percent to 5,903,331 from 6,831,417 in 2019 while value of transactions

increased by 2.30 percent to GH¢177,625.00 million from GH¢173,623.25 million in 2019. (See Table 3 and Chart 3).

**Table 3: Cheque Codeline Clearing**

Indicators	2017	2018	2019	2020	2020 change	2020 Growth(%)
Volume	7,334,460	7,255,220	6,831,417	5,903,331	928,086	(13.59)
Value (GH¢'million)	179,555.47	203,465.32	173,623.25	177,625.00	4,001.75	2.30
Average value per transaction GH¢	24,481.08	28,043.99	25,415.41	30,088.94	4,673.53	18.39

**Chart 3: Cheque Codeline Clearing (CCC)**



### 4.4 Ghana Automated Clearing House (GACH)

#### 4.4.1 Direct Credit

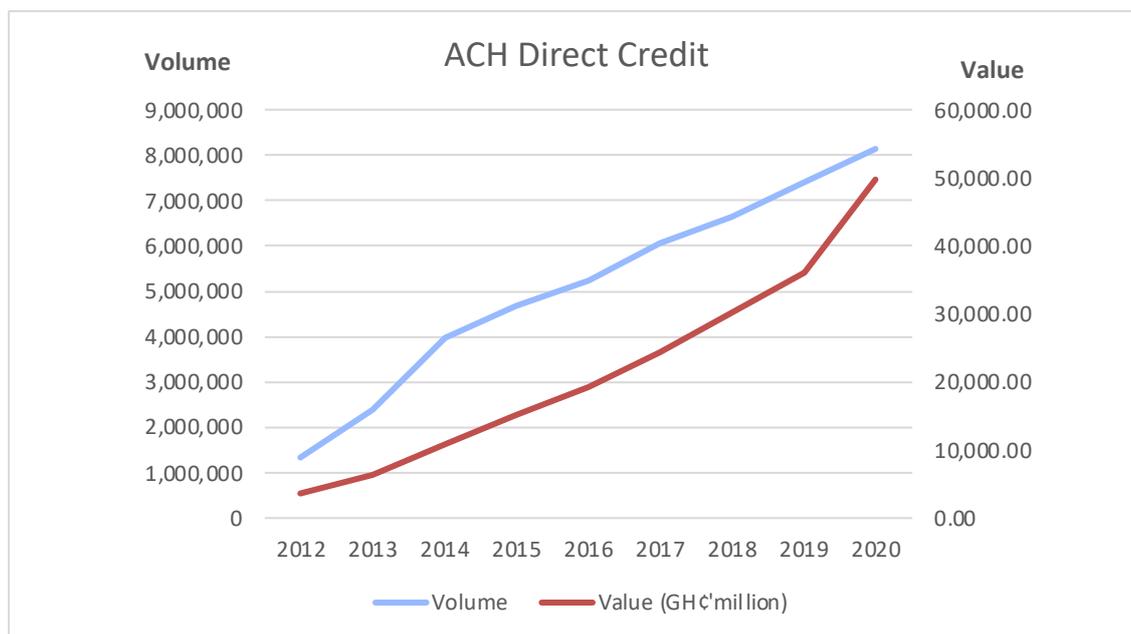
During the review period, the total volume of transactions cleared through the direct credit system increased by 9.83 percent from 7,404,059 to 8,131,989. Total value of direct credit transfers also increased from GH¢36,137.96 million in 2019 to GH¢49,794.26 million. Payment

of SSNIT pensions by Bank of Ghana on behalf of Government continued to be the major contributor to the growth in the direct credit transactions. Express ACH direct credit recorded an increase of 6.60 percent and 34.80 percent in both volume and value of transfers over the 2019 positions of 1,153,551 and GH¢11,534.13 million respectively. (See Table 4 and Chart 4)

**Table 4: GACH Direct Credit Transactions**

Indicators	2017	2018	2019	2020	2020 change	2020 Growth(%)
Volume	6,061,093	6,645,126	7,404,059	8,131,989	727,930	9.83
Value (GH¢'million)	24,327.26	30,226.94	36,137.96	49,794.26	13,656.30	37.79
Average value per transaction GH¢	4,013.68	4,548.74	4,880.83	6,123.26	1,242.43	24.45

**Chart 4: GACH Direct Credit Transactions**



**4.4.2 Direct Debit**

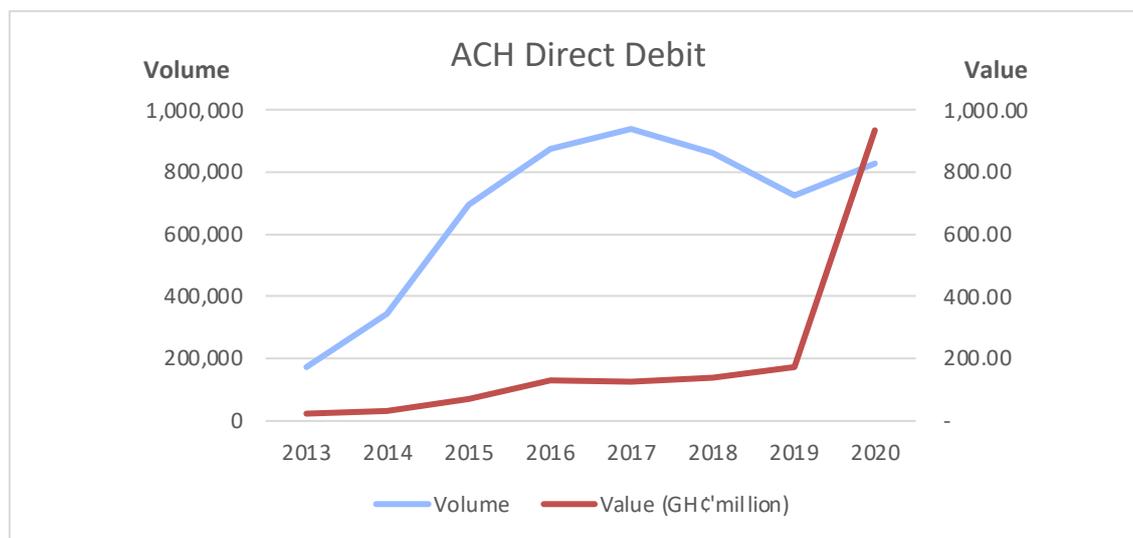
In 2020, the total volume of direct debit transactions increased to 827,901 from 722,337 in 2019. The total value of transactions also increased by GH¢763 million to GH¢936.10 million. The average value per transaction also increased significantly from GH¢239.64 in 2019 to GH¢1,130.69 in 2020.

Despite the growth in the volume and value of transactions, significant volume of direct debits were returned unpaid on account of various reasons including insufficient funds, invalid account number or mandate, wrong presentation, stopped payment and blocked customer account. (See Table 5 and Chart 5)

**Table 5: GACH Direct Debit Transactions**

Indicators	2017	2018	2019	2020	2020 change	2020 Growth(%)
Volume	940,649	861,169	722,337	827,901	105,564	14.61
Value (GH¢'million)	126.28	139.15	173.10	936.10	763	440.79
Average value per transaction GH¢	134.25	161.58	239.64	1,130.69	891.05	371.83

**Chart 5: GACH Direct Debit Transactions**



#### 4.5 E-Zwich Transactions

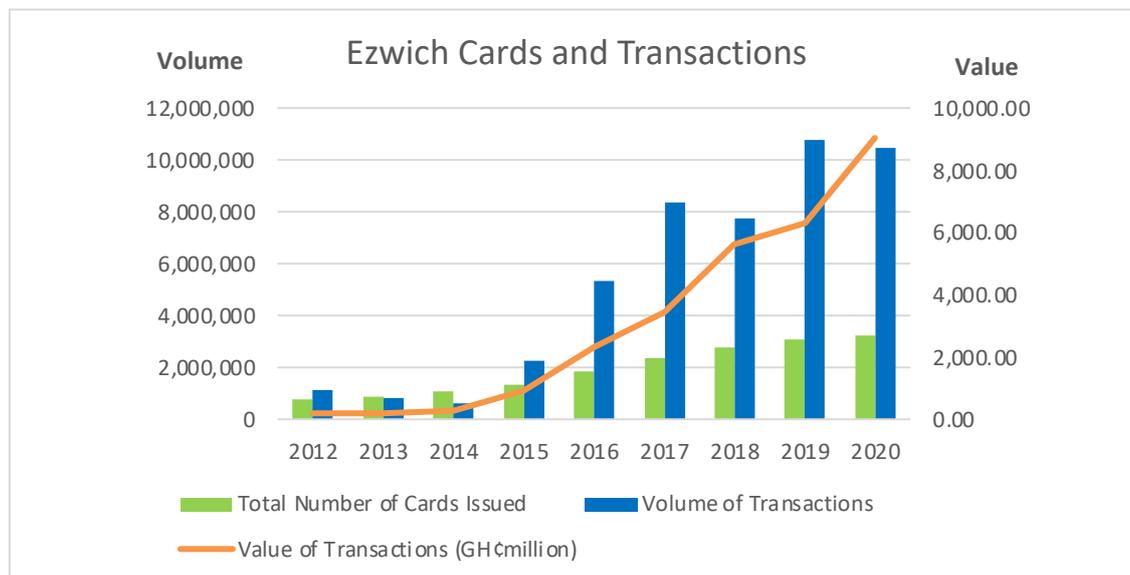
During the review period, the number of e-zwich card holders increased by 5.84 percent from 3,072,965 in 2019 to 3,252,493 in 2020. The total volume of e-zwich transactions however declined by 2.95 percent to 10,477,601 while total value of transactions increased by 43.19 percent to GH¢9,033.25 million. (See Table 6 and Chart 6).

The Government continued to use the E-zwich platform to pay caterers of national school feeding programme, beneficiaries of the Livelihood Empowerment Against Poverty (LEAP), Youth Employment Agency (YEA), Nurses and Teacher Trainees allowances, Students Loans Trust Fund and personnel of the National Service Scheme as means of ensuring efficiency in payments and facilitating growth in adoption of E-zwich card.

**Table 6: E-Zwich Transactions**

Indicators	2017	2018	2019	2020	2020 change	2020 Growth(%)
Total Number of Cards Issued	2,364,456	2,774,799	3,072,965	3,252,493	3,252,493	5.84
Cards with Value (% of total)	50.71	53.24	71.67	67.14	67.14	(6.32)
Value on Cards (GH¢'million)	74.43	123.19	202.91	180.80	180.80	(10.90)
Average Value Per Card (GH¢)	62.07	83.38	92.13	82.79	82.79	(10.14)
Volume of Transactions	8,367,017	7,759,354	10,796,560	10,477,601	10,477,601	(2.95)
Value of Transactions (GH¢'million)	3,431.49	5,651.14	6,308.37	9,033.25	9,033.25	43.19

**Chart 6: E-Zwich Transactions**



#### 4.6 Gh-Link™ (National Switch)

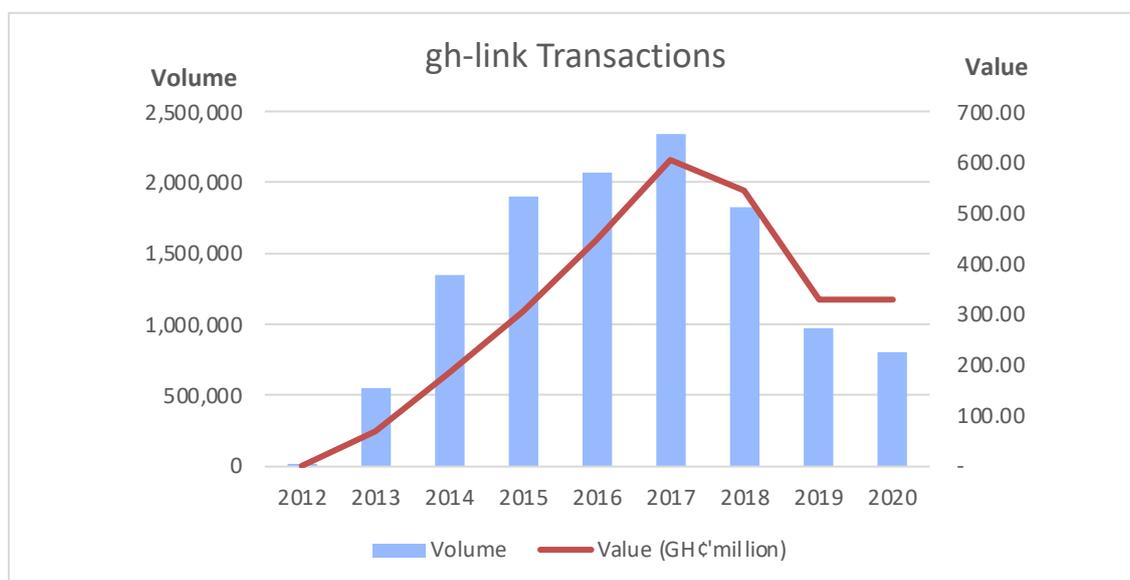
The Gh-link™ platform recorded a total of 806,486 transactions with a value of GH¢329.70 million during the review period compared with 972,746 and

GH¢329.23 million in 2019. ATM transactions continued to dominate on the Gh-link™ platform and constituted more than 99.00 percent of the total transactions. (See Table 7 and Chart 7)

**Table 7: Gh-Link™ Transaction**

Indicators	2017	2018	2019	2020	2020 change	2020 Growth(%)
Volume	2,340,409	1,830,182	972,746	806,486	(166,260)	(17.09)
Value (GH¢'million)	603.43	543.74	329.23	329.70	0.47	0.14
Average value per transaction GH¢	257.83	297.10	338.45	408.81	70.36	20.79

**Chart 7: Gh-Link™ Transactions**



**4.7 GhIPSS Instant Pay (GIP)**

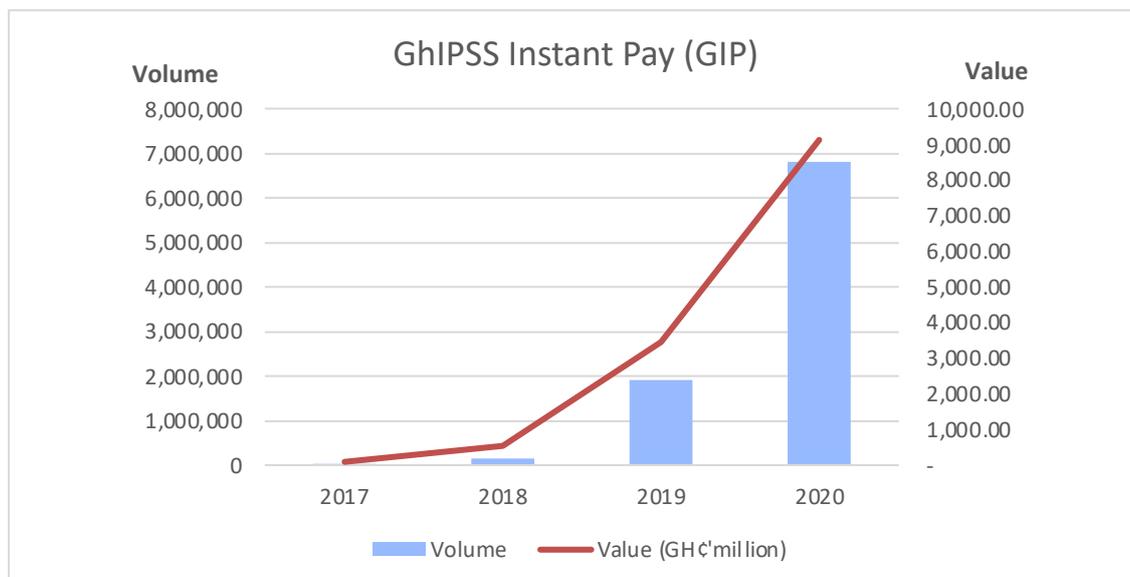
In 2020, GhIPSS Instant Pay (GIP) recorded a total volume of 6,804,754 transactions with a value of GH¢9,146.76

million compared with 1,905,267 and GH¢3,456.89 million respectively in 2019. (See Table 8 and Chart 8)

**Table 8: GIP Transactions**

Indicators	2019	2020	2020 change	2020 Growth(%)
Volume	1,905,267	6,804,754	4,899,487	257.15
Value (GH¢'million)	3,456.89	9,146.76	5,689.87	164.59

**Chart 8: GIP Transactions**



#### 4.8 Internet and Mobile Banking

The number of registered internet banking customers declined by 7.88 percent from 1,106,270 in 2019 to 1,019,073 in 2020 while registered mobile banking customers increased by 12.30 percent from 4,245,479 in 2019 to 4,767,719 in 2020.

The value of Internet Banking transactions increased significantly by 101.50 percent to GH¢24.21 billion in 2020 compared with the 2019 position of GH¢12.01 billion. Mobile Banking transaction value was GH¢12.94 billion in 2020 compared with GH¢6.69 billion in 2019 and showed a growth of 93.51 percent. (See Table 9).

**Table 9: Internet and Mobile Banking**

		2018	2019	2020 change	2020 Growth(%)
Internet Banking	Number of registered Customers	815,904	1,106,270	1,019,073	(7.88)
	Volume of transactions	3,205,878	4,651,290	7,055,793	51.70
	Value of transactions (GH¢)	6,267,223,830	12,014,728,578	24,208,653,517	101.50
Mobile Banking	Average volume of transactions per day	8,783	12,743	19,330	51.70
	Number of registered customers	3,891,269	4,245,479	4,767,719	12.30
	Volume of transactions	14,805,878	18,770,721	34,842,318	85.62
	Value of transactions (GH¢)	5,658,399,344	6,687,332,884	12,940,760,028	93.51
	Average volume of transactions per day	40,564	51,427	95,458	85.62

## 4.9 Automated Teller Machines (ATMs) and Point of Sales (POS) Terminals

The number of ATMs deployed by banks as at end-December 2020 of 2,237 showed an increase of 5.37 percent over

2019 position of 2,123. The number of POS terminals went up by 19.17 percent from 8,802 at end-December 2019 to 10,489 in December 2020, (See Table 10).

**Table 10: Automated Teller Machines and Points of Sales**

	2018	2019	2020	2020 change 2020	2020 Growth (%)
Automated Teller Machines (ATMs)	2,139	2,123	2,237	114	5.37
Point of Sales (POS) terminals	8,253	8,802	10,489	1,687	19.17

## 4.10 Electronic Payment Cards (Debit, Credit and Prepaid Cards)

### 4.10.1 Debit Cards

The total number of debit cards issued by banks as at December 2020 was 4,813,063 and showed an increase of 8.70 percent over 4,427,848 cards in December 2019.

International scheme cards of 3,168,608 constituted 65.83 percent of the total issued debit cards compared with banks proprietary cards of 1,644,455 which constituted 34.17 percent of the total issued debit cards. The international scheme and banks proprietary cards increased by 11.53 percent and 3.63 percent respectively in 2020. (See Table 11).

### 4.10.2 Credit Cards

The number of credit cards issued as at the end of December 2020 increased by 13.73 percent from 29,050 cards in December 2019 to 33,039 cards in 2020. The increase in the issued credit cards was on account of additional banks authorized by the Bank of Ghana to issue credit cards. All the credit cards issued were international scheme cards (See Table 11).

### 4.10.3 Prepaid Cards

The total number of prepaid cards issued increased by 53.98 percent from 372,586 in 2019 to 573,703 at end December 2020 (See Table 11).

**Table 11: Electronic Payment Cards**

Type	2018	2019	2020	Growth(%)
<b>Debit Cards:</b>	<b>4,754,514</b>	<b>4,427,848</b>	<b>4,813,063</b>	8.70
Banks own Proprietary Cards	1,612,291	1,586,800	1,644,455	3.63
International Scheme Cards	3,142,223	2,841,048	3,168,608	11.53
<b>Credit Cards:</b>	<b>23,102</b>	<b>29,050</b>	<b>33,039</b>	13.73
Banks own Proprietary Cards	-	-	-	-
International Scheme Cards	23,102	29,050	33,039	13.73
<b>Prepaid Cards:</b>	<b>216,592</b>	<b>372,586</b>	<b>573,703</b>	53.98
Banks own Proprietary Cards	-	17	56	229.41
International Scheme Cards	216,592	372,569	573,647	53.97

## CHAPTER 5: MOBILE MONEY SERVICES

### 5.1 Mobile Money transactions

Mobile money transactions increased year-on-year by 42.27 percent in transactional volume from 2.00 billion transactions in 2019 to 2.86 billion in 2020. Total value of transactions also increased year-on-year by 82.37 percent

from GH¢ 309.35 billion in 2019 to GH¢ 564.16 billion in 2020. Strong quarterly growth was experienced throughout the year with the strongest growth achieved in quarter three (Q3) of 2020 across all the key mobile money indicators (see Table 12).

**Table 12: Mobile Money Statistics**

Statistics	2017	2018	2019	2020
Registered e-money accounts (Cumulative)	23,947,437	32,554,346	32,470,793	38,473,734
Active e-money accounts*	11,119,376	13,056,978	14,459,352	17,142,677
Registered Agents (Cumulative)	194,688	396,599	306,346	423,892
Active Agents**	151,745	180,664	226,298	328,329
Total volume transactions for the year	981,564,563	1,454,470,801	2,009,989,300	2,859,624,191
Total value of transactions for the year	155,844,843,012	223,207,202,406	309,352,254,970	564,155,900,015
Balance on Float (GH¢'million)	2,321,070,106	2,633,925,288	3,633,832,947	6,980,030,924

### Interpretation

\* The number of accounts which transacted at least once in the 90 days prior to reporting

\*\* The number of agents who transacted at least once in the 30 days prior to reporting

**Chart 9: Total e-money transactions Volume and Value- '000**



**Chart 10: Total Transaction Volume and Value - YOY**



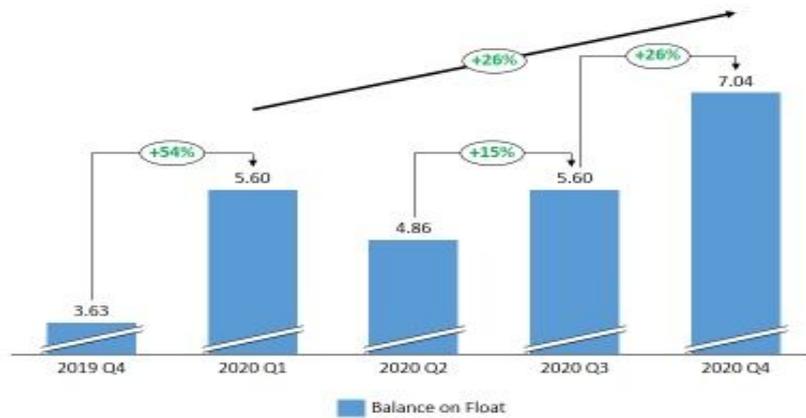
Float account balances went up consistently on monthly basis throughout the year with major growth of 23.8 percent and 25 percent achieved in quarter two (Q2) and quarter four (Q4)

respectively. The average balance per account holder increased by 6 percent on a monthly basis from GH¢ 112 in January to GHS 179.45 end 2020.

**Chart 11: Float account balances - YoY**



**Chart 11: Float account balances - YoY**



The growth in transactional and float activity was bolstered by an 18.56 percent year-on-year growth of active mobile money customers from 14.46 million active customers in 2019 to 17.14

million in 2020. In 2020, the count of active agents that provided electronic money agency services to customers increased by 45.09 percent from 226,298 in 2019 to 328,329 in 2020.

## CHAPTER 6: PAYMENT SYSTEMS RISK AND OVERSIGHT

### 6.1 Establishment of the Payment Systems Advisory Committee

Pursuant to section 4 (1) of the Payment Systems and Services Act 2019 (Act 987) the Bank of Ghana in March 2020, established the Payment Systems Advisory Committee (PSAC) to advise the Bank on regulation, oversight, operational and technical standards of payment, clearing and settlement systems. The membership of the Payment Systems Advisory Committee consists of the Governor of the Bank of Ghana as the chairperson and one representative each of the following institutions:

- Ministry of Finance
- Ghana Interbank Payment and Settlement Systems Ltd (GhIPSS)
- Securities and Exchange Commission (SEC)
- Ghana Association of Bankers (GAB)
- Ghana Chamber of Telecommunications
- National Information Technology Agency (NITA)
- Association of Ghana Industries (AGI)
- Ghana Chamber of Technology

The Committee formed five working groups with membership drawn from mobile network operators, merchants, consumers, payment service providers, Fintechs and third-party providers to support its work.

The working groups were grouped under a specific thematic areas as follows;

- Pricing, Promotion and Awareness Working Group
- Legal Working Group
- Innovation Working Group
- Operation and Automation Working Group
- Standard and Technology Working Group

### 6.2 Risk Management

The Bank confirmed to implement risk-based oversight framework within the payment ecosystem and adherence to international standards for payment system risk assessment.

**Operational Risk:** Various methods were adopted to contain operational risks including on-site examinations, directives, notices and guidelines. The Bank's Cyber and Information Security Directive provides the minimum requirements for licensed financial institutions. The Bank additionally issued a notice to Payment Service Providers on the minimum technical and governance requirements.

**Liquidity Risk:** Liquidity risk was a key concern for payment system operators especially during the banking sector reforms which required recapitalization of financial institutions. The clean-up and recapitalization played a major role in minimizing liquidity risk in the payment ecosystem.

**Legal Risk:** The Payment Systems and Services Act 2019 (Act 987) provides a comprehensive legal framework for the operation of payment systems participants.

### 6.3 Covid-19 Emergency Response Measures to Promote Electronic Payments

In March 2020, the Bank of Ghana introduced a number of measures to contain the impact of COVID-19 on the Ghanaian economy. The following emergency response measures were undertaken to facilitate more efficient payments and promote digital forms of payments:

- Mobile money transactions up to GHS 100.00 incurs no charge
- Mobile phone subscribers permitted to use their already existing mobile phone registration details to be on-boarded for minimum KYC account.

- The daily transaction limits for mobile money were increased as follows:

Daily Transaction Limits		
KYC Account Type	Current Limit	New Limit
Minimum KYC	GH¢300.00	GH¢1,000.00
Medium KYC	GH¢2,000.00	GH¢5,000.00
Enhanced KYC	GH¢5,000.00	GH¢10,000.00

- The mobile money wallet limits were increased as follows:

Daily Transaction Limits		
KYC Account Type	Current Limit	New Limit
Minimum KYC	GH¢1,000.00	GH¢2,000.00
Medium KYC	GH¢10,000.00	GH¢15,000.00
Enhanced KYC	GH¢20,000.00	GH¢30,000.00

- The revised aggregate monthly transaction limits were increased as follows:

Daily Transaction Limits		
KYC Account Type	Current Limit	New Limit
Minimum KYC	GH¢3,000.00	GH¢6,000.00
Medium KYC	GH¢20,000.00	No limit
Enhanced KYC	GH¢50,000.00	No Limit

#### 6.4 National Payment Systems Strategic Plan (2019-2024)

In January 2020, the Bank published the National Payment Systems Strategic Plan (2019 - 2024). The plan seeks to promote an enabling environment to develop the Ghanaian payment and financial systems. The key pillars of the strategic plan were as follows:

- Develop and implement clear, comprehensive, regulatory and governance framework.
- Promote free competitive and orderly development of the

payment system space that encourages innovation.

- Promote a safe and efficient payment system that fosters confidence and encourages usage.
- Deepen financial inclusion.
- Promote interoperability of payment system.
- Promote financial technologies.
- Participate in the integration of regional payment systems.

## 6.5 Establishment of a Fintech and Innovation Office

In recognition of the growing and dynamic nature of the Fintech industry, the Bank undertook some structural changes in May 2020, by establishing a Fintech and Innovation Office. This arrangement provided a dedicated office to manage all Fintech related activities and to test new and emerging payment technologies which required regulation. The Office is responsible for Dedicated Electronic Money Issuers (DEMI), Payment Service Providers, closed loop payment products, payment support solutions and other emerging forms of payment delivered by non-bank entities.

## 6.6 Establishment of Operations and Activities of GhIPSS

In line with the Bank's mandate, Bank of Ghana conducted examinations (virtual and on-site) on the operations and activities of GhIPSS.

The objectives of the examination was to determine the adequacy of controls pertaining to corporate governance, operations, information security, cybersecurity, human resource management,

risk management, business continuity and internal audit processes.

## 6.7 Development of the Ghanaian QR Code standards

In 2020, the Ghana Interbank Payment and Settlement Systems (GhIPSS) launched the GhQR code; Ghana's standard for QR codes, and the Proxy Pay platform. This created a standardized format for the use of QR codes in Ghana.

Merchants who signed on to this platform displayed a QR Code and Terminal ID in their shops. Customers of merchants were able to scan the QR code (for smartphones) or dial a short code (for feature phones) to pay from their bank account or mobile money wallets. The funds were then transferred instantly from the customer account to the merchant account.

## 6.8 Mobile Money Services Fees and Tariffs

Mobile money services fees and tariffs were either quoted as a flat rate or expressed as a percentage of the value of the transaction. The fee structure was designed to make mobile money services accessible at lower cost. Mobile money services fees and tariffs as at December 2020 are provided in Table 13 below:

**Table 13: Mobile Money Services Fees and Tariffs**

Comparison of Mobile Money Fees and Tariffs									
Mobile Money Operators	Transaction Amount	Deposit Cash	Send money from a registered customer to another registered customer (same network)	Send money from a registered customer to unregistered customer	Send money from an unregistered customer to an unregistered customer	Withdrawal by registered customer	Withdrawal by unregistered customer	ATM cash-out	Interoperability
MTN	1.00-50.00	Free	0.50	1.50	2.50	0.50	Free	0.5	0.75
	50.01-1000.00	Free	1.00%	3%	5%	1.00%	Free	1.00%	1.50%
	Above 1000.00	Free	10.00			10.00			15.00
Vodafone	1.00-50.00	Free	Free	1.50	Nil	0.50	Nil	0.50	Nil
	50.01-75.00	Free	Free	2.50	Nil	1.0%	Nil	1.50	Nil
	75.01-100.00	Free	Free	2.50	Nil	1.0%	Nil	1.50	Nil
	100.01-250.00	Free	Free	4.50	Nil	1.0%	Nil	2.50	Nil
	250.01-500.00	Free	Free	6.00	Nil	1.0%	Nil	4.00	Nil
	500.01-1000.00	Free	Free	Nil	Nil	1.0%	Nil		Nil
	1000.01-2000.00	Free	Free	Nil	Nil	10.00	Nil		Nil
2000.01-3000.00	Free	Free	Free	Nil	Nil	10.00	Nil	Nil	
AirtelTigo	1.00-50.00	Free	0	0.75	0.5	0.5	Free	0.5	0.75
	50.01-1000.00	Free	0.50%	1.50%	1.00%	1.00%	Free	1.00%	1.50%
	Above 1000.00	Free	10.00	1.50%		10.00	Free	10.00	15.00

## CHAPTER 7: FINANCIAL INCLUSION IN GHANA

### 7.1 Innovations and Developments in Financial Inclusion

In the midst of the pandemic, the Bank instituted a number of policy and regulatory interventions including the inauguration of the Payment Systems Advisory Committee (PSAC) on March 05, 2020. Some of the key interventions made towards fostering of financial inclusion were as follows:

a. Ghana's universal QR Code payment solution (GhQR code) and National Interbank funds Transfer (PROXY PAY) for payments was launched on March 25, 2020. This payment service enabled customers to scan the codes of merchants and pay directly from various funding sources on any platform. The QR code payment is also available for feature phone users, who are required to dial a specific code to effect payment. Payment using the QR code can be made using mobile money wallet or bank accounts, as well as any other payment applications that are developed by FinTechs and other payment service providers

b. The National Financial Inclusion and Development Strategy, the Digital Financial Services Strategy and the Cash-Lite Policy were launched by the government to improve access to financial services from 58% in 2015 to 85% by 2023 through increased digital financial services that will help promote economic empowerment of the poor and underserved in society.

c. Users of mobile money were permitted to send up to one hundred Ghana cedis (GH¢100) for free, excluding cash out to recipients on the same network or other networks through the interoperability platform.

d. Mobile money wallet limits were increased with daily transaction limits increased to GH¢ 1000, GH¢5000 and GH¢ 10,000 for minimum, medium and enhanced KYC accounts respectively and monthly total limit were also increased to

GH¢ 6000 for minimum KYC accounts and eliminated for other accounts.

e. Mobile money subscribers were allowed to use their existing mobile phone registration details for on-boarding of minimum Know Your Customer (KYC) Account and daily and aggregate monthly transaction limits.

f. Biometric e-zwich cards and mobile money interoperability platform were used for the distribution of stipend to beneficiary and collection of funds of the Livelihood Empowerment Against Poverty (LEAP) programme.

g. The Second Deputy Governor of the Bank, Mrs. Elsie Addo Awadzi, was appointed as the new Chair of the Alliance for Financial Inclusion Gender Inclusive Finance Committee (GIFC). The committee is responsible for providing leadership in advancing and promoting women's financial inclusion within the network and to oversee gender policy development.

## +Appendix

### Comparative Payment System Statistics from 2017 to 2020

category	Indicators	2017	2018	2019	2020	Annual Change 2020 (%)
<b>Basic Statistical data</b>	Total Population Estimate (million)	28.92	29.61	30.20	31.07	2.88
	Exchange Rate (GHS/USD\$)-End of Year	4.4157	4.8200	5.5337	5.7631	4.15
	Nominal Gross Domestic Product (GDP) GH¢'million	256,671	300,596	349,480	288,155	(15.55)
<b>Institutions offering payment services</b>	Licensed Banks (DMBs)	34	23	23	23	-
	Bank Branches	1,491	1,557	1,179	1,177	(0.17)
	Rural and Community Banks	141	144	144	145	0.69
	NBFI/SDIs	71	67	42	42	-
	Micro Finance Institution (MFI)	566	566	180	180	-
	Mobile Money Operators	3	3	3	3	-
	Active mobile money agents	151,745	180,664	226,298	328,329	45.09
<b>Large Value Payments (RTGS):</b>	Volume	934,234	1,221,650	1,376,094	1,442,182	4.80
	Value (GH¢'million)	2,083,846.27	1,963,465.27	2,106,117.85	2,433,537.47	15.55
	Average Value per Transaction (GH¢)	2,230,539.96	1,607,224.06	1,530,504.35	1,687,399.70	10.25
	Volume of transactions per day	3,767.07	4,926.01	5,548.77	5,815.25	4.80
<b>Cheque Codeline Clearing (CCC)</b>	Volume	7,334,460	7,255,220	6,831,417	5,903,331	(13.59)
	Value (GH¢million)	179,555.47	203,465.32	173,623.25	177,625	2.30
	Average Value per Transaction (GH¢)	24,481.08	28,043.99	25,415.41	30,088.94	18.39
	Average Volume of transactions per day	29,574.44	29,254.92	27,546.04	23,803.75	(13.59)
<b>ACH Direct Credit</b>	Volume	6,061,093	6,645,126	7,404,059	8,131,989	9.83
	Value (GH¢'million)	24,327.26	30,226.94	36,137.96	49,794.26	37.79
	Average Value per Transaction (GH¢)	4,013.68	4,548.74	4,880.83	6,123.26	25.45
	Average Volume of transactions per day	24,439.89	26,794.86	29,855.08	32,790.28	9.83
<b>ACH Direct Debit</b>	Volume	940,649	861,169	722,337	827,901	14.61
	Value (GH¢'million)	126.28	139.15	173.10	936.10	440.79

category	Indicators	2017	2018	2019	2020	Annual Change 2020 (%)
	Average Value per Transaction (GH¢)	134.25	161.58	239.64	1,130.69	371.83
	Average Volume of transactions per day	3,792.94	3,472.46	2,912.65	3,338.31	14.61
<b>E-Zwich</b>	Total Number of Cards Issued	2,364,456	2,774,799	3,072,965	3,252,493	5.84
	Volume of Transactions	8,367,017	7,759,354	10,796,560	10,477,601	(2.95)
	Value of Transactions (GH¢million)	3,431.49	5,651.14	6,308.37	9,033.25	43.19
	Average Volume of transactions per day	22,923.33	21,258.50	29,579.62	28,705.76	(2.95)
<b>Gh_Link™ (National Switch)</b>	Volume	2,340,409	1,830,182	972,746	806,486	(17.09)
	Value (GH¢'million)	603.43	543.74	329.23	329.70	0.14
	Average Value per Transaction (GH¢)	257.83	297.10	338.45	408.81	20.79
	Average Volume of transactions per day	6,412.08	5,014.20	2,665.06	2,209.55	(17.09)
<b>GhIPSS Instant Pay (GIP)</b>	Volume	41,795	143,879	1,905,267	6,804,754	257.15
	Value (GH¢'million)	83.23	534.04	3,456.89	9,146.76	164.60
	Average Value per Transaction (GH¢)	1,991.39	3,711.76	1,814.39	1,344.17	(25.92)
<b>Mobile Money</b>	Total number of mobile voice subscription (Cumulative)	37,445,048	40,934,875	40,173,115	40,173,115	-
	Registered mobile money accounts (Cumulative)	23,947,437	32,554,346	32,470,793	38,473,734	18.49
	Active mobile money accounts	11,119,376	13,056,978	14,459,352	17,142,677	18.56
	Registered Agents (Cumulative)	194,688	396,599	306,346	423,892	38.37
	Active Agents	151,745	180,664	226,298	328,329	45.09
	Total volume of mobile money transactions	981,564,563	1,454,470,801	2,009,989,300	2,859,624,191	42.27
	Total value of mobile money transactions (GH¢'Million)	155,844.84	223,207.23	309,352.25	564,155.90	82.37
	Balance on Float (GH¢'Million)	2,321.07	2,633.93	3,633.83	6,980.03	92.08
	Average Volume of transactions per day	2,689,217	3,984,851	5,506,820	7,834,586	42.27

**Table 15: Data on Payment Channels and Instruments**

Item	Indicators	Year Ending 2017	Year Ending 2018	Year Ending 2019	Year Ending 2020	Change 2020 (%)
<b>ATMs</b>	Number of ATMs (cumulative)	2,044	2,139	2,123	2,237	5.37
	Volume of transactions	57,317,491	57,763,558	55,709,252	56,603,211	1.60
	Value of transactions (GH¢)	18,542,950,793	21,796,487,291	26,392,440,332	32,148,026,396	21.81
<b>POS Terminals</b>	Number of Terminals (cumulative)	7,356	8,253	8,802	10,489	19.17
	Volume of transaction	7,198,029	10,218,088	14,251,259	15,159,237	6.37
	Value of transaction (GH¢)	4,158,052,064	8,261,737,489	8,104,491,560	11,271,897,541	39.08
<b>Internet Banking</b>	Number of Customers registered	936,965	815,904	1,106,270	1,019,073	(7.88)
	Volume of transactions	2,437,785	3,205,878	4,651,290	7,055,793	51.70
	Value of transactions (GH¢)	9,739,336,941	6,267,223,830	12,014,728,578	24,208,653,517	101.50
<b>Mobile Banking</b>	Number of Customers registered	2,110,984	3,891,269	4,245,479	4,767,719	12.30
	Volume of transactions	7,036,285	14,805,878	18,770,721	34,842,318	85.62
	Value of transactions (GH¢)	1,501,372,536	5,658,399,344	6,687,332,884	12,940,760,028	93.51
<b>Debit Cards</b>	Number of cards issued (cumulative):	5,953,484	4,754,514	4,427,848	4,813,063	8.70
	International Scheme Cards	2,912,256	3,142,223	2,841,048	3,168,608	11.53
	Banks own proprietary cards	3,041,228	1,612,291	1,586,800	1,644,455	3.63
	Volume of transaction	60,382,177	60,118,182	56,068,367	58,596,924	4.51
	Value of transaction (GH¢)	17,785,179,796	21,804,830,666	27,758,120,613	37,903,559,526	36.55
<b>Credit Cards</b>	Number of cards issued (cumulative):	14,698	23,102	29,050	33,039	13.73
	International Scheme Cards	14,698	23,102	29,050	33,039	13.73
	Banks' own proprietary cards			-	-	-
	Volume of transaction	185,101	324,841	465,906	600,876	28.97
	Value of transaction (GH¢)	99,989,316	171,702,441	232,609,683	275,013,808	18.23
<b>Prepaid cards</b>	Number of cards issued (cumulative)	86,017	216,592	372,586	573,703	53.98
	Volume of transactions	472,071	590,139	489,672	382,678	(21.85)
	Value of transactions (GH¢)	255,875,512	326,055,976	358,649,962	311,321,972	(13.20)





[www.bog.gov.gh](http://www.bog.gov.gh)