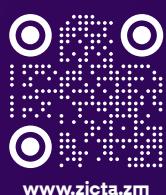




ICTs Sector 2022 Annual Market Report

A Supply Side Assessment of Developments in the
Information and Communications Technology Sector



www.zicta.zm

A Regulator at the Nexus
of an Inclusive Digital Economy



Information and Communication Technologies Sector 2022 Annual Market Report

A Supply Side Assessment of Developments in the Information
and Communications Technology Sector

February, 2023

About this Report

The 2022 Annual Market Report for the Information and Communication Technologies (ICT) Sector was developed by the Zambia Information and Communications Technology Authority (ZICTA) as part of its regulatory mandate to track developments in the ICT sector.

The report provides quantitative and qualitative insights gathered from various players in the ICT sector including providers of ICT services, Government Ministries, Agencies and Departments as well as physical and online resources which were complemented with information generated by the Authority. Specifically, the report sought to track global and national developments in the ICT sector over the year 2022. An assessment of the macro-economic environment with a focus on deciphering implications for the ICT sector is provided in the report.

Key trends in ICT access and usage based on micro level data such as details on market size, competition landscape, revenue performance and investment are outlined in the report. A sectorial policy and regulatory review based on consultations with the industry is also provided. The report concludes with some sentiments on the forecast for the subsequent review period and provides some suggestions on interventions to consider for the succeeding year.

All opinions, errors or omissions are the responsibility of the authors and would not present any liability on the Authority.

List of Abbreviations

CPI	Consumer Price Index
EMS	Expedited Mail Service
FDI	Foreign Direct Investment
Gbps	Gigabytes per second
GDP	Gross Domestic Product
GNI	Gross National Income
GSMA	GSM Association
HHI	Herfindahl-Hirschman Index
ICT	Information and Communication Technology
ITU	International Telecommunications Union
LTE	Long Term Evolution
MNO	Mobile Network Operator
MoFNP	Ministry of Finance and National Planning
MSMEs	Micro, Small and Medium Enterprises
OTTs	Over –The-Top Technologies
PSTN	Public Switched Technology Network
SMS	Short Message Services
UPU	Universal Postal Union
VAT	Value Added Taxes
VOIP	Voice over internet Protocol
ZICTA	Zambia Information and Communications Technology Authority

Table of Contents

ABOUT THIS REPORT	I
LIST OF ABBREVIATIONS.....	II
LIST OF FIGURES.....	VI
LIST OF TABLES	VII
1.0. RECENT GLOBAL DEVELOPMENTS IN THE ICT SECTOR	12 -
1.1. TRENDS IN GLOBAL ICT PRODUCT SUBSCRIPTIONS	12 -
1.2. GLOBAL TRENDS IN USAGE OF THE INTERNET BY THE POPULATION	12 -
1.3. TRENDS IN MOBILE NETWORK COVERAGE	- 3 -
1.4. GROWTH IN 5G CONNECTIONS	- 3 -
1.5. AFFORDABILITY OF INTERNET SERVICES	- 3 -
1.6. TRENDS IN GLOBAL MOBILE FINANCIAL INCLUSION	- 4 -
1.7. ITU-2022 PLENIPOTENTIARY CONFERENCE	- 4 -
1.8. OUTCOMES FROM THE 2022 WTDC.....	- 4 -
1.9. 2022 POSTAL DEVELOPMENT INDEX	- 4 -
1.10. UPU AND WORLD CUSTOMS ORGANISATION SIGN COOPERATION AGREEMENT.....	- 5 -
1.11. THE UTILISATION OF THE UPU ELECTRONIC ADVANCE DATA APPLICATION.....	- 5 -
2.0 SELECTED LOCAL DEVELOPMENTS IN THE ICT SECTOR.....	- 6 -
2.1. ISSUANCE AND RENEWAL OF LICENSES TO OPERATORS IN THE ICT SECTOR	- 6 -
2.2. ISSUANCE AND RENEWAL OF LICENCES TO OPERATORS IN THE POSTAL SECTOR	- 6 -
2.3. TRENDS IN MOBILE MONEY ADOPTION AND USAGE	- 7 -
2.4. DEVELOPMENT OF REVISED NATIONAL ICT POLICY AND DIGITAL TRANSFORMATION STRATEGY	- 7 -
2.5. TWO MILLION SIM CARDS DEACTIVATED.....	- 7 -
2.6. ASSIGNMENT OF HIGH DEMAND SPECTRUM IN THE 700 MHZ. AND 2600 MHZ. BANDS. -	7
-	
2.7. AWARD OF NETWORK (FACILITIES) LICENSE IN THE INTERNATIONAL MARKET SEGMENT -	8 -
2.8. ENHANCED CONTROLS ON KNOW YOUR CUSTOMER (KYC) SIM REGISTRATION DATA AND COMPLIANCE INITIATIVES	- 8 -
2.9. LAUNCH OF SHORT CODE FOR REPORTING NUMBERS SUSPECTED OF FRAUDULENT ACTIVITIES	- 8 -
2.10. COMMENCEMENT OF PHASING OUT OF SCRATCH CARDS	- 8 -
2.11. INTERIM DETERMINATION OF PRICING FOR POLE CO-LOCATION SERVICES	- 9 -
2.12. ZAMBIA AND EGYPT SIGN 5-YEAR MoU ON ICTs	- 9 -
2.13. ZAMPOST LAUNCHES E-ZAMPOST AND ZAMPOST MONEY	- 9 -
2.14. ZAMBIAN GOVERNMENT SIGNS €10 MILLION MoU WITH ASSECO	- 9 -
2.15. REDUCTION OF POSTAL LICENSE FEES	- 10 -
2.16. LAUNCH OF 5G SERVICES IN ZAMBIA.....	- 10 -
3.0 DEVELOPMENTS IN THE MACROECONOMIC ENVIRONMENT.....	11 -
3.1. ECONOMIC GROWTH.....	- 11 -
3.2. INFLATION RATE PERFORMANCE	- 11 -
3.3. PERFORMANCE OF THE FOREIGN EXCHANGE MARKET	- 12 -
3.4. AVERAGE LENDING RATES AND MONETARY POLICY RATES.....	- 13 -
3.5. ACCESS TO COMMERCIAL BANK CREDIT IN THE ICT SECTOR.....	- 14 -
3.6. FOREIGN CAPITAL INVESTMENTS AND INVESTOR PERCEPTIONS	- 15 -
3.7. CHANGES TO THE TAX REGIME IN THE ICT SECTOR	- 15 -
4.0 PERFORMANCE OF THE ICT SECTOR	- 16 -
4.1. MOBILE TELEPHONE SERVICES MARKET	- 16 -
4.1.1 Active Mobile Network Subscription.....	- 16 -
4.1.2 Market Shares of Mobile Telephone Subscriptions and Trends in Market Concentration.....	- 16 -
4.1.3 Unique Mobile Subscribers	- 17 -
4.1.4 Mobile Cellular Voice Traffic.....	- 18 -

4.1.5	Mobile Cellular SMS Traffic	- 20 -
4.1.6	Mobile Voice Tariffs	- 20 -
4.1.7	Telecommunication Infrastructure.....	- 22 -
4.1.8	Mobile Revenue Performance.....	- 23 -
4.1.9	MNO Average Revenue per User	- 24 -
4.2	FIXED TELEPHONY MARKET.....	- 25 -
4.2.1	Active Public Switched Telephone Network Subscriptions	- 25 -
4.2.1.	PSTN Traffic	- 26 -
4.3.	INTERNET SERVICES	- 26 -
4.2.2	Fixed and Mobile Internet Subscription	- 26 -
4.3.1.	Bandwidth Capacity and Utilisation	- 28 -
4.4.	PASSIVE INFRASTRUCTURE	- 30 -
4.4.1.	Ownership of Tower Infrastructure	- 30 -
4.5.	DATA STORAGE FACILITIES	- 30 -
4.5.1.	Capacity and Utilisation of Data Storage Facilities.....	- 30 -
4.6.	TRANSMISSION NETWORK MARKET	- 31 -
4.6.1.	Network Capacity and Utilization in the Transmission Network Market. -	31 -
4.6.2.	Wholesale Transmission Infrastructure.....	- 31 -
4.6.2.1.	Fibrecom Fibre Network	- 32 -
4.6.2.2.	Liquid Technologies Network	- 32 -
4.6.2.3.	Zamtel Fibre Network	- 33 -
4.6.2.4.	Airtel Networks Fibre Network	- 34 -
4.6.2.5.	MTN Zambia Fibre Network.....	- 35 -
4.7.	EMPLOYMENT IN THE ICT SECTOR.....	- 35 -
5.	SECTORIAL POLICY AND REGULATORY REVIEW	- 37 -
5.1.	POSITIVE FACTORS INFLUENCING GROWTH ON THE MARKET	- 37 -
5.2.	CONSTRAINTS GROWTH ON THE MARKET.....	- 38 -
5.3.	PROPOSALS FOR ENHANCING THE BUSINESS ENVIRONMENT.....	- 38 -
6.0.	OUTLOOK FOR THE ICT SECTOR IN 2023	- 40 -

ABOUT THIS REPORT	I
LIST OF ABBREVIATIONS.....	II
LIST OF FIGURES.....	VI
LIST OF TABLES	VII
1.0. RECENT GLOBAL DEVELOPMENTS IN THE ICT SECTOR	- 12 -
1.1. TRENDS IN GLOBAL ICT PRODUCT SUBSCRIPTIONS	12 -
1.2. GLOBAL TRENDS IN USAGE OF THE INTERNET BY THE POPULATION	12 -
1.3. TRENDS IN MOBILE NETWORK COVERAGE	- 3 -
1.4. GROWTH IN 5G CONNECTIONS	- 3 -
1.5. AFFORDABILITY OF INTERNET SERVICES	- 3 -
1.6. TRENDS IN GLOBAL MOBILE FINANCIAL INCLUSION	- 4 -
1.7. ITU-2022 PLENIPOTENTIARY CONFERENCE	- 4 -
1.8. OUTCOMES FROM THE 2022 WTDC.....	- 4 -
1.9. 2022 POSTAL DEVELOPMENT INDEX	- 4 -
1.10. UPU AND WORLD CUSTOMS ORGANISATION SIGN COOPERATION AGREEMENT.....	- 5 -
1.11. THE UTILISATION OF THE UPU ELECTRONIC ADVANCE DATA APPLICATION.....	- 5 -
2.0 SELECTED LOCAL DEVELOPMENTS IN THE ICT SECTOR.....	- 6 -
2.1. ISSUANCE AND RENEWAL OF LICENSES TO OPERATORS IN THE ICT SECTOR	- 6 -
2.2. ISSUANCE AND RENEWAL OF LICENCES TO OPERATORS IN THE POSTAL SECTOR	- 6 -
2.3. TRENDS IN MOBILE MONEY ADOPTION AND USAGE	- 7 -
2.4. DEVELOPMENT OF REVISED NATIONAL ICT POLICY AND DIGITAL TRANSFORMATION STRATEGY	- 7 -
2.5. TWO MILLION SIM CARDS DEACTIVATED.....	- 7 -
2.6. ASSIGNMENT OF HIGH DEMAND SPECTRUM IN THE 700 MHz. AND 2600 MHz. BANDS. -	7

2.7.	AWARD OF NETWORK (FACILITIES) LICENSE IN THE INTERNATIONAL MARKET SEGMENT	- 8 -
2.8.	ENHANCED CONTROLS ON KNOW YOUR CUSTOMER (KYC) SIM REGISTRATION DATA AND COMPLIANCE INITIATIVES	- 8 -
2.9.	LAUNCH OF SHORT CODE FOR REPORTING NUMBERS SUSPECTED OF FRAUDULENT ACTIVITIES	- 8 -
2.10.	COMMENCEMENT OF PHASING OUT OF SCRATCH CARDS	- 8 -
2.11.	INTERIM DETERMINATION OF PRICING FOR POLE CO-LOCATION SERVICES	- 9 -
2.12.	ZAMBIA AND EGYPT SIGN 5-YEAR MoU ON ICTs	- 9 -
2.13.	ZAMPOST LAUNCHES E-ZAMPOST AND ZAMPOST MONEY	- 9 -
2.14.	ZAMBIAN GOVERNMENT SIGNS €10 MILLION MoU WITH ASSECO	- 9 -
2.15.	REDUCTION OF POSTAL LICENSE FEES	- 10 -
2.16.	LAUNCH OF 5G SERVICES IN ZAMBIA	- 10 -
3.0	DEVELOPMENTS IN THE MACROECONOMIC ENVIRONMENT	- 11 -
3.1	ECONOMIC GROWTH	- 11 -
3.2	INFLATION RATE PERFORMANCE	- 11 -
3.3	PERFORMANCE OF THE FOREIGN EXCHANGE MARKET	- 12 -
3.4	AVERAGE LENDING RATES AND MONETARY POLICY RATES	- 13 -
3.5	ACCESS TO COMMERCIAL BANK CREDIT IN THE ICT SECTOR	- 14 -
3.6	FOREIGN CAPITAL INVESTMENTS AND INVESTOR PERCEPTIONS	- 15 -
3.7	CHANGES TO THE TAX REGIME IN THE ICT SECTOR	- 15 -
4.0	PERFORMANCE OF THE ICT SECTOR	- 16 -
4.1	MOBILE TELEPHONE SERVICES MARKET	- 16 -
4.1.1	Active Mobile Network Subscription	- 16 -
4.1.2	Market Shares of Mobile Telephone Subscriptions and Trends in Market Concentration	- 16 -
4.1.3	Unique Mobile Subscribers	- 17 -
4.1.4	Mobile Cellular Voice Traffic	- 18 -
4.1.5	Mobile Cellular SMS Traffic	- 20 -
4.1.6	Mobile Voice Tariffs	- 20 -
4.1.7	Telecommunication Infrastructure	- 22 -
4.1.8	Mobile Revenue Performance	- 23 -
4.1.9	MNO Average Revenue per User	- 24 -
4.2	FIXED TELEPHONY MARKET	- 25 -
4.2.1	Active Public Switched Telephone Network Subscriptions	- 25 -
4.2.2	PSTN Traffic	- 26 -
4.3	INTERNET SERVICES	- 26 -
4.3.1	Fixed and Mobile Internet Subscription	- 26 -
4.3.2	Bandwidth Capacity and Utilisation	- 28 -
4.4	PASSIVE INFRASTRUCTURE	- 30 -
4.4.1	Ownership of Tower Infrastructure	- 30 -
4.5	DATA STORAGE FACILITIES	- 30 -
4.5.1	Capacity and Utilisation of Data Storage Facilities	- 30 -
4.6	TRANSMISSION NETWORK MARKET	- 31 -
4.6.1	Network Capacity and Utilization in the Transmission Network Market	- 31 -
4.6.2	Wholesale Transmission Infrastructure	- 31 -
4.6.2.1	Fibrecom Fibre Network	- 32 -
4.6.2.2	Liquid Technologies Network	- 32 -
4.6.2.3	Zamtel Fibre Network	- 33 -
4.6.2.4	Airtel Networks Fibre Network	- 34 -
4.6.2.5	MTN Zambia Fibre Network	- 35 -
4.7	EMPLOYMENT IN THE ICT SECTOR	- 35 -
5.	SECTORIAL POLICY AND REGULATORY REVIEW	- 37 -
5.1.	POSITIVE FACTORS INFLUENCING GROWTH ON THE MARKET	- 37 -
5.2.	CONSTRAINTS GROWTH ON THE MARKET	- 38 -
5.3.	PROPOSALS FOR ENHANCING THE BUSINESS ENVIRONMENT	- 38 -
6.0.	OUTLOOK FOR THE ICT SECTOR IN 2023	- 40 -

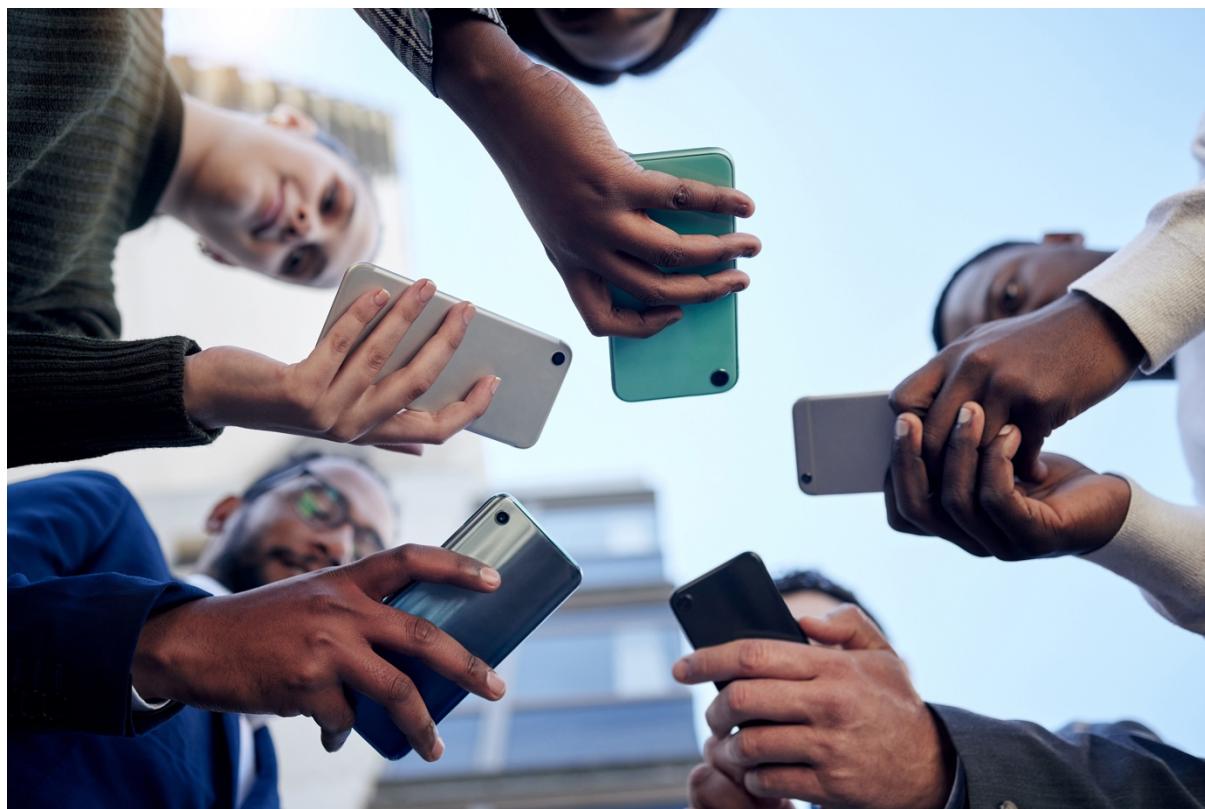
List of Figures

FIGURE 1: GLOBAL SUBSCRIPTIONS PER 100 INHABITANTS, 2005 – 2022	- 12 -
FIGURE 2: INDIVIDUALS USING THE INTERNET	- 2 -
FIGURE 3: PERCENTAGE OF INDIVIDUALS USING THE INTERNET BY REGION, 2022	- 2 -
FIGURE 4: POPULATION COVERAGE BY TYPE OF MOBILE NETWORK, 2015-2022	- 3 -
FIGURE 5: TRENDS IN ECONOMIC GROWTH AND CONTRIBUTION OF THE ICT SECTOR	- 11 -
FIGURE 6: INFLATION RATE PERFORMANCE; DEC 2021 – DEC 2022.....	- 12 -
FIGURE 7: EXCHANGE RATE PERFORMANCE; DEC 2021 – DEC 2022	- 13 -
FIGURE 8: COMMERCIAL BANK LENDING RATES AND POLICY RATES; DEC 2021 – DEC 2022	- 14 -
FIGURE 9: COMMERCIAL BANK CREDIT ALLOCATED TO TRANSPORT, STORAGE AND COMMUNICATION SECTOR; DEC 2021 – DEC 2022.....	- 14 -
FIGURE 10: PRIVATE FOREIGN INVESTMENT PERFORMANCE: 2018 TO 2021	- 15 -
FIGURE 11: TRENDS IN ACTIVE MOBILE CELLULAR SUBSCRIPTIONS 2020 - 2022.....	- 16 -
FIGURE 12: TRENDS IN MOBILE CELLULAR MARKET CONCENTRATION 2020 - 2022.....	- 17 -
FIGURE 13: TRENDS IN DOMESTIC OUTGOING TRAFFIC IN MINUTES: 2020 TO 2022.....	- 18 -
FIGURE 14: TRENDS IN DOMESTIC INCOMING TRAFFIC IN MINUTES: 2020 TO 2022	- 18 -
FIGURE 15: TRENDS IN INTERNATIONAL OUTGOING TRAFFIC IN MINUTES: 2020 TO 2022	- 19 -
FIGURE 16: TRENDS IN INTERNATIONAL INCOMING TRAFFIC IN MINUTES: 2020 TO 2022	- 19 -
FIGURE 17: TRENDS IN SMS TRAFFIC 2020 - 2022	- 20 -
FIGURE 18: MOBILE VOICE TARIFFS ‘PER MINUTE IN ZMW’: 2010-2022	- 21 -
FIGURE 19: TRENDS IN TELECOMMUNICATION SITES 2020 - 2022	- 22 -
FIGURE 20: TREND IN MNO REVENUE PERFORMANCE, 2020 - 2022	- 23 -
FIGURE 21: CONTRIBUTION TO TOTAL REVENUE BY SERVICE FOR MNO: 2020 TO 2022.....	- 24 -
FIGURE 22: TRENDS IN AVERAGE REVENUES PER USER: 2020 - 2022	- 25 -
FIGURE 23: TRENDS IN PTSN ACTIVE SUBSCRIPTIONS; 2020 – 2022	- 25 -
FIGURE 24: TRENDS IN PSTN TRAFFIC; 2020 – 2022	- 26 -
FIGURE 27: TRENDS IN INTERNET SUBSCRIPTION; 2019 TO 2022	- 27 -
FIGURE 30: BANDWIDTH CAPACITY AND UTILIZATION BY MNO: 2019 TO 2022	- 29 -
FIGURE 31: DATA THROUGHPUT VOLUMES: 2019 TO 2022	- 29 -
FIGURE 32; TRENDS OF TOWER INFRASTRUCTURE: 2020 TO 2022	- 30 -
FIGURE 33: TRENDS IN NETWORK TRANSMISSION CAPACITY AND UTILIZATION: JUNE 2019 TO JUNE 2022.. - 31 -	- 31 -
FIGURE 34: FIBRECOM NETWORK MAP: 2022	- 32 -
FIGURE 35: LIQUID TECHNOLOGIES METRO AND BACKBONE NETWORK DIAGRAM, 2022	- 33 -
FIGURE 36: ZAMTEL FIBRE BACKBONE INFRASTRUCTURE, 2022	- 34 -
FIGURE 37: AIRTEL NETWORK PLANNED AND EXISTING FIBRE NETWORK INFRASTRUCTURE, 2022	- 34 -
FIGURE 39: EMPLOYMENT IN THE ICT SECTOR: 2019 TO 2022.....	- 36 -

List of Tables

FIGURE 1: GLOBAL SUBSCRIPTIONS PER 100 INHABITANTS, 2005 – 2022	- 12 -
FIGURE 2: INDIVIDUALS USING THE INTERNET	- 2 -
FIGURE 3: PERCENTAGE OF INDIVIDUALS USING THE INTERNET BY REGION, 2022	- 2 -
FIGURE 4: POPULATION COVERAGE BY TYPE OF MOBILE NETWORK, 2015-2022	- 3 -
FIGURE 5: TRENDS IN ECONOMIC GROWTH AND CONTRIBUTION OF THE ICT SECTOR	- 11 -
FIGURE 6: INFLATION RATE PERFORMANCE; DEC 2021 – DEC 2022.....	- 12 -
FIGURE 7: EXCHANGE RATE PERFORMANCE; DEC 2021 – DEC 202.....	- 13 -
FIGURE 8: COMMERCIAL BANK LENDING RATES AND POLICY RATES; DEC 2021 – DEC 2022	- 14 -
FIGURE 9: COMMERCIAL BANK CREDIT ALLOCATED TO TRANSPORT, STORAGE AND COMMUNICATION SECTOR; DEC 2021 – DEC 2022.....	- 14 -
FIGURE 10: PRIVATE FOREIGN INVESTMENT PERFORMANCE: 2018 TO 2021	- 15 -
FIGURE 11: TRENDS IN ACTIVE MOBILE CELLULAR SUBSCRIPTIONS 2020 - 2022.....	- 16 -
FIGURE 12: TRENDS IN MOBILE CELLULAR MARKET CONCENTRATION 2020 - 2022.....	- 17 -
FIGURE 13: TRENDS IN DOMESTIC OUTGOING TRAFFIC IN MINUTES: 2020 TO 2022.....	- 18 -
FIGURE 14: TRENDS IN DOMESTIC INCOMING TRAFFIC IN MINUTES: 2020 TO 2022	- 18 -
FIGURE 15: TRENDS IN INTERNATIONAL OUTGOING TRAFFIC IN MINUTES: 2020 TO 2022.....	- 19 -
FIGURE 16: TRENDS IN INTERNATIONAL INCOMING TRAFFIC IN MINUTES: 2020 TO 2022	- 19 -
FIGURE 17: TRENDS IN SMS TRAFFIC 2020 - 2022	- 20 -
FIGURE 18: MOBILE VOICE TARIFFS ‘PER MINUTE IN ZMW’: 2010-2022	- 21 -
FIGURE 19: TRENDS IN TELECOMMUNICATION SITES 2020 - 2022	- 22 -
FIGURE 20: TREND IN MNO REVENUE PERFORMANCE, 2020 - 2022	- 23 -
FIGURE 21: CONTRIBUTION TO TOTAL REVENUE BY SERVICE FOR MNO: 2020 TO 2022.....	- 24 -
FIGURE 22: TRENDS IN AVERAGE REVENUES PER USER: 2020 - 2022	- 25 -
FIGURE 23: TRENDS IN PTSN ACTIVE SUBSCRIPTIONS; 2020 – 2022	- 25 -
FIGURE 24: TRENDS IN PSTN TRAFFIC; 2020 – 2022	- 26 -
FIGURE 27: TRENDS IN INTERNET SUBSCRIPTION; 2019 TO 2022	- 27 -
FIGURE 30: BANDWIDTH CAPACITY AND UTILIZATION BY MNO: 2019 TO 2022	- 29 -
FIGURE 31: DATA THROUGHPUT VOLUMES: 2019 TO 2022	- 29 -
FIGURE 32; TRENDS OF TOWER INFRASTRUCTURE: 2020 TO 2022	- 30 -
FIGURE 33: TRENDS IN NETWORK TRANSMISSION CAPACITY AND UTILIZATION: JUNE 2019 TO JUNE 2022.. - 31 -	- 31 -
FIGURE 34: FIBRECOM NETWORK MAP: 2022	- 32 -
FIGURE 35: LIQUID TECHNOLOGIES METRO AND BACKBONE NETWORK DIAGRAM, 2022	- 33 -
FIGURE 36: ZAMTEL FIBRE BACKBONE INFRASTRUCTURE, 2022	- 34 -
FIGURE 37: AIRTEL NETWORK PLANNED AND EXISTING FIBRE NETWORK INFRASTRUCTURE, 2022	- 34 -
FIGURE 39: EMPLOYMENT IN THE ICT SECTOR: 2019 TO 2022.....	- 36 -

Executive Summary



Major Global Developments in the ICT Sector: Estimates provided by the International Telecommunications Union (ITU) indicate that global mobile cellular subscriptions grew to 108 per 100 persons from 106.5 per 100 persons in 2021. The mobile broadband subscriptions grew by an average of 14.8 percent per year, against a growth rate of 2 percent for mobile-cellular subscriptions and 6.7 for fixed broadband subscriptions over the last 10 years. Specifically, the total number of people that were using the internet increased from 4.9 billion in 2021 to 5.3 billion in 2022 representing an annual growth rate of 6.1 percent and a corresponding penetration rate of 66 percent.

On the other hand, the penetration rate for fixed-telephone subscriptions continued their slow but steady decline, losing an average of 4.2 percent each year over the last 10 years. The report also established that 4G network coverage had doubled between 2015 and 2022 to reach 88 percent of the world population. In Africa, 4G networks were reported to cover at least half of the continents population. The 2022 ITU Plenipotentiary Conference was convened in Romania's capital city of Bucharest. The Plenipotentiary Conference approved the strategic and financial plans of the Union covering the years 2024–2027 thus laying the foundation for ITU's operational priorities and future activities.

The Universal Postal Unions (UPU) 2022 Postal development report indicated that Cameroon surpassed Ghana as the highest ranked for postal development in the African region. Zambia's postal development score, based on Zampost's performance reduced from 22.4 in 2021 to 16.5 in 2022, representing a deterioration in the overall performance of the national postal service.

Major Local Developments in the ICT Sector: As at the end of December 2022, there were a total of eighty-four (84) valid licenses in the ICT sector compared to seventy-three (73) valid licenses that had been issued by the Authority at the end of December 2021. ZICTA had also issued a total of seventy one (71) valid licenses in the Postal sector as at the end of December, 2022 compared to forty nine (49) valid licenses that had been issued at the end of December, 2021 reflecting a growth of 45 percent.

The total number of active mobile money subscriptions in the country increased from 9.8 million in 2021 to 11.2 million subscribers in 2022 representing a growth rate of 13.98 percent. Further, the value of mobile money transactions increased significantly from ZMW 169.4 billion recorded at the end of 2021 to ZMW 295.8 billion at the end of 2022 reflecting an increase of 74.63 percent.

Similarly, the volume of mobile money transactions increased from 834 million transactions at the end of 2021 to 1,581 million transactions at the end of 2022 reflecting an improvement of 89.6 percent. In order to curb the increase in digital financial crimes in the country, the Authority in collaboration with the Mobile Network Operators introduced the *707# short code for reporting, detecting, verifying, and deactivating phone numbers/SIM cards used in perpetuating digital frauds and scams.

Further, ZICTA in collaboration with GSMA Zambia successfully expanded its initiatives related to Green ICTs through the launch of an initiative for the phasing out of airtime Scratch Cards. In the 2023 National Budget statement issued by the Minister of Finance and National Planning, the postal and courier license fees charged by the Authority were reduced from ZMW 15,000 to ZMW 10,000 for domestic license whereas the fees for the local license were reduced from ZMW 10,000 to ZMW 5,000.

Macroeconomic Performance: The ICT sector's contribution to overall economic activity increased from 2 percent in the second quarter of 2022 to 3.5 percent in the third quarter of 2022. According to the Ministry of Finance and National Planning, the country is expected to grow by an average of 3.1 percent in 2022. Consequently, it is anticipated that this positive economic outturn will have a positive impact on the ICT sector as it will increase the demand for ICT services.

The annual inflation rate, measured by the Consumer Price Index, decreased from 16.4 percent to 9.9 percent over the reference period representing a decline in price increments of about 40 percent. In the ICT sector, the overall rate of price increases also declined from 2.5 percent at the end of December 2021 to 1 percent at the end of December 2022 reflecting a decline of 60 percent. The performance of the Zambian currency against some of the major trading currencies improved marginally between the end of 2021 and the end of 2022. Specifically, the Zambian Kwacha appreciated from ZMW/GBP 22.38 to ZMW/GBP 21.80 reflecting a strengthening of 3 percent and ZMW/ZAR 1.10 to ZMW/ZAR1.06 reflecting a strengthening of 4 percent over the reference period.

On the other hand, the Kwacha depreciated against the United States Dollar (USD), from ZMW/USD 16.67 to ZMW/USD 18.80 representing a weakening of 8 percent. The average commercial bank lending rate declined marginally by 2 percent between the end of December 2021 and the end of December 2022 entailing a decline in the cost of borrowing. The 2023 National Budget presented by the Minister of Finance and National Planning in September 2022 proposed a number of changes to the ICT and postal sectors' tax regime aimed at promoting growth as well as steering the country towards digital transformation.

The table below provides selected estimates for the sector's performance as obtained from the 2022 ICT sector market report.

Indicator	2021	2022	Comment
1. Total number of active mobile network subscriptions	20.2 million	19.8 million	Decrease (2 percent)
2. Market Concentration (HHI)	0.369	0.375	Marginal reduction in competitive forces (0.006 points)
3. Number of unique mobile cellular subscriptions	7.5 million	7.9 million	Improvement (6 percent)
4. Total domestic outgoing traffic on mobile cellular networks (minutes)	24.4 billion	28.5 billion	Improvement (17 percent)
5. Volume of international outgoing traffic	17.4 million	14.9 million	Decrease (15 percent)
6. Volume of international incoming traffic	18.6 million	17 million	Decrease (9 percent)
7. Benchmarking of mobile voice across 18 countries drawn from the region (Zambia performance on On-net calls during Peak hours)	7 th position	6 th position	Improvement
8. Total number of operational telecommunication sites in the country	11,478	11,987	Improvement (4 percent)
9. Revenue performance in the mobile telephone subsector	ZMW 6.6 billion	ZMW 7.8 billion	Improvement (18 percent)
10. Total number of active internet (mobile & fixed) subscriptions	10.4 million	11.1 million	Improvement (6.73 percent)
11. Average equipped capacity for the mobile network operators.	181,728.25 Mbps	155,486.67 Mbps	Decrease (14.4 percent)
12. Volume of data Utilised	272,894.24 TB	421,238.65 TB	Improvement 54.4 percent.
13. Number of telecommunication towers in Zambia	3,413	3,506	Improvement (2.6 percent)
14. Total available capacity among wholesale carriers	640.2 Gbps	839.7 Gbps	Improvement (31.2 percent)
15. Incoming International Mail Traffic – Zampost	151,183	162,715	Improvement (7.63 percent)
16. Total number of employees in the ICT sector	1,709	1,909	Improvement (11.7 percent)

A sectorial policy and regulatory review undertaken at the end of December, 2022 through extensive consultations with operators in the ICT and postal sectors revealed the following challenges in the sector:

- a) **High tax incidence in the ICT sector.** The ICT sector continued to face the highest corporate tax rate of 35 percent despite the reduction from 40 percent previously applied for profits above K250,000.00. In addition, the excise duty of 17.5 percent applied on airtime has a direct effect of increasing the cost of services and consequently reduced the pace of adoption as well as intensity of usage of ICT services.

- b) **Macro-Economic Instability:** Operators identified challenges associated with the macroeconomic environment as a key factor that increased the cost of doing business. Notably, the effect of the extensive depreciation of the local currency towards the end of the previous year was noted to be the significant factor that affected the business environment.
- c) **Rising Energy Costs:** The cost of diesel which is a key input in the provision of services increased significantly in 2022. In addition, the frequency of adjustments in the pricing resulting from the monthly revisions of fuel prices increased instability of operational costs.
- d) **Delays in Approval for installation of infrastructure:** Operators indicated that there were delays by ZICTA in obtaining approvals for installation of infrastructure such as the laying of fiber. In addition, there were concerns on cost and delivery time associated with the compulsory requirement for concrete poles to be used in the deployment of fiber.
- e) **Low Awareness on Cyber Security Risks:** Operators identified cyber security risks as a growing challenge in the country. However, it was also observed that the extent of awareness of the existing risks and mitigation strategies among users of ICT services was low.

The outlook for the year 2023 based on the trends noted on the market as well as sentiments gathered from operators are summarized below:

- a) **Forecast in uptake and Usage of ICT Services:** The Authority forecasts a positive outlook in the general uptake and use of ICT services in the subsequent review period. The number of active mobile network subscriptions is expected to increase from 19.8 million reported at the end of 2022 to 20.4 million subscriptions at the end of 2023 and subsequently 21.3 million in 2024. In addition, the volume of domestic outgoing mobile voice call minutes is forecasted to increase from 28.5 billion minutes estimated at the end of 2022 to 32.1 billion projected for the year 2023 and could reach 34.5 billion minutes in 2024.
- b) **Macro-economic outlook and its implications:** The macro-economic outlook is positive amid notable improvements in the inflation rate and economic growth rates. There is also a general positive posture on the business environment arising from the extensive investment promotion efforts by the government.
- c) **Cyber Related Risks:** Cyber related frauds especially on mobile money accounts are expected to persist. The SMS frauds which are targeted at mobile money users are increasingly drawing the biggest attention on consumer awareness and consumer protection. However, as adoption of ICTs increases the diversity and intensity of these risks is expected to persist.
- d) **Investment in Infrastructure:** The continued investments in backbone and metro fibre networks as well as telecommunication sites by operators is expected to extend coverage and improve quality of service. It is anticipated that a number of operators will continue investing in their 4G networks aimed at extending coverage as well as improving quality of service.
- e) **Product and Service Diversity:** Operators are also expected to continue introducing innovative product offerings for consumers to remain viable in the competitive environment. There is also an anticipated opportunity for growth in the adoption of new and emerging technologies such as cloud computing and artificial intelligence.
- f) **Issuance of Spectrum in the 800 MHz. band, 700 MHz. band and 2600 MHz. band:** ZICTA issued spectrum in the 800 MHz band, 700 MHz. and 2600 MHz band during the

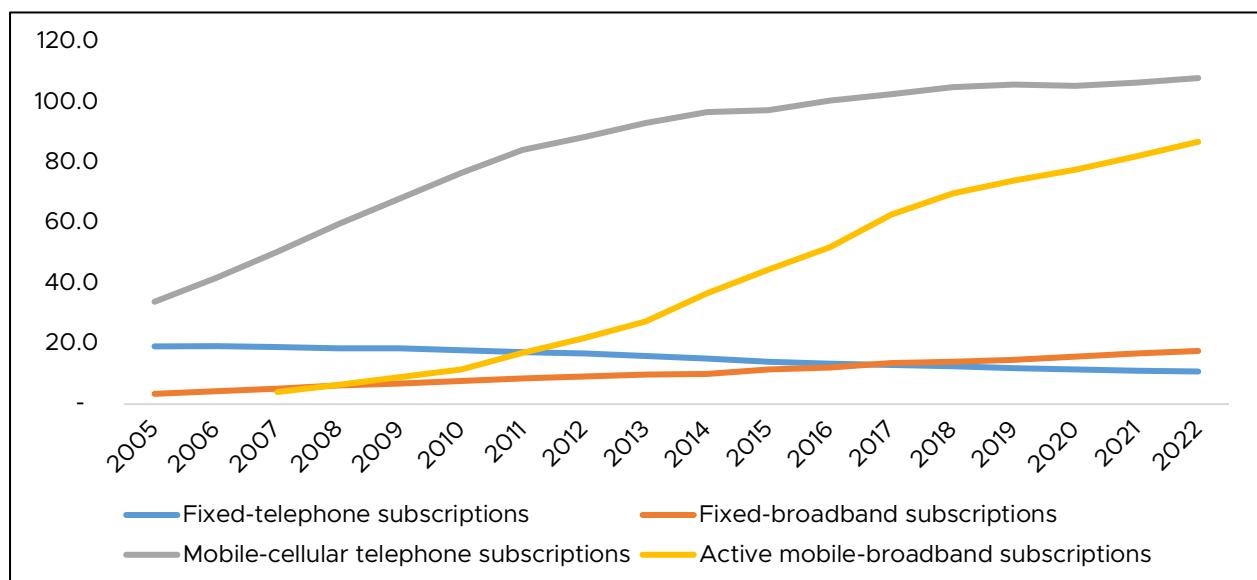
year 2022 in line with the 5G spectrum roadmap. These scarce resources are expected to assist with improving quality of service, extending coverage and facilitate the introduction of innovative products and services.

1.0. RECENT GLOBAL DEVELOPMENTS IN THE ICT SECTOR

1.1. Trends in Global ICT Product Subscriptions

The International Telecommunications Union (ITU) in their Measuring Digital Development Facts and Figures report, estimated that mobile-broadband subscriptions continued to grow strongly relative to other subscriptions to telecommunication services. Accordingly, the number of mobile-broadband subscriptions was shown to have rapidly approached the level of mobile-cellular subscriptions, which were observed to have plateaued. Over the last 10 years, the penetration rate of mobile-broadband subscriptions grew by an average of 14.8 percent per year, against 2 percent for mobile-cellular subscriptions. Further, fixed-broadband subscriptions also continued to grow steadily, at an annual growth rate averaging 6.7 percent over the last 10 years. It was also reported that fixed-telephone subscriptions continued their slow but steady decline, losing an average of 4.2 percent each year over the last 10 years.¹

Figure 1: Global subscriptions per 100 inhabitants, 2005 – 2022



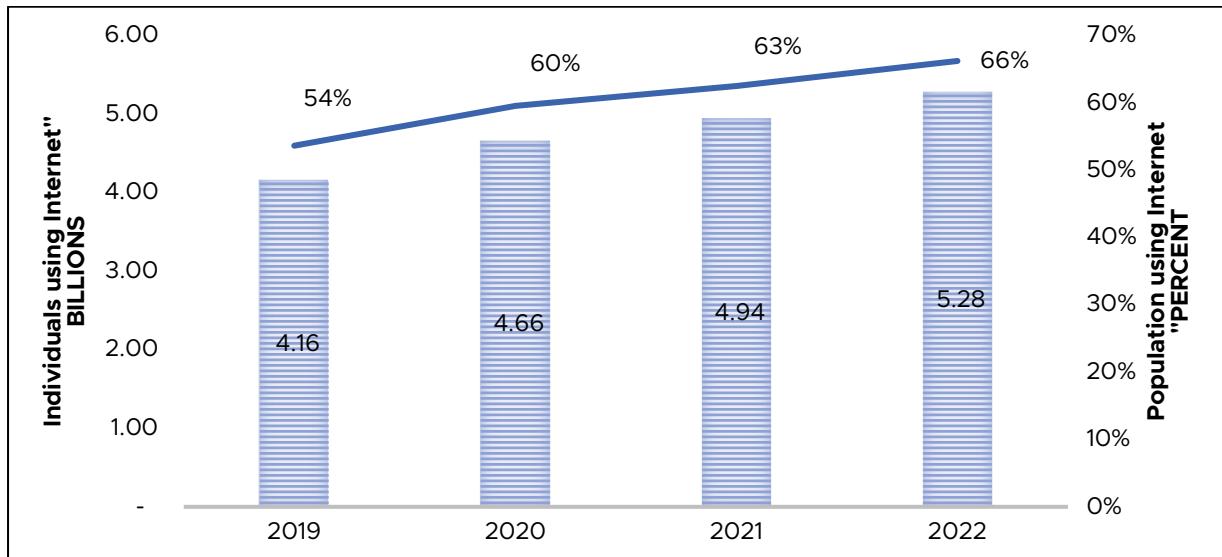
Source: 2022 ITU Measuring Digital Development Facts and Figures

1.2. Global Trends in Usage of the Internet by the Population

The ITU estimated that the total number of people that were using the internet increased from 4.9 billion in 2021 to 5.3 billion in 2022 representing a growth rate of 6.1 percent. The number of people that were using the internet in 2022 represented 66 percent of the world's population. The growth rate observed during the reference period was higher than the growth rate observed between 2020 and in 2021 of 5.1 percent, but was lower than the 11 per cent growth observed between 2019 and 2020, when the COVID-19 pandemic emerged. Despite the noted progress, the ITU indicated that about 2.7 billion people were still not using the internet reflecting the need for consistent efforts to attain universal and meaningful connectivity by 2030.

¹ 2022 ITU Measuring Digital Development Facts and Figures

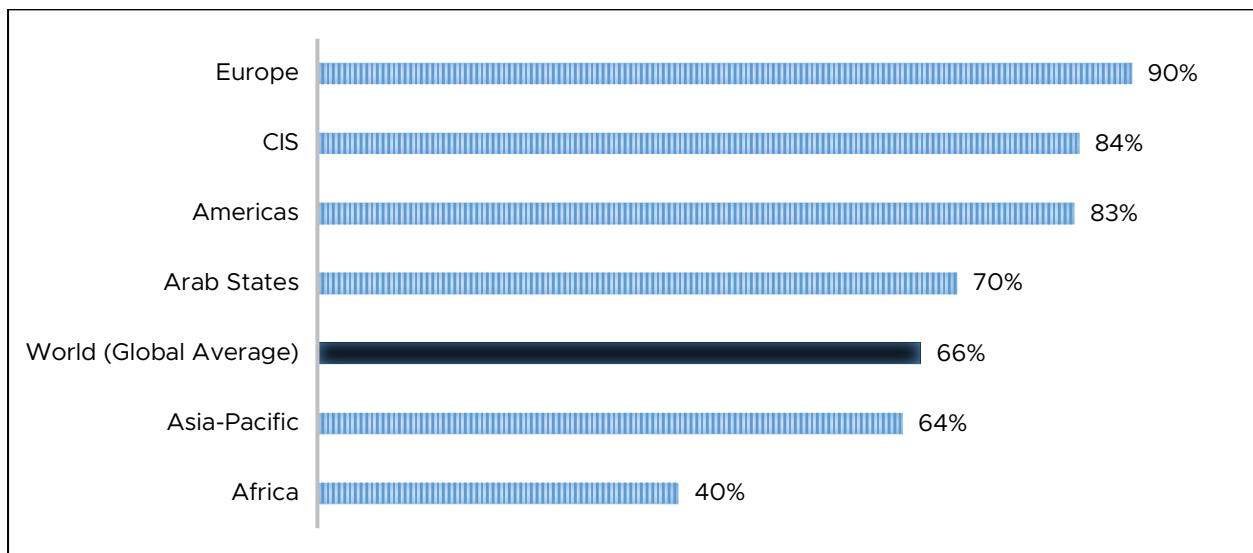
Figure 2: Individuals using the Internet



Source: 2022 ITU Measuring Digital Development Facts and Figures

It was also reported that in the countries of Europe, the Commonwealth of Independent States (CIS) and the Americas, between 80 and 90 per cent of the population used the Internet, approaching universal use (defined for practical purposes as an Internet penetration rate of at least 95 per cent). Further, approximately 70 percent of the population in the Arab States and 64 percent of the population in the Asia-Pacific countries used the Internet, while Africa continued to lag behind with just 40 percent of the population that used the internet. The ITU further reported that universal connectivity remained a distant prospect in the least developed countries (LDCs) and landlocked developing countries (LLDCs), where only 36 per cent of the population used the internet.²

Figure 3: Percentage of individuals using the Internet by region, 2022

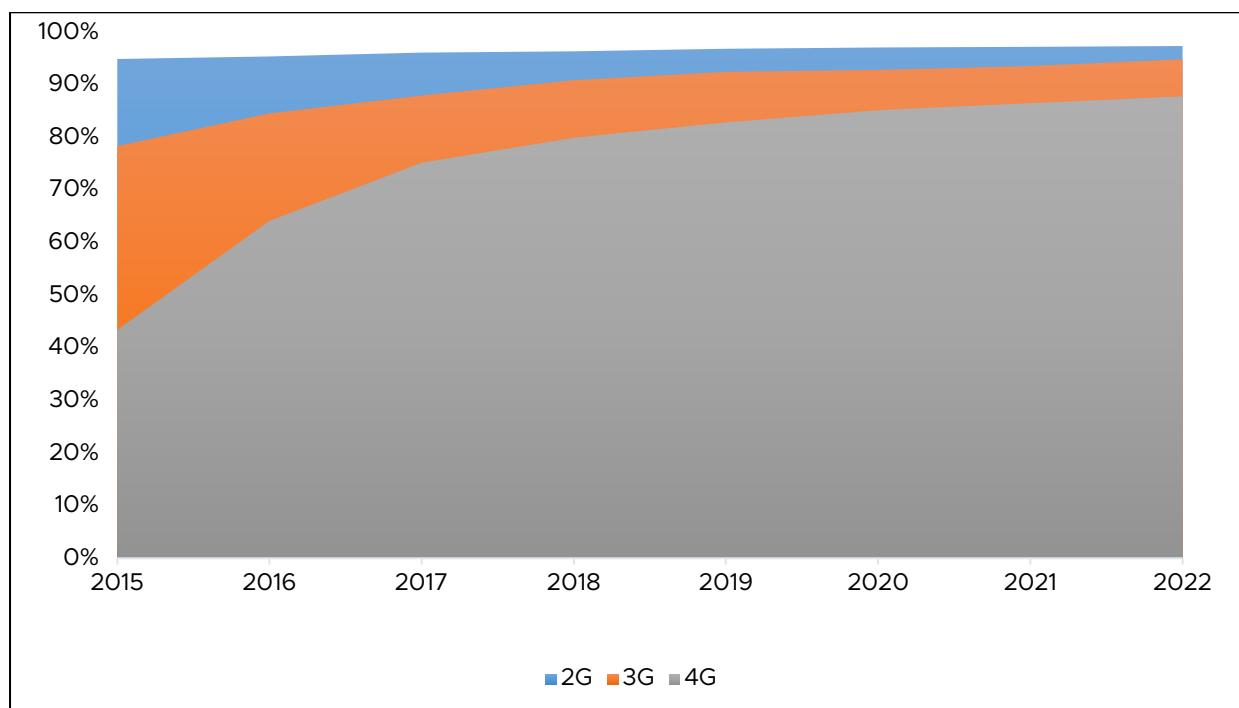


² 2022 ITU Measuring Digital Development Facts and Figures

1.3. Trends in Mobile Network Coverage

The ITU reported that in most developing countries, mobile broadband (3G or above) was the main way, and often the only way, to connect to the Internet. This kind of access was available to 95 per cent of the world population in 2022. Bridging the “coverage gap”, that is, connecting the remaining five percent continued to prove difficult since crossing the 90 percent threshold in 2018 as global 3G coverage had increased by only four percentage points since then. In Africa, the gap constituted 18 per cent, predominantly affecting the population of central and western Africa. Between 2015 and 2022, 4G network coverage was reported to have doubled to reach 88 per cent of the world’s population. 4G technology was reported to be available to at least half the population in Africa. The ITU reported that in many countries, older-generation networks were being switched off in favour of networks that were more efficient and allowed the development of a digital ecosystem compatible with 5G.³

Figure 4: Population coverage by type of mobile network, 2015-2022



1.4. Growth in 5G Connections

According to the GSMA, 5G connections were estimated to surpass 1 billion in 2022 and are expected to reach 2 billion by 2025. By the end of 2025, 5G connections are estimated to account for over a fifth of total mobile connections, and more than two in five people globally will live within reach of a 5G network. There are approximately 200 live 5G networks in 70 countries, including 68 operators providing 5G Fixed Wireless Access (FWA) services and 23 delivering Stand Alone 5G services. All this supports consumer demand propelled by an ever-growing portfolio of 5G-enabled smartphones. Early network capability initiatives are underway to support the increasing number of innovative consumer and enterprise use cases across the 5G Era. These include the 5G utilisation of multiple sub-3GHz spectrum bands, 5G Advanced, and Private Networks.⁴

1.5. Affordability of Internet Services

The ITU reported that the cost of Internet services had reduced across the globe and that the global median price of mobile-broadband services dropped from 1.9 percent to 1.5 per cent of average gross national income (GNI) per capita. In spite of the noted reduction in the cost of internet services, only 63 per cent of women were using the Internet in 2022 compared to 69 per cent of men. The report identified youths aged 15-24 years as the driving force of

³ 2022 ITU Measuring Digital Development Facts and Figures

⁴https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwik3724vb_4AhVswOIHdcJAKkOFn_oECAcQAO&url=https%3A%2F%2Fwww.gsma.com%2Fmobileeconomy%2Fwp-content%2Fuploads%2F2022%2F02%2F280222-The-Mobile-Economy-2022.pdf&usg=AOvVaw0j-W4VMghFIIn_O80R19m_M

connectivity, with 75 per cent of young people worldwide now able to use the Internet. Cost, however, remained a major obstacle to Internet access, especially in low-income economies. The global economic situation, with high inflation, rising interest rates, and deep uncertainty, could add to the challenge of extending Internet reach in lower-income areas.⁵

1.6. Trends in Global Mobile Financial inclusion

According to the 2022 GSMA Mobile Money Industry Report, there were over 1.35 billion registered mobile money accounts by the end of 2021 reflecting an increase of 18 percent since 2020 and 10 times more than there were in 2012 when the number was 134 million. The year-on-year increases in transaction values were driven by new customer uptake and a growing number of mobile money use cases. 518 million of the accounts were active on a 90-day basis and 346 million on a 30-day basis, growing nearly 15 times and 13 times respectively since 2012. Between 2012 and 2021, the number of active agents grew more than 10 times, from 534,000 to 5.6 million, unlocking access to financial services for the most underserved customers.

Across low- and middle-income countries (LMICs), women were still less likely than men to own a mobile money account. This is due to a variety of reasons including not owning a mobile phone, lack of awareness of mobile money and lack of perceived relevance, knowledge and skills. Despite the huge success of mobile money services in many countries, in others, the sustainability of mobile money services is threatened by certain policy and regulatory interventions, from taxes on transactions to poorly implemented instant payment solutions and costly data localisation mandates⁶.

1.7. ITU-2022 Plenipotentiary Conference

The 2022 ITU twenty-first Plenipotentiary Conference was convened in Romania's capital city of Bucharest. Held every four years, this top policy-making body determines the collective direction and priorities of the Union in line with the evolving needs of ITU's diverse global membership. The Plenipotentiary Conference, PP-22, approved strategic and financial plans covering the years 2024–2027, laying the foundation for ITU's operational priorities and future activities.

It also addressed key issues ranging from connectivity, digital literacy, and bridging the digital divide to gender mainstreaming and tackling climate change. Decisions taken at PP-22 would help shape the future of the information society in both developed and developing countries. A central part of the conference was electing the ITU's next management team — the five top executives responsible for leading the organization's work over the next four years. PP-22 also elected the 12-member Radio Regulations Board and decided which Member States will serve on the 48-seat ITU Council⁷.

1.8. Outcomes from the 2022 WTDC

The eighth World Telecommunication Development Conference (WTDC) concluded in Kigali, Rwanda, towards the beginning of the third quarter of 2022 with agreement on a new Declaration and Plan of Action to bring meaningful connectivity to all the world's people and communities. The gathering discussed and debated 215 proposals, and succeeded in finding consensus on the way forward for information and communication technology (ICT) development worldwide.

The resulting Kigali Declaration called on member states "to spare no effort towards the expansion and use of telecommunications and digital infrastructures, applications and services for building and establishing truly sustainable digital economies and societies." The global agreement was built on core principles of the ITU and consensus that have been practiced at the union for the last 157 years⁸.

1.9. 2022 Postal Development Index

The Universal Postal Union (UPU) compiled its Postal development report during the year 2022. The report included a composite development index for the postal operators of various

⁵ <https://www.itu.int/en/mediacentre/Pages/PR-2022-11-30-Facts-Figures-2022.aspx>

⁶ GSMA 2022 State of the Industry Report on Mobile Money

⁷ https://www.itu.int/en/itunews/Documents/2022/2022-04/2022_ITUNews04-en.pdf

⁸ https://www.itu.int/en/itunews/Documents/2022/2022-03/2022_ITUNews03-en.pdf

member states. The index focused on Reliability of performance, Reach of operators network, Relevance of portfolio of postal services and Resilience of postal operations. For the 2022 report, Cameroon surpassed Ghana as the highest ranked for postal development in the African region. Zambia's postal development score, based on Zampost's performance reduced from 22.4 in 2021 to 16.5 in 2022, representing a deterioration in the overall performance of the national postal service.

1.10. UPU and World Customs Organisation Sign Cooperation Agreement

The UPU signed a cooperation agreement with the World Customs Organisation (WCO) that was aimed at harnessing the development of e-commerce and network security in the postal sector. The agreement outlined the shared common goals of the two organisations in advancing trade and security in the global postal network. As a result, the cooperation agreement is expected to foster relations in the post-customs digital spectrum and ensure reliability in the delivery of postal items globally.

1.11. The Utilisation of the UPU Electronic Advance Data Application

The UPU's Postal Technology Centre (PTC) developed an Electronic Advance Data (EAD) application that enables the transfer and storage of data in the postal network. The application organised data in a format that assists postal customers and Micro, Small and Medium Enterprises (MSMEs) in gathering customs information in relation to their postal items. This service assured postal customers the reliability of transparent customs clearance information and expedient compliance with the destination post.

Furthermore, the EAD application provided digital transformation in the postal sector supply chain through the optimisation of postal cyber security, reduction of postal compliance costs and enhancement of customer welfare in the effectiveness of postal items deliveries.

2.0 SELECTED LOCAL DEVELOPMENTS IN THE ICT SECTOR

2.1. Issuance and Renewal of Licenses to Operators in the ICT Sector

As at the end of December 2022, there were a total of eighty-four (84) valid licenses in the ICT sector compared to seventy-three (73) valid licenses that had been issued by the Authority at the end of December 2021. The licences constituted twenty (20) Network Facilities, twenty-nine (29) Network Service and Facilities, twenty-nine (29) Service (with Network Category A), six (6) Service (Without Network Category C). No licence Service (VAS Category C) licences had been issued during the period under review.

Table 1: Number of Valid Licenses Issued in the ICT Sector, 2021- 2022

Type of Licence	Coverage	Licenses 2021	Licenses 2022
1. Network Facilities	International	n/a	3
	National	n/a	13
	Provincial	n/a	2
	District	n/a	2
2. Network (Service & Facilities)	International	4	4
	National	28	18
	Provincial	4	2
	District	7	5
3. Service (With a Network- Category A)	International	0	4
	National	20	18
	Provincial	2	2
	District	5	5
4. Service (Without a Network- Category B)	National	3	6
	Provincial	0	0
	District	0	0
Total		73	84

2.2. Issuance and Renewal of Licences to Operators in the Postal Sector

As at the end of December, 2022, ZICTA had issued a total of seventy one (71) valid licenses in the Postal sector compared to forty nine (49) valid licenses that had been issued at the end of December, 2021 reflecting a growth of 45 percent. A total of twenty (20) new licences were issued in 2022 while eight (8) existing licences were renewals while two (2) licences were cancelled.

Table 2: Number of Valid Licenses Issued in the Postal Sector: 2021 - 2022

	Licence Type	Licenses 2021	Licenses 2022
1.	Public Postal Operator	1	1
2.	International & Domestic Courier Licence	22	28
3.	Domestic Courier Licence	18	27
4.	Local Courier Licence	8	15
	Total	49	71

2.3. Trends in Mobile Money Adoption and Usage

The total number of active mobile money subscriptions in the country increased from 9.8 million in 2021 to 11.2 million subscribers in 2022 representing a growth rate of 13.98 percent. This performance was mainly attributed to the continued reliance on electronic and mobile platforms to send and receive funds as well as payment of utility services such as electricity, water and pay TV subscriptions. The value of mobile money transactions increased significantly from ZMW 169.4 billion recorded at the end of 2021 to ZMW 295.8 billion at the end of 2022 reflecting an increase of 74.63 percent. Similarly, the volume of mobile money transactions increased from 834 million transactions at the end of 2021 to 1,581 million transactions at the end of 2022 reflecting an improvement of 89.60 percent (see Table 3).

Table 3: Trends in Volumes and Values of Electronic Money Transactions

	2020	2021	2022	YTD change
Volumes of Transactions	746,500,187	834,068,499	1,581,355,224	89.60%
Values of Transactions (ZMW)	105,619,623,780.67	169,402,432,643.17	295,828,075,728.24	74.63%
Active Subscribers	8,607,461	9,867,409	11,246,686	13.98 %

Source: Bank of Zambia

2.4. Development of Revised National ICT Policy and Digital Transformation Strategy

The Government of the Republic of Zambia embarked on the development of the Revised National ICT policy as well as the Digital Transformation strategy in 2022. The two documents were aimed at providing a medium term strategy for the development of the ICT sector in Zambia. The current ICT policy was developed in 2006 and was not considered responsive to the needs of the digital economy. A number of developments in technology as well as business models adopted by providers of ICT services had also evolved. Consequently, new requirements to ensure that consumers were adequately protected from any risks associated with the digital economy are needed while a number of opportunities that require consideration continue to emerge.

2.5. Two Million SIM Cards Deactivated

The Zambia Information and Communications Technology Authority (ZICTA) disconnected over two million SIM cards across the country in a bid to combat digital fraud. The deactivated SIM cards belonged to subscribers who had more than ten SIM cards under one name or had some missing information related to their registration. The Authority undertook this measure to address the challenge of unsolicited messages and voice calls to members of the public using the mobile cellular platforms aimed at defrauding users of electronic communication services.⁹

2.6. Assignment of High Demand Spectrum in the 700 MHz. and 2600 MHz. Bands

ZICTA assigned spectrum in the 700MHz and 2600MHz bands through a competitive process. The Authority received three applications from eligible licensees constituting Beeline Telecommunications Limited, Zambia Telecommunications Company and Airtel Networks

⁹ <https://dailynationzambia.com/2022/03/zicta-deactivates-2-1-million-sim-cards/>

Zambia PLC. ZICTA approved the award of the spectrum in the 700MHz and 2600 MHz bands, in November 2022, as shown in table 4 below:

Table 4: Assignment of High Demand Spectrum

No.	Applicant	Description	Spectrum Band
1.	Beeline Telecommunications	700MHz	2 lots (2x10MHz)
2.	Zambia Telecommunications Company (ZAMTEL)	700MHz	1 lot (2x10MHz)
3.	Airtel Networks Zambia	2600MHz	1x40MHz

The assigned spectrum is expected to improve the quality of service provided by the licensees, increase coverage of the telecommunication networks as well as facilitate the introduction of new and innovative technologies on the market among other benefits.¹⁰

2.7. Award of Network (Facilities) License in the International Market Segment

ZICTA awarded the Network (Facilities) Licence in the International Market Segment for Data to Paratus Telecommunications Limited in December, 2022 through a competitive process. The award followed an invitation for proposals from eligible prospective licensees, for the award of the Network (Facilities) Licence in the International Market Segment pursuant to the Section 10 of the Information and Communication Technologies (ICT) Act and Clause 9 of the Licensing Guidelines of 2022. The scope of the Licence issued allows Paratus to have international connectivity across the Zambian Borders via wired or wireless means and route data traffic to and from international destinations. Zambia is centrally located in the Southern Africa region and is surrounded by eight neighboring countries giving it both a competitive and comparative advantage to becoming a regional hub for internet connectivity. It is envisaged that the license will not only facilitate increased reliability of the country's connectivity but will also enable Zambia to increase its capacity and actualize the country's aspiration of becoming a regional connectivity hub for the Southern Africa region.¹¹

2.8. Enhanced Controls on Know Your Customer (KYC) SIM Registration Data and Compliance Initiatives

In order to promote consumer confidence and mitigate against fraud arising from pre-registered SIM cards, the Authority issued directives on SIM card registration. The issuance of the directives is expected to reinforce security in the ICT sector as well as promoting compliance to Statutory Instrument Number 65 of 2011. Among the requirements outlined in the directives was the need for Mobile Network Operators to enhance the SIM card registration and replacement process to include live facial photographs for all customers. The directives were a response to the growing threat to security among users arising from the sim registration and replacement process which had some weaknesses thus acting as a conduit for online fraud and cybercrimes.

2.9. Launch of Short Code for Reporting Numbers Suspected of Fraudulent Activities

In order to curb the increase in digital financial crimes in the country, the Authority in collaboration with the Mobile Network Operators introduced the *707# short code for reporting, detecting, verifying, and deactivating phone numbers/SIM cards used in perpetuating digital frauds and scams. The launch of the short code was in October, 2022 by the Minister of Technology and Science, Honourable, Felix Mutati, MP.¹²

2.10. Commencement of Phasing out of Scratch Cards

ZICTA in collaboration with GSMA Zambia successfully expanded its initiatives related to Green ICTs through the launch of an initiative for the Phasing out of airtime Scratch Cards. The initiative is in line with Global Climate Change initiatives and has reinforced ZICTA's commitment to supporting the Nations sustainable Digital Transformation Agenda. The launch was graced by the Honorable Minister of Technology and Science- Mr. Felix Mutati and was attended by various Senior Government Officials, the Board, Representatives of Mobile Service Providers and members of the Press. The phasing out of scratch cards shall be undertaken throughout 2023 and collaborative awareness programmes will be undertaken during the implementation period.

¹⁰ https://www.connectingafrica.com/author.asp?section_id=816&doc_id=779524

¹¹ <https://developingtelecoms.com/telecom-business/telecom-regulation/14518-paratus-zambia-awarded-gateway-licence-by-zicta.html>

¹² https://www.facebook.com/watch/live/?ref=watch_permalink&v=591583132763279

2.11. Interim Determination of Pricing for Pole Co-Location Services

ZICTA issued an interim determination to facilitate equitable sharing of pole infrastructure by setting a ceiling on pole co-location charges of K30 per month and encouraged the continued use of alternative infrastructure sharing arrangements. This determination was made following numerous representations from the industry relating to excessive and discriminatory pricing for pole co-location services. The Authority has also embarked on a process to commission a Cost of Service study for Wholesale Access and Infrastructure Sharing Services to develop robust cost models and model offers to address pole co-location among other forms of wholesale access and infrastructure sharing services in the medium term. It is anticipated that the outcomes of the study will bring about efficiency in the wholesale market, facilitate the adoption of new, innovative and cost effective commercial models for infrastructure sharing and ultimately improve affordability in the sector.

2.12. Zambia and Egypt Sign 5-year MoU on ICTs

Egypt and Zambia signed a five (5) year Memorandum of understanding (MoU) that aims to strengthen cooperation in telecommunications, information technology, and digital transformation. Egypt will support Zambia's efforts to become more digitally enabled through the facilitation of partnering with multinational companies, as well as its own efforts to build the institutional competencies, skills, and technology required for success in the areas of digital transformation, postal services, the building of institutional competencies, skill development, artificial intelligence, online education, digital inclusion, and international infrastructure.

Egypt's National Postal Authority will help in competency-building activities in collaboration with Zambian postal services companies. The M.O.U provides for the protection of Intellectual Property Rights in accordance with the laws, rules and regulations of each party and international agreements binding on both parties. The agreement will be valid for a period of five (5) years and may be renewed by any of the two parties.¹³

2.13. Zampost Launches e-Zampost and Zampost Money

The Minister of Technology and Science, officially launched the e-Zampost and Zampost Money platforms on 28th May, 2022. These digital platforms entail the initiative of Zampost in fostering a digital transformation in the provision of postal services across Zambia. E-Zampost is a postal management system that provides digital postal services in the field of e-commerce, e-government and e-logistics. Zampost Money is a digital e-wallet platform that enables customers to accessible financial services in local money transfer businesses as well as other value added services such as bill payment services.

2.14. Zambian Government Signs €10 Million MoU with ASSECO

The Ministry of Technology and Science signed a Memorandum of Understanding (MoU) agreement with ASSECO, a Polish technologies company, in the objective of investing €10 Million into the digitalisation of Zampost's processes. This agreement outlines that the Zambian government, through the direct cooperation from Zampost and ASSECO, will establish a joint venture company that shall oversee the digital transformation of Zampost. The digital transformation encompasses developing Zampost's capabilities and resources in the e-commerce and e-banking platforms. The MoU outlines the intent of providing universal postal services in the Zambian rural regions across the country through enhanced operational efficiency and security of postal service delivery.

¹³ <https://www.zambiamonitor.com/zambia-signs-5-years-deal-with-egypt-to-grow-ict-sector/>

2.15. Reduction of Postal License Fees

In the 2023 National Budget statement issued by the Minister of Finance and National Planning, the postal and courier license fees charged by the Authority were reduced from ZMW 15,000 to ZMW 10,000 for Domestic License whereas the fees for the local license were reduced from ZMW 10,000 to ZMW 5,000. These respectively represented significant reductions of 33 percent and 50 percent. The reduction of fees are expected to increase the participation of SMEs in the sector and thereby increase competition and reduce unemployment in the country.

2.16. Launch of 5G Services in Zambia

MTN Zambia launched a 5G network in November 2022, becoming the first mobile operator in Zambia to offer 5G services commercially, after successfully running trials. MTN's 5G services were activated to cover about 65% of the population in the cities of Lusaka, Kitwe, and Ndola, as well as parts of Chingola, Solwezi, and Kalumbila covering about 15% of the Zambian population. The company announced that it intends to reach 100 percent 5G coverage in Lusaka, Kitwe, and Ndola by the middle of 2023, while gradually expanding the 5G network to other locations¹⁴.

¹⁴ <https://techcabal.com/2022/11/28/mtn-zambia-5g/>

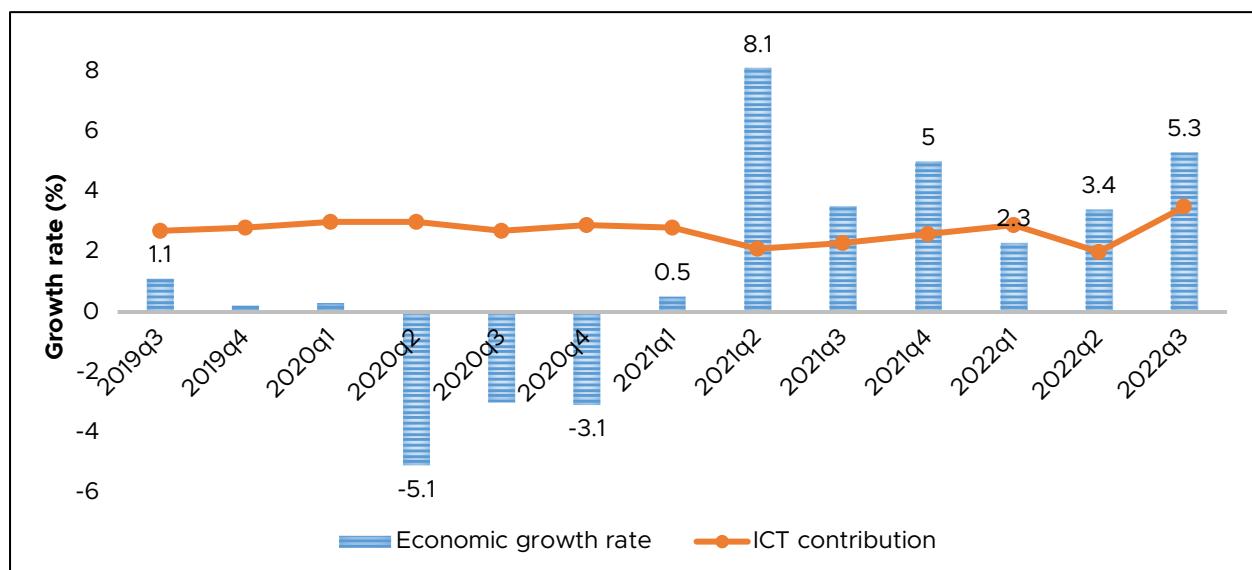
3.0 DEVELOPMENTS IN THE MACROECONOMIC ENVIRONMENT

3.1 Economic Growth

Growth in the country's overall economic activity, computed by changes in the Gross Domestic Product (GDP), continued on a positive trajectory in 2022. In the third quarter of 2022, the country's economy grew by 5.3 percent, representing a 1.9 percentage point increase from the previous quarter and 1.8 percentage point increase on a year to date basis. This significant increase in economic activity was mostly attributed to growth in the Wholesale and retail trade, Information & communication, Transport & storage, Education, Accommodation and food service and Manufacturing sectors.

The Information and communications sector's contribution to overall economic activity increased from 2 percent in the second quarter of 2022 to 3.5 percent in the third quarter of 2022 while the year-on-year analysis revealed a 1.2 percentage point increase in the sector's contribution to GDP. Specifically, the sector grew by 17 percent in the third quarter suggesting a fairly bidirectional relationship between the sector's activity and GDP. According to the Ministry of Finance and National Planning (MoFNP), the country is expected to grow by an average of 3.1 percent in 2022¹⁵. Consequently, it is anticipated that this positive economic outturn will have a positive impact on the ICT sector as it will increase the demand for ICT services.

Figure 5: Trends in Economic Growth and Contribution of the ICT Sector



Source: Constructed using Zambia Statistical Agency Data

3.2 Inflation Rate Performance

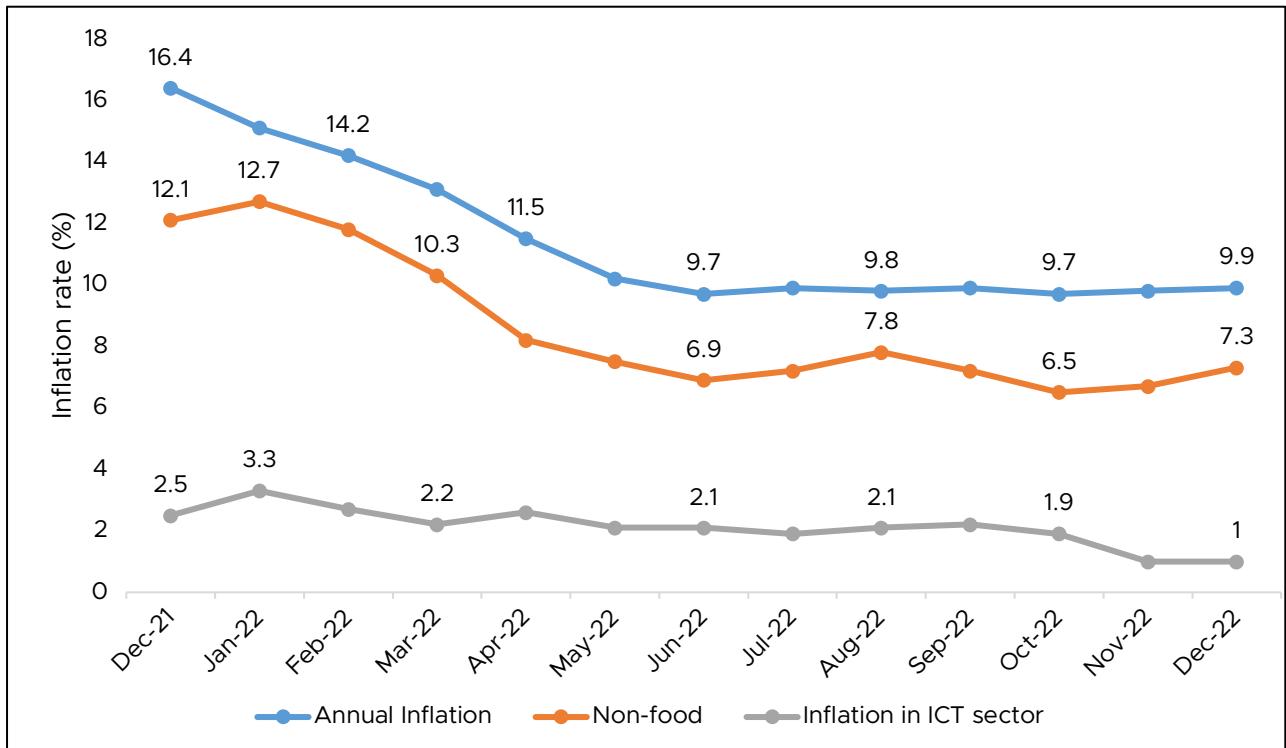
The overall price level of goods and services in the country declined between the end of 2021 and the end of 2022. The annual inflation rate, measured by the Consumer Price Index (CPI), decreased from 16.4 percent to 9.9 percent over the reference period representing a decline in price increments of about 40 percent. This decline was attributed to decreases in both non-food inflation, which reduced from 12.2 percent to 7.3 percent and food inflation which declined from 19.9 percent to 11.9 percent over the review period.

The overall reduction in the rate of price increases reflects increasing stability of commodity prices and an improvement in the macroeconomic environment. The slow down in price increases is expected to translate into new investments and reinvestments as price fluctuations decelerate thereby increasing profitability and cost predictability. In the ICT sector, the overall rate of price increases also declined from 2.5 percent at the end of December 2021 to 1 percent at the end of December 2022 reflecting a decline of 60 percent. This reduction is anticipated to

¹⁵ Ministry of Finance and National Planning (2023). State of the Economy in 2022 and Unlocking Barriers to Growth in 2023 and Beyond.

increase the usage of ICT services as the price changes are anticipated to increase the demand for these services.

Figure 6: Inflation Rate Performance; Dec 2021 – Dec 2022



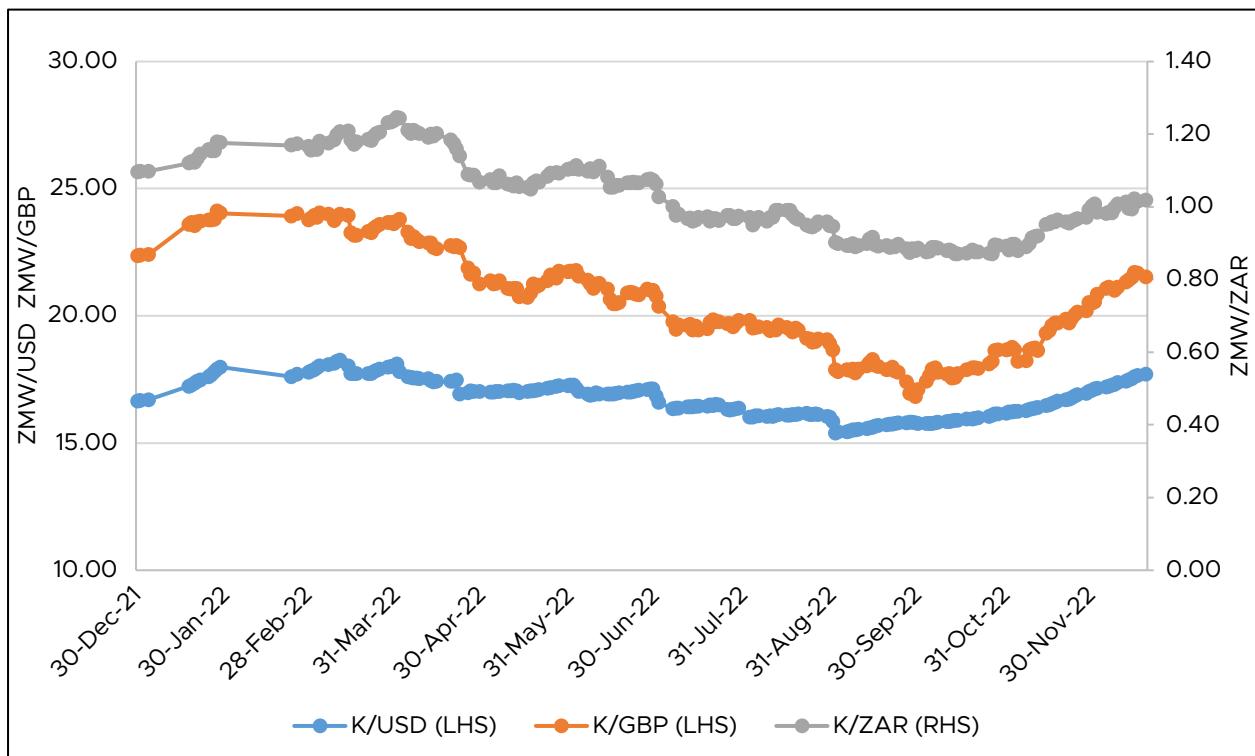
Source: Constructed using Zambia Statistics Agency Data

3.3 Performance of the Foreign Exchange Market

The performance of the Zambian currency against some of the major trading currencies improved marginally between the end of 2021 and the end of 2022. Specifically, the Zambian Kwacha appreciated from ZMW/GBP 22.38 to ZMW/GBP 21.80 reflecting a strengthening of 3 percent and ZMW/ZAR 1.10 to ZMW/ZAR1.06 reflecting a strengthening of 4 percent over the reference period. On the other hand, the Kwacha depreciated against the United States Dollar (USD), from ZMW/USD 16.67 to ZMW/USD 18.80 representing a weakening of 8 percent. This was despite the local currency strengthening against the USD for the large part of the year.

The depreciation of the local currency relative to the US dollar was mostly attributed to the appreciation of the dollar following significant increases in the country's interest rates during the year in a bid to combat inflation that resulted from the Russia-Ukraine war. On the other hand, the Zambian kwacha appreciated against other trading currencies due to a number of factors including the positive investor sentiments emanating from the issuance of the Extended Credit Facility (ECF) by the International Monetary Fund (IMF) and broader stability of the economy. The depreciation of the local currency with the USD is expected to have a negative impact on the affordability of ICT services due to the increased cost of internationally sourced inputs such as international bandwidth and the majority of imported capital items.

Figure 7: Exchange Rate Performance; Dec 2021 – Dec 2022

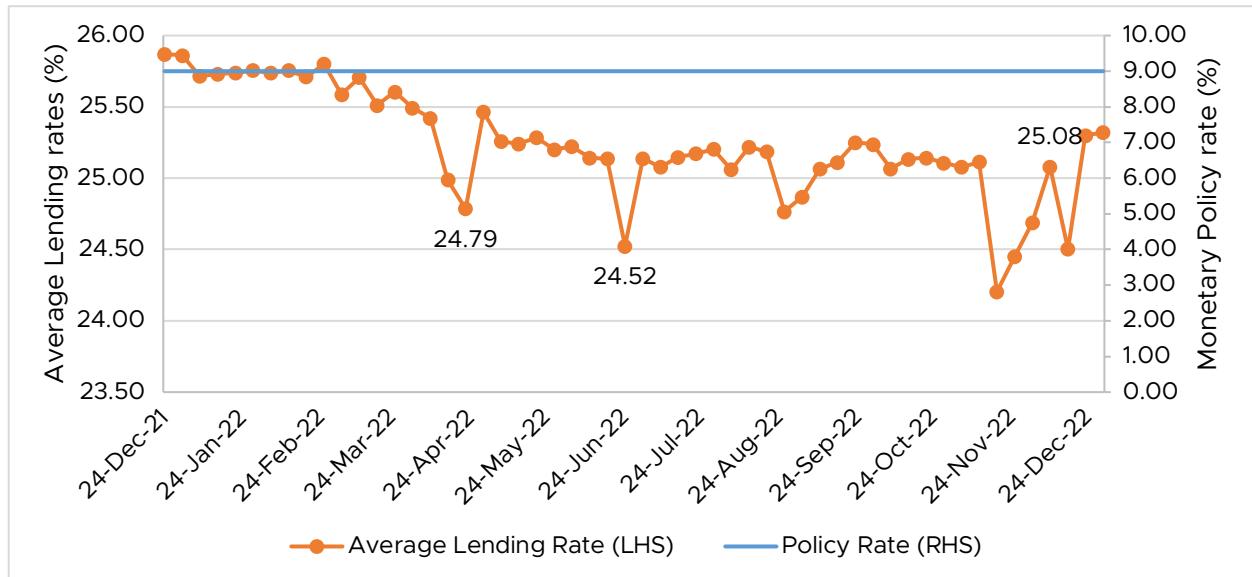


Source: Constructed using Bank of Zambia data

3.4 Average Lending Rates and Monetary Policy Rates

The average commercial bank lending rate declined marginally by 2 percent between the end of December 2021 and the end of December 2022. These interest rates which represent the average cost of borrowing on the Zambian market reflect a slight decrease in the cost of borrowing from 25.87 percent in December 2021 to 25.32 percent in December 2022. The average interest rate consistently fell below the initial rate observed at the end of December 2021. During the review period, the monetary policy rate was maintained at 9 percent in a bid to anchor inflation towards the medium term target range of 6 to 8 percent. The Monetary policy rate, which provides an anchor for the commercial bank lending rates, allowed for the minimized upwards movements in the lending rates as it was kept fixed throughout the review period. The marginal decline in the average commercial bank lending rate is expected to benefit the ICT sector by increasing access to investment resources which will result in increased network coverage and the development of innovative ICT products.

Figure 8: Commercial Bank Lending Rates and Policy Rates; Dec 2021 – Dec 2022

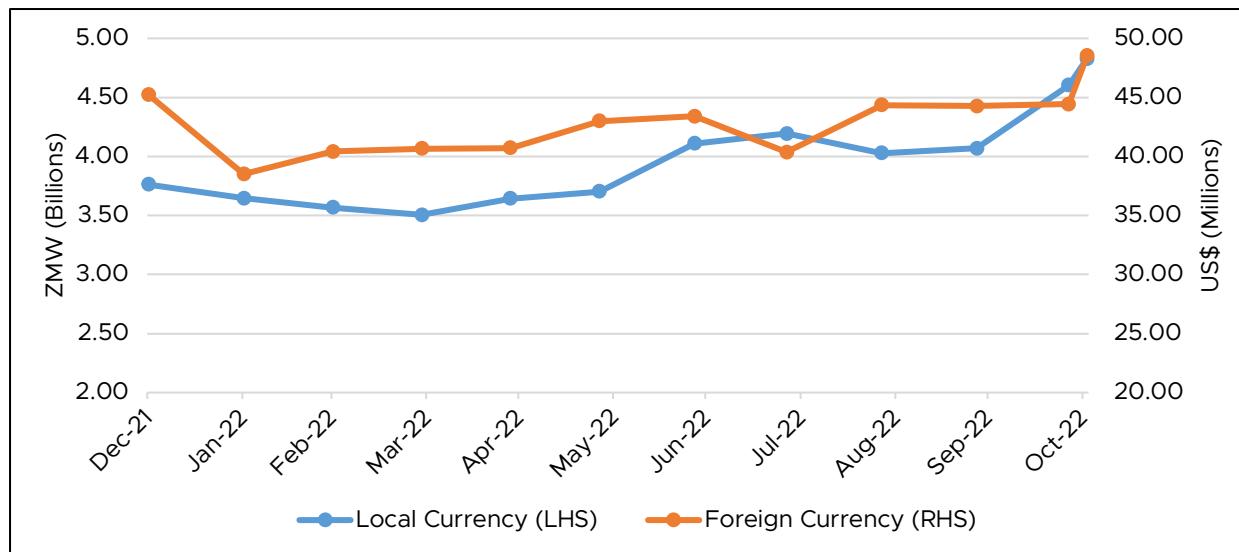


Source: Constructed using Bank of Zambia data

3.5 Access to Commercial Bank Credit in the ICT Sector

The total commercial bank credit dominated in local currency that was allocated to the transport, storage and communication sector increased from ZMW 3.76 billion in 2021 to ZMW 4.82 billion in 2022 reflecting an improvement of 7 percent. The increase in access to financing in the ICT sector could mainly be attributed to the overall decline in the cost of borrowing, the increased cost of borrowing in the foreign markets and the increasing stability of the local currency during the review period. Further, commercial bank credit in foreign currency to the sector increased from US\$ 45.2 billion in December 2021 to US\$ 48.5 billion in December 2022. This development was mainly attributed to the increasing opportunities for investment in the sector stemming from various regulatory and market related developments such as revision of the electronic communications licensing framework as well as improvements in the macroeconomic fundamentals. The overall increase in the credit allocated to the sector is expected to increase investments in the sector and subsequently extend access to electronic communications services and improve quality of service.

Figure 9: Commercial Bank Credit allocated to Transport, Storage and Communication Sector; Dec 2021 – Dec 2022

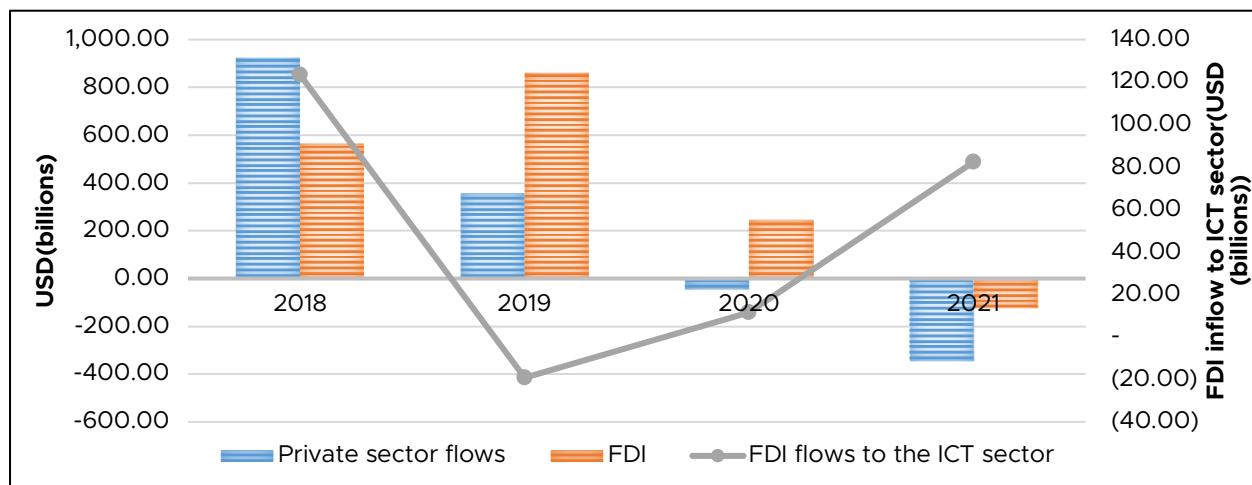


Source: Constructed using Bank of Zambia data

3.6 Foreign Capital Investments and Investor Perceptions

According to the 2022 Survey on Private Sector Foreign Investment in Zambia, the value of net private sector foreign liabilities in the country reduced significantly in 2021 as the net outflows increased from US\$45.4 million in 2020 to US\$345.80 million in 2021. This performance was mostly attributed to loan repayments in the mining sector and non-affiliated entities in the ICT and energy sector. Similarly, the net Foreign Direct Investment (FDI) liability flows declined from a net inflow of US\$245.20 million in 2020 to a net outflow of US\$122.1 million in 2021 with most inflows emanating from Canada and most outflows directed to the United Kingdom (UK). Despite the net FDI outflows, the ICT sector recorded a net FDI inflow of US\$82.2 million in 2021 against a net outflow of US\$11.4 million recorded in 2020. This reflects increasing resources into the ICT sector which is expected to increase infrastructure investment in the sector. With regards to investor perception, the overall investor perception index increased from 21 in 2021 to 40.5 in 2022 reflecting a shift from a dissatisfactory score to a satisfactory score. This improvement was mostly attributed to the peace and security, market potential, good infrastructure and political stability measures which were recognized as the main parameters that encouraged investment in the country. The improvement in the perception on the business environment is expected to attract further investments in the economy including in the ICT sector.

Figure 10: Private Foreign Investment Performance: 2018 to 2021



Source: Constructed using Bank of Zambia reports

3.7 Changes to the Tax Regime in the ICT sector

The 2023 National Budget presented by the Minister of Finance and National Planning in September 2022 proposed a number of changes to the ICT and postal sectors' tax regime aimed at promoting growth as well as steering the country towards digital transformation. Some of the key tax policy changes presented in 2022 budget included:

- Replacement of the two-tier corporate tax regime with a single corporate tax rate of 35 percent. Currently, entities with a profit above ZMW250,000 are subject to a tax rate of 40 percent while those below the threshold are taxed at the standard rate of 30 percent;
- Zero-rating order on Value Added Tax (VAT) for selected ICT equipment;
- Reduction of customs duty from 15 percent to 5 percent on selected ICT equipment as well as zero rating of customs duty on other equipment for a period of three (3) years; and
- Reduction of the licensing fees for local courier licenses by 50 percent and those of domestic couriers by 33 percent.

These tax changes are expected to increase resources available for investments, increase competitiveness and create job opportunities in the ICT and postal sectors. Further, the reduction in the cost of equipment will spur infrastructure investment and subsequently access to telecommunication services as well as improve the quality of the services.

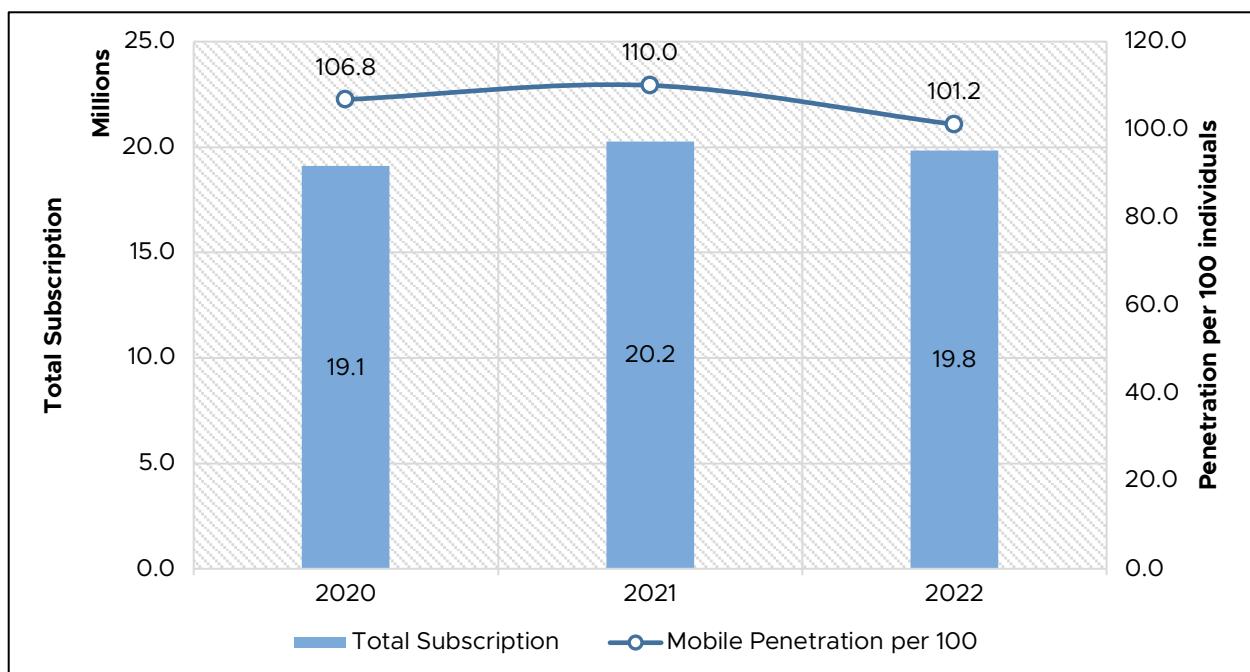
4.0 PERFORMANCE OF THE ICT SECTOR

4.1 Mobile Telephone Services Market

4.1.1 Active Mobile Network Subscription

The total number of active mobile cellular subscriptions reduced from 20.2 million subscriptions reported at the end of 2021 to 19.8 million subscriptions at the end of 2022 representing an annual decline of 2 percent. Correspondingly, the mobile cellular penetration rate, defined as the ratio of the total number of active mobile cellular subscribers to the total population, declined from 110 percent reported at the end of 2021 to 101.2 percent at the end of 2022. The overall decline in the number of mobile cellular subscriptions as well as mobile cellular penetration rate was mainly attributed to the significant number of sim cards that were deactivated relative to the new activations during the review period in a bid to increase compliance to the sim registration guidelines issued by the Authority as well as efforts to curb the surge in fraudulent activities carried out on mobile cellular platforms.

Figure 11: Trends in Active Mobile Cellular Subscriptions 2020 - 2022



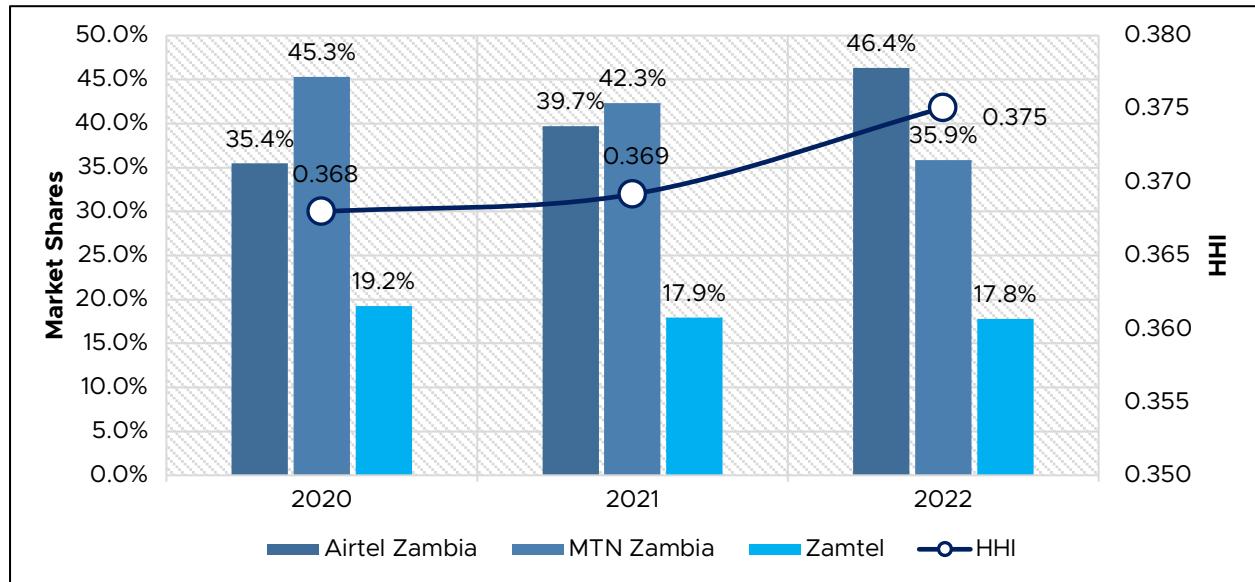
Source: Operator submissions

4.1.2 Market Shares of Mobile Telephone Subscriptions and Trends in Market Concentration

The market concentration, as measured by the Hirschman – Herfindahl Index (HHI)¹⁶, for the mobile telephony subsector increased marginally during the review period from 0.369 to 0.375 representing an increase of 0.06 points. This increase in market concentration entails a decrease in the competition intensity or increased market dominance of selected market players. The decline was mostly attributed to the increase in the market shares of Airtel Zambia from 39.7 percent in 2021 to 46.4 percent in 2022 reflecting an increase of 6.7 percentage points while that of MTN Zambia decreased from 42.3 percent to 35.9 percent representing a reduction of 6.4 percentage points. Consequently, Airtel Zambia became the operator with the largest market share in 2022, replacing MTN which had the largest market share in 2021. The market shares of Zamtel declined marginally over the period from 17.9 percent to 17.8 percent retaining its position as the holder of the least market share in the mobile cellular market.

¹⁶ The Herfindahl-Hirschman Index is a composite measure of concentration computed as the sum of squared shares firm in total subscription. Its value lies between 0 and 1 with magnitude signaling a decrease in competition or increase in concentration of market power among a few firms.

Figure 12: Trends in Mobile Cellular Market Concentration 2020 - 2022



Source: Operator submissions

4.1.3 Unique Mobile Subscribers

The total number of unique subscribers, defined as the total count of active sim cards attached to a unique identification number, increased from 7.5 million at the end of 2021 to 7.9 million subscribers at the end of 2022 translating into an increase of 6 percent. A significant increase in the number of unique subscriptions was observed for Airtel Zambia whose unique subscribers increased from 4.9 million to 6 million accounting for a growth of 6 percent and making the company the operator with the largest share of unique subscribers. On the other hand, MTN Zambia and Zamtel recorded some marginal declines in the number of unique subscriptions declining by 4 percent and 0.7 percent respectively. In relation to the multiple subscriptions, the overall sim card multiple intensity ratio decreased from 2.7 at the end of 2021 to 2.5 at the end of 2022 suggesting a decline in multiple Sim card registrations attached to a unique identification. The decline of the overall intensity ratio was observed among all network operators as Airtel Zambia's intensity ratio fell from 1.6 to 1.5 while MTNs ratio fell from 1.9 to 1.6 and that of Zamtel which fell from 2.2 to 2.1 over the reference period.

Table 5: Extent of Multiplicity of SIM cards in MNO Subscription: 2020 to 2022

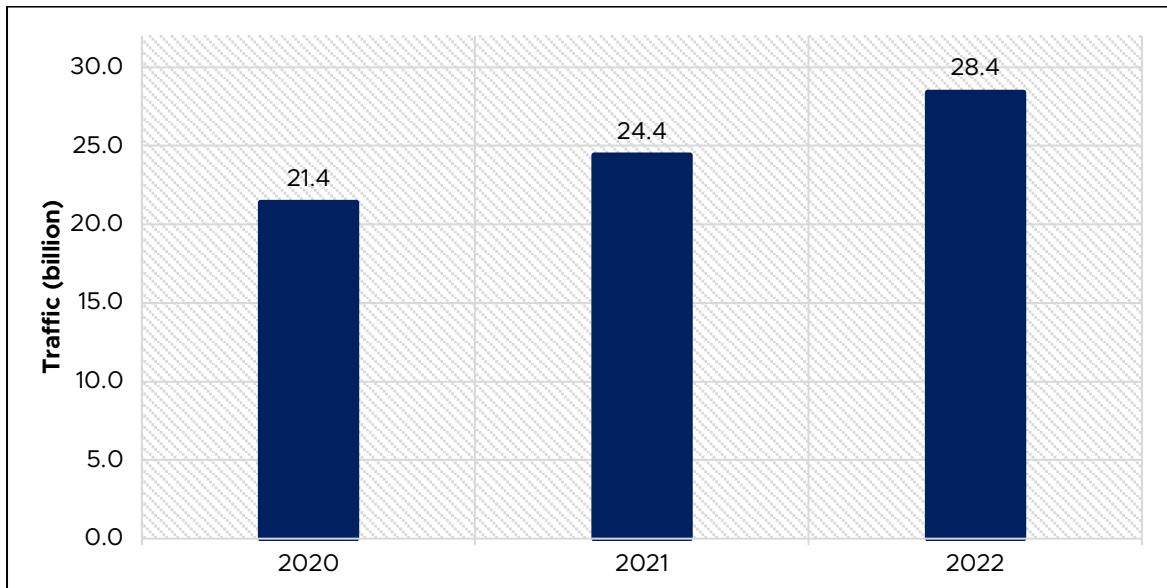
	Operator	Multiple Subscription	Unique Subscription	Intensity Ratio of SIM Multiplicity
Dec-22	MTN Zambia	7,112,482	4,322,472	1.6
	Airtel Zambia	9,195,828	6,026,290	1.5
	Zamtel	3,529,690	1,646,546	2.1
	Across All	19,838,000	7,913,875	2.5
Dec-21	MTN Zambia	8,569,227	4,493,314	1.9
	Airtel Zambia	8,043,806	4,890,461	1.6
	Zamtel	3,634,078	1,633,587	2.2
	Across All	20,247,111	7,477,715	2.7
Dec-20	MTN Zambia	8,656,154	4,528,440	1.9
	Airtel Zambia	6,771,906	4,283,603	1.6
	Zamtel	3,676,148	2,472,760	1.5
	Across All	19,104,208	7,375,091	2.6
Percent Change YTD		-5%	-1%	-4%

Source: Operator submissions

4.1.4 Mobile Cellular Voice Traffic

The volume of domestic outgoing traffic increased from 24.4 billion minutes in 2021 to 28.5 billion minutes in 2022 reflecting a growth rate of 17 percent. The increase in domestic outgoing traffic was mainly attributed to the continued favourable pricing arising from discounted minutes offered through bundled packages by operators who continued to increase the number of minutes in bundled packages as a strategy for customer acquisition and gaining a competitive edge on the market.

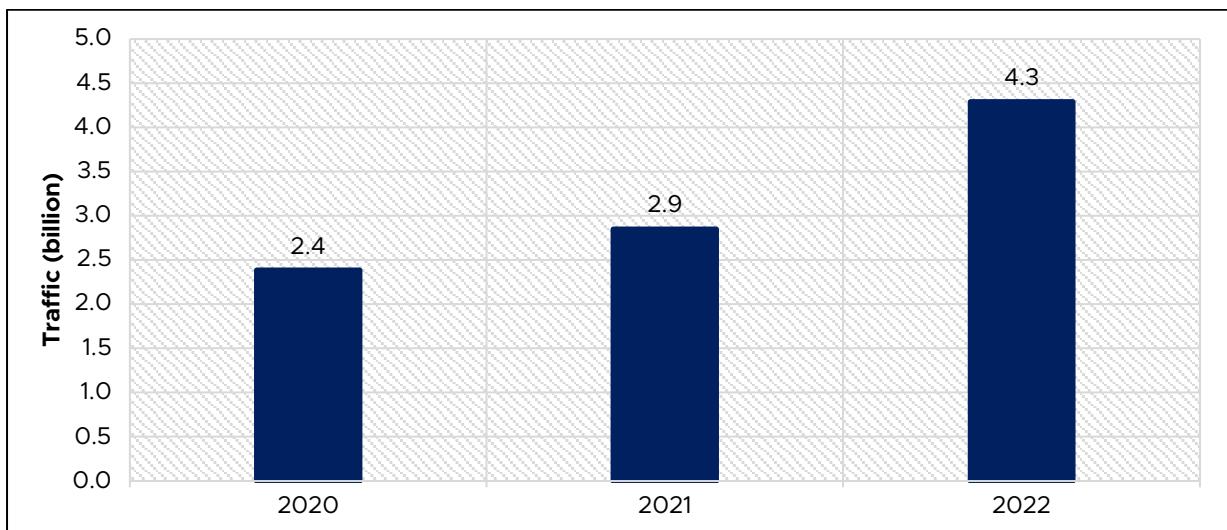
Figure 13: Trends in Domestic Outgoing Traffic in Minutes: 2020 to 2022



Source: Operator submissions

The total volume of domestic incoming traffic increased significantly from 2.9 billion minutes in 2021 to 4.3 billion minutes in 2022 translating into an improvement of nearly 50 percent. The increase in domestic incoming traffic was mainly attributed to the sustained favourable pricing arising from discounted minutes offered through all-net bundled packages

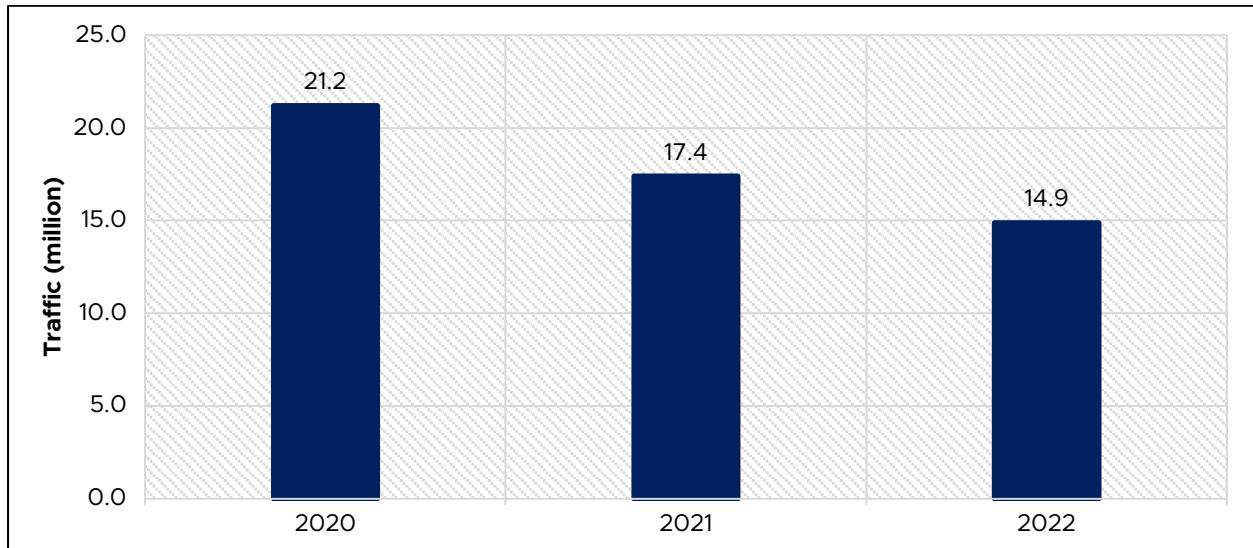
Figure 14: Trends in Domestic Incoming Traffic in Minutes: 2020 to 2022



Source: Operator submissions

On the other hand, the volume of international traffic has continued on a downward trajectory in 2022. International outgoing traffic reduced from 17.4 million minutes reported in 2021 to 14.9 million minutes in 2022 reflecting a reduction of 15 percent. The continued decline in international outgoing traffic was mainly attributed to the increasing use of close substitutes to traditional calling platforms which included Voice over Internet Protocol (VOIP) enabled applications like WhatsApp among others.

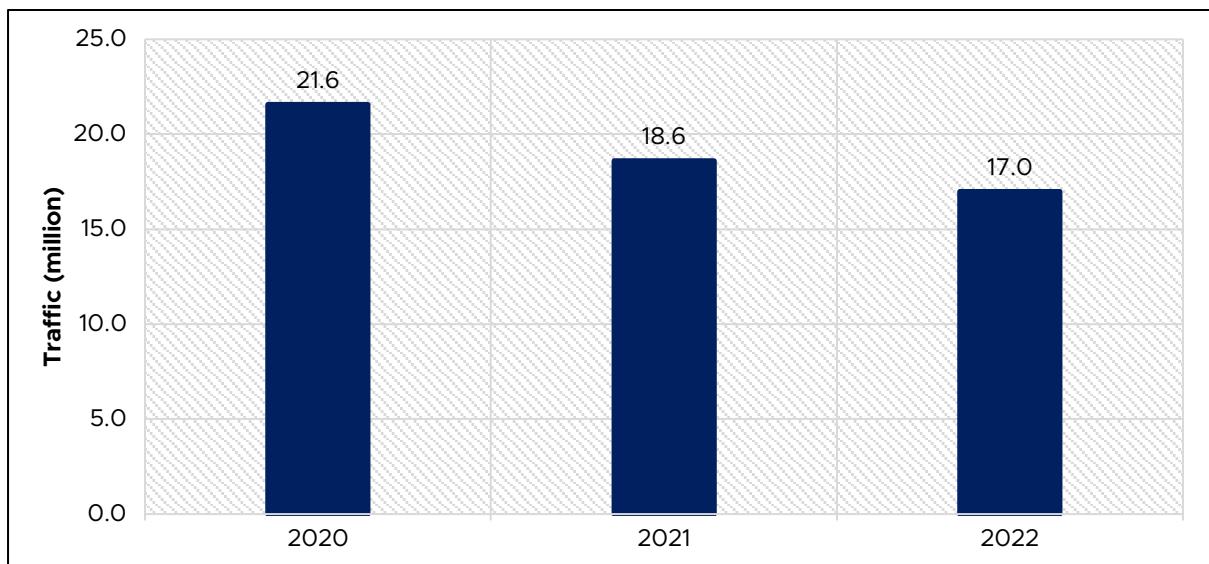
Figure 15: Trends in International Outgoing Traffic in Minutes: 2020 to 2022



Source: Operator submissions

In 2022, the total volume of international incoming traffic continued to decline. It decreased by 9.0 percent to 17 million minutes from 18.6 million minutes reported in 2021. International incoming traffic has continued to be affected by the increasing use of VOIP enabled applications such as WhatsApp.

Figure 16: Trends in International Incoming Traffic in Minutes: 2020 to 2022

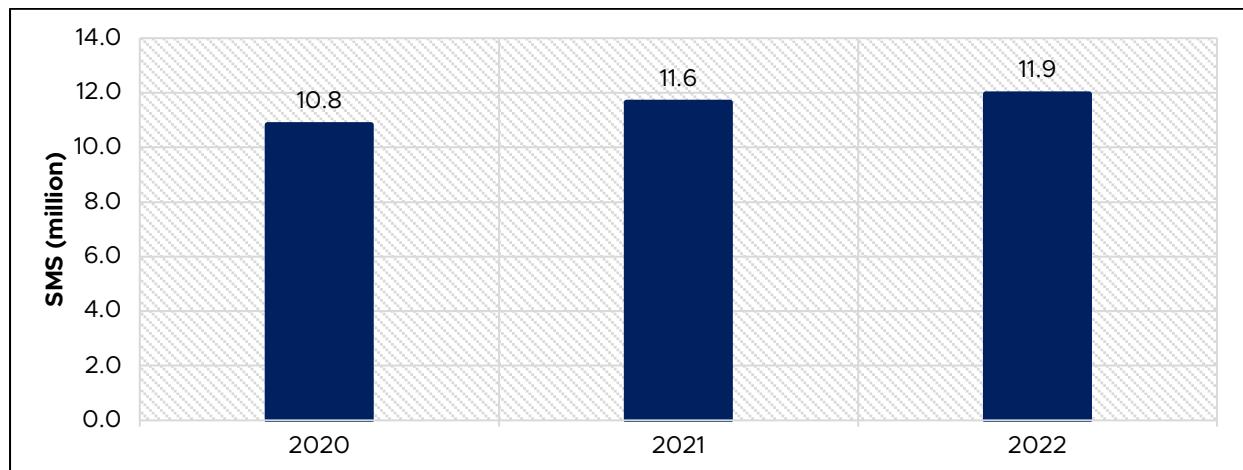


Source: Operator submissions

4.1.5 Mobile Cellular SMS Traffic

Figure 17 shows that the volume of Short Messaging Service (SMS) traffic increased during the review period. It increased from 10.8 billion SMS in 2020 to 11.9 billion in 2022, representing a year-on-year growth of 2.6 percent. Overall, the increase in the volume of SMS traffic was attributed to increased affordability of the SMS service and discounted SMSs offered in bundled packages by operators who have continued to increase the volume of SMSs in bundles. Further, the use of bulk messaging services by corporates for engagements customer has also contributed to the increase in SMS traffic volume.

Figure 17: Trends in SMS Traffic 2020 - 2022



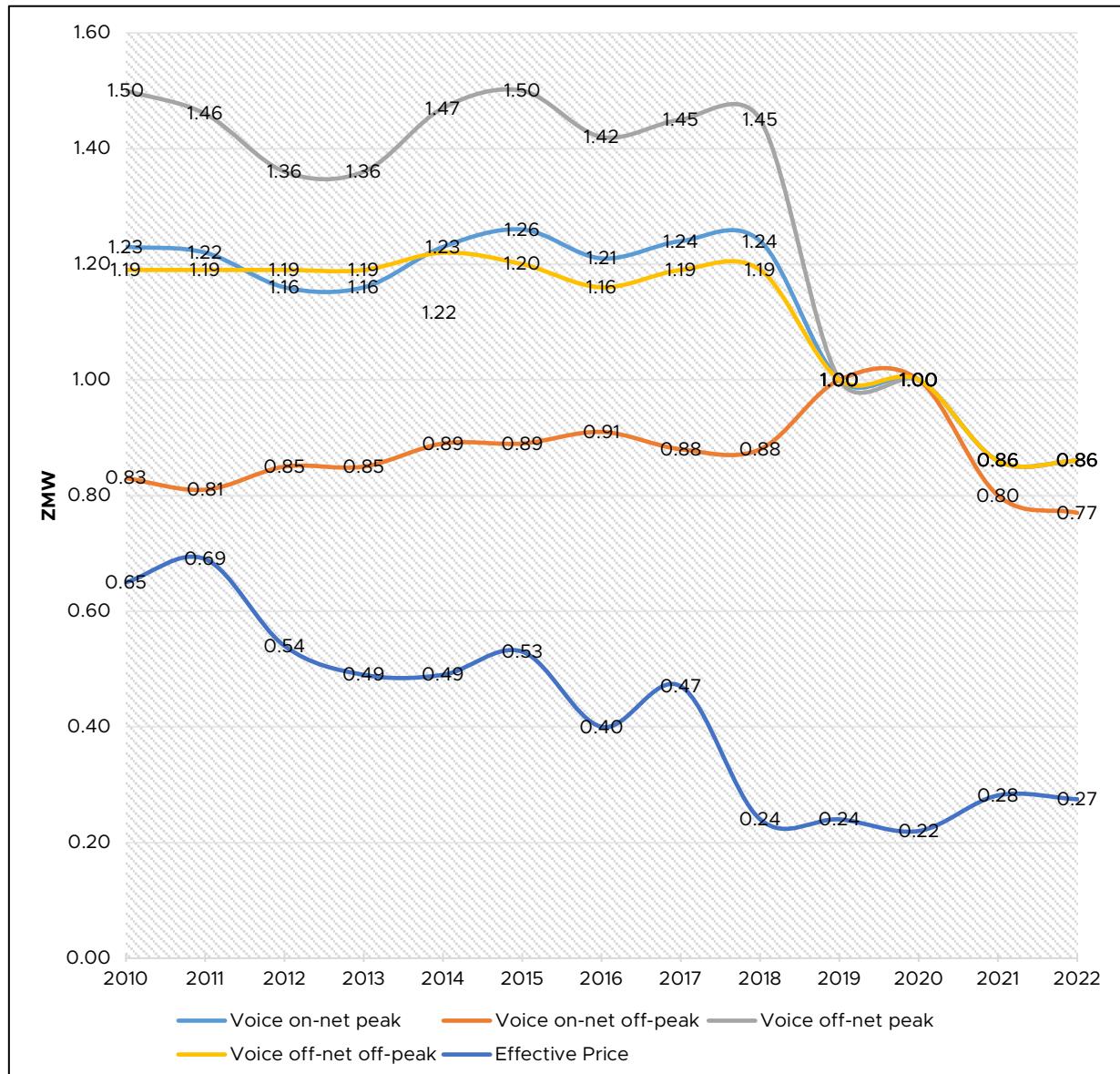
Source: Operator submissions

4.1.6 Mobile Voice Tariffs

The headline tariffs remained relatively unchanged between 2021 and 2022. Notably, the price of voice off- net and on-net peak remained unchanged between 2021 and 2022 while a minimal reduction of 3 percent was observed on voice on-net off-peak minutes which declined from an average of ZMW 0.8 per minute at the end of 2021 to ZMW 0.77 per minute at the end of 2022.

Similarly, there was a decline in the effective tariff from ZMW 0.28 to ZMW 0.27 per minute over the review period representing a decline of 3.6 percent. The continued decline in the price of voice calls was mainly attributed to the increased adoption of bundled voice services which are generally provided at a discounted rate as well as the strategy by operators to increase their network utilisation rates.

Figure 18: Mobile Voice Tariffs 'Per Minute in ZMW': 2010-2022



Source: Operator Submissions

The pay-as-you-go tariffs in Zambia were benchmarked against similar tariffs in eighteen (18) countries within the region. It was observed that the headline tariffs in the country were relatively competitive particularly on off-net minutes. Notably, Zambia ranked 'sixth' on peak On-net; 'seventh' on Off-peak On-net calls, 'fourth' on Off-peak On-net and 'fifth' on Off-peak Off-net calls.

These rankings also reflect an increase in competitiveness in the region as the ranks improved from 'seventh' on peak On-net; 'eighth' on Off-peak On-net calls, 'fifth' on Off-peak On-net and 'sixth' on Off-peak Off-net calls observed in 2021.

Table 6: Benchmarking of Mobile Voice Call Tariffs in the Region

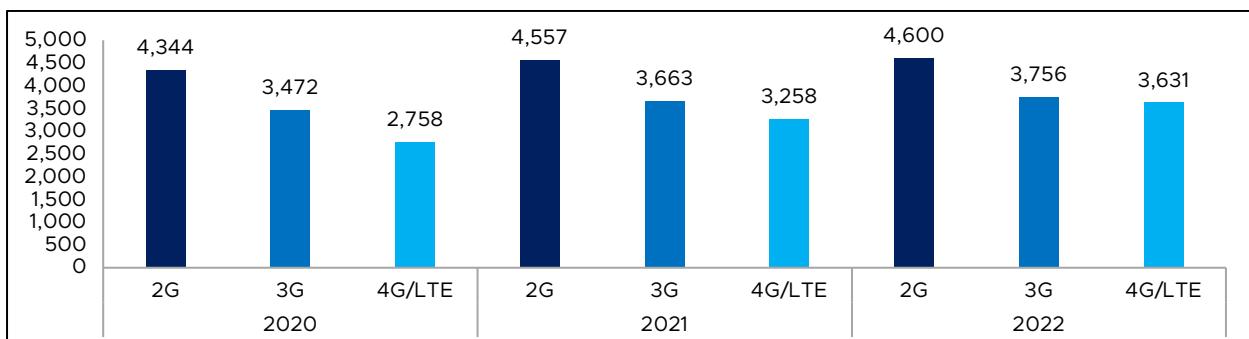
Country	Mean On-net Peak Tariffs		Mean On-net Off-Peak Tariffs		Mean Off-net Peak Tariffs		Mean Off-net Off-Peak Tariffs	
	Price (\$)	Rank	Price (\$)	Rank	Price (\$)	Rank	Price (\$)	Rank
Angola	0.064	10	0.064	11	0.074	11	0.074	12
Botswana	0.104	15	0.063	10	0.104	15	0.063	9
Kenya	0.023	2	0.022	3	0.025	2	0.025	3
Lesotho	0.109	16	0.093	15	0.109	16	0.093	15
Madagascar	0.038	5	0.038	6	0.056	7	0.056	7
Malawi	0.070	12	0.070	13	0.076	12	0.072	11
Mauritius	0.025	3	0.025	4	0.072	10	0.075	13
Mozambique	0.095	14	0.095	16	0.095	14	0.095	16
Namibia	0.086	13	0.086	14	0.086	13	0.086	14
Nigeria	0.056	8	0.056	8	0.056	6	0.056	6
Rwanda	0.036	4	0.013	1	0.039	3	0.017	2
Seychelles	0.257	18	0.121	17	0.294	18	0.153	18
South Africa	0.058	9	0.058	9	0.058	8	0.058	8
Swaziland	0.051	7	0.027	5	0.051	5	0.027	4
Tanzania	0.016	1	0.016	2	0.016	1	0.016	1
Uganda	0.066	11	0.066	12	0.066	9	0.066	10
Zambia	0.046	6	0.044	7	0.046	4	0.046	5
Zimbabwe	0.130	17	0.130	18	0.128	17	0.128	17

Source: MNO Websites

4.1.7 Telecommunication Infrastructure

In 2022, the number of sites across all three operators increase by 4.4 percent, from 11,478 sites at the end of 2021 to 11,987 sites at the end of 2022. The increase in telecommunication sites was largely attributed to the significant increase of 4G/LTE sites. In 2022, LTE/4G sites increased by 11.4 percent from 3,258 sites in 2021 to 3,631 sites in 2022. However, the number of 2G and 3G sites increased marginally during the review period, by about 1.0 percent and 2.5 percent respectively. Consequently, 4G/LTE telecommunication sites in the country accounted for 30 percent of the total number of sites at the end of 2022 compared to 27 percent reported in 2021. Correspondingly, the proportions of 2G and 3G sites dropped marginally in 2022 compared to 2021. Overall, the increase in telecommunication sites is expected to extend coverage of mobile network and thus encourage further adoption of mobile cellular services.

Figure 19: Trends in Telecommunication Sites 2020 - 2022

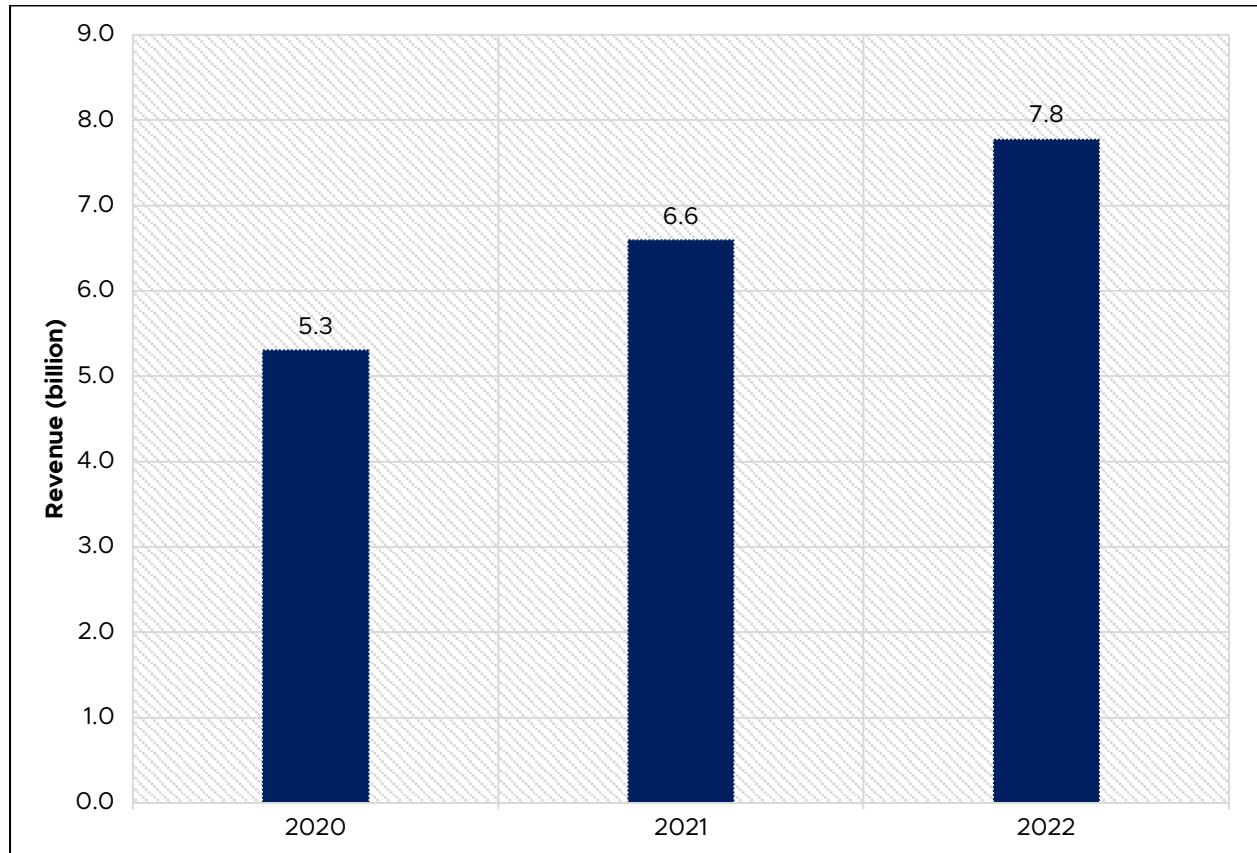


Source: Operator Submissions

4.1.8 Mobile Revenue Performance

The total revenue of the mobile cellular operators continued to increase during the review period. The revenues in the subsector grew to ZMW 7.8 billion at the end of 2022 from ZMW 6.6 billion at the end of 2021 translating into a growth rate of 18.0 percent. Overall, the increase in Mobile Network Operator (MNO) revenues was mainly attributed to increased adoption and usage of ICTs arising from increased investments in coverage as well as the customer responsive products and services on the market.

Figure 20: Trend in MNO Revenue Performance, 2020 - 2022

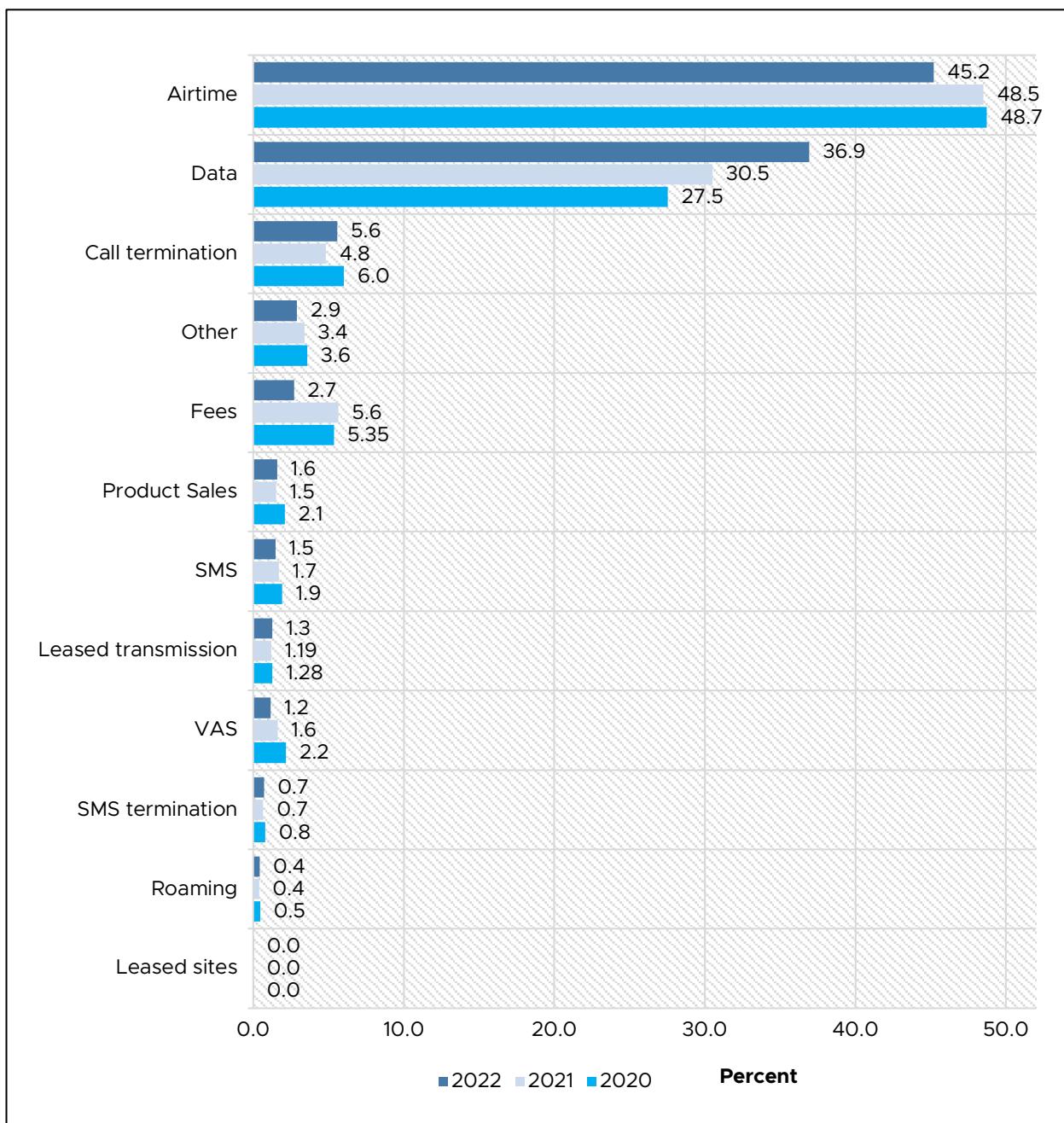


Source: Operator submissions

With regards to the services contributing to the revenues, airtime remained the largest contributor to MNO revenues accounting for 45.2 percent of the total revenues in the subsector. This was a slight decrease of about 3.3 percentage points from the airtime contribution recorded at the end of 2021 which was estimated at 48.5 percent. The contribution of data to total revenues at the end of 2022 increased from 30.5 percent at the end of 2021 to 36.9 percent representing an increase of 6.4 percentage points.

It was further observed that the contribution of call termination, product sales and leased transmission to total revenues increased in 2022. Revenues from data which had the most significant growth rate present a positive prospect for the operators' revenues arising from increased intensity of usage among users as well as the diversity of the usage patterns linked to entertainment, education, social networking as well as business transactions among other uses.

Figure 21: Contribution to Total Revenue by Service for MNO: 2020 to 2022

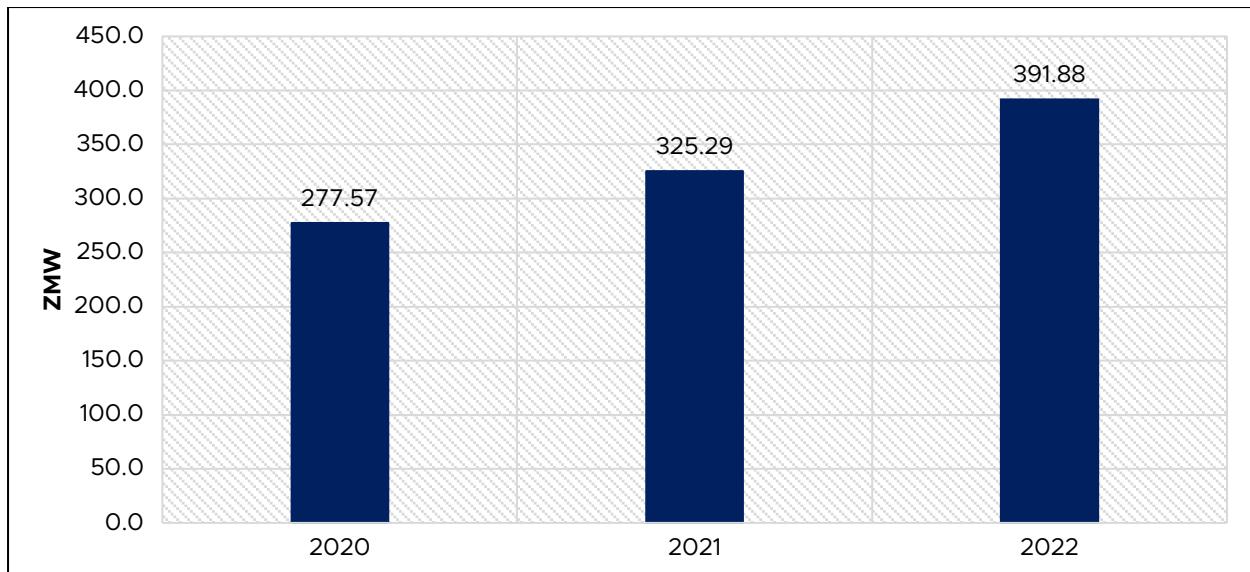


Source: Operator submissions

4.1.9 MNO Average Revenue per User

The average revenue per user (ARPU), measured as a ratio of total revenues to the number of active subscribers, increased from ZMW 325.29 at the end of 2021 to ZMW 391.88 at the end of 2022 representing an improvement of 20.3 percent. This implies that on average an active subscription contributed ZMW 391.88 to Mobile Network Operators' total revenues in 2022. The observed increases in the ARPU was mainly attributed to the increased usage of ICT services amongst subscribers as well as the development of various innovative products by operators leading to an improvement in adoption and revenues.

Figure 22: Trends in Average Revenues per User: 2020 - 2022



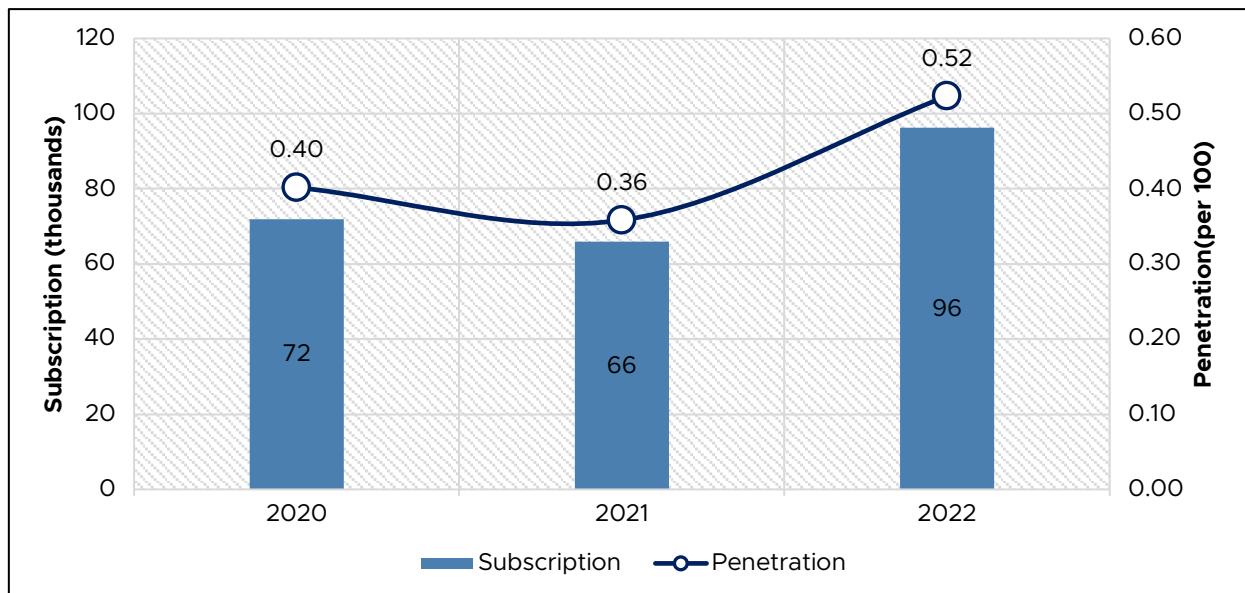
Source: Operator submissions

4.2 Fixed Telephony Market

4.2.1 Active Public Switched Telephone Network Subscriptions

There was an increase in the number of active Public Switch Telephone (PSTN) subscribers at the end of 2022 relative to that of 2021. Specifically, the total number of active PSTN subscribers increased from 66 thousand at the end of 2021 to 95 thousand at the end of 2022 reflecting an increase of 46 percent. Correspondingly, the fixed line penetration rate increased from 0.36 percent to 0.52 percent over the review period. The increase in the number of active PSTN subscribers was largely attributed to strategy of bundled offers tied to fixed internet services which received wide adoption.

Figure 23: Trends in PTSN Active Subscriptions; 2020 – 2022

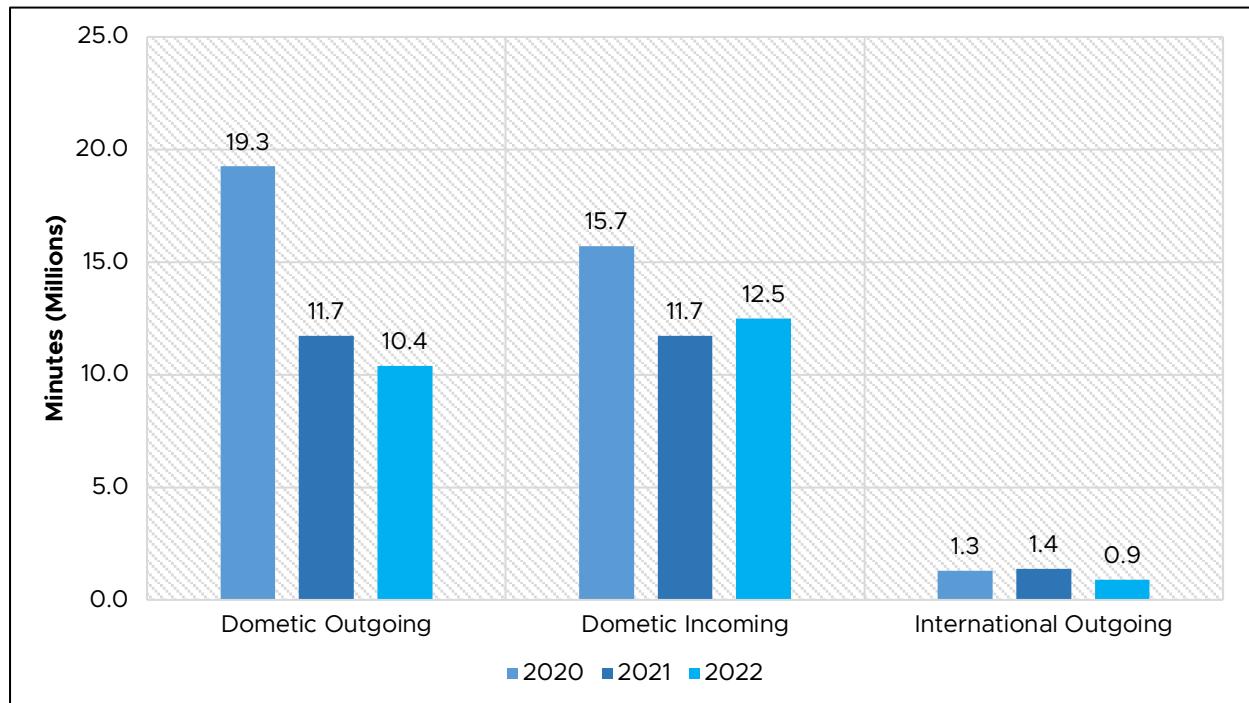


Source: Operators submissions

4.2.1. PSTN Traffic

The volume of domestic and international PSTN traffic continued to decline in 2022 despite the increase in the number of active subscriptions. Notably, the volume on domestic outgoing traffic reduced from 11.7 million minutes at the end of 2021 to 10.4 million minutes at the end of 2022 representing a decrease of 11.4 percent. Similarly, the volume of outgoing international traffic reduced from 1.4 million minutes to 900 thousand minutes translating into a decline of 35.5 percent. On the other hand, the volume of domestic incoming traffic increased from 11.7 million minutes to 12.5 million minutes in 2022 representing a marginal increase of 7 percent. The overall decline in the volume of traffic on PSTN services has been attributed to the increasing use of mobile cellular networks for voice calls.

Figure 24: Trends in PSTN Traffic; 2020 – 2022



Source: Operator Submission

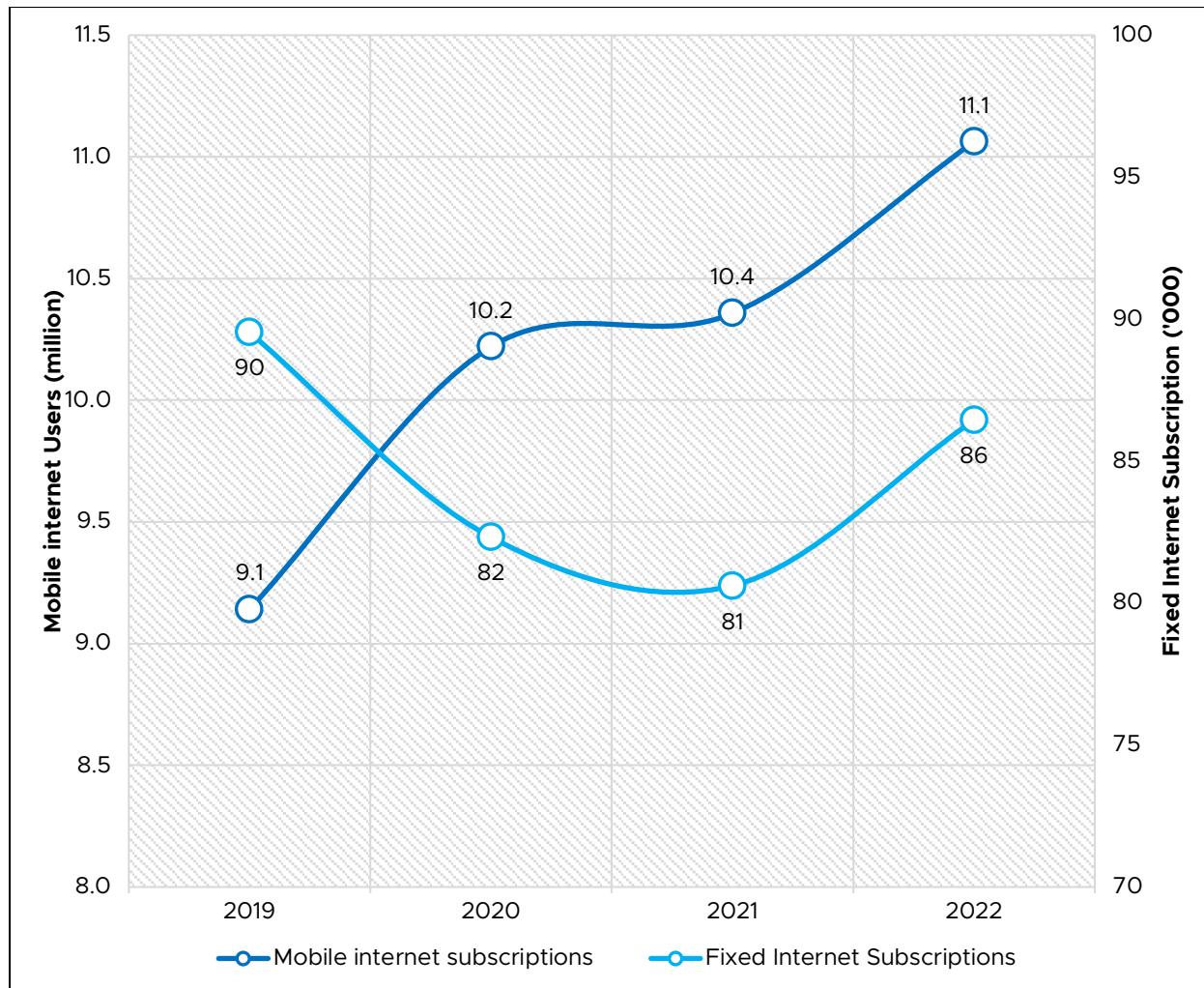
4.3. Internet Services

4.2.2 Fixed and Mobile Internet Subscription

The total number of active internet subscriptions in the country increased from 10.4 million subscriptions reported at the end of 2021 to 11.1 million recorded at the end of 2022 representing a growth of 6.73 percent. Consequently, the increase in the total number of active internet subscriptions reflected a marginal increase in the internet penetration rate from 56.7 per 100 inhabitants reported in 2021 to 56.8 per 100 inhabitants attained in 2022. The marginal growth was on account of the adjustment in the estimated population size. The majority of internet users remained mobile internet subscriptions, accounting for nearly 99 percent of internet users. Subscription to fixed internet services increased from about 80.6 thousand subscriptions reported in 2021 to 86.4 thousand subscriptions in 2022 representing an increase of 7.2 percent. On the other hand mobile internet subscriptions increased from 10.4 million in 2021 to 11.1 million in 2022. It is anticipated that future investments among service providers leading to extensive coverage of 3G/4G networks and the increased adoption of these emerging technologies will lead to further improvements in internet adoption.

The majority of users with fixed internet subscription are corporates mainly due to reliability and capacity of the services. However, the high cost associated with fixed Internet services serves has deterred most potential household users. Therefore, most households prefer mobile Internet to fixed Internet. In addition, providers of mobile internet services are also providing enterprise solutions leading to some corporates switching between services.

Figure 25: Trends in Internet Subscription; 2019 to 2022



Source: Operator submissions

A benchmarking of the price for a data bundle and average consumption bundles constituting data and voice minutes was carried out to determine the competitiveness of the services in the country. A data bundle consisting of at least a 2GB monthly bundle and a data and voice bundle consisting of at least 150 mins, 70 SMS and a data bundle of 1.5 GB valid for a month was considered in the assessment.

Zambia ranked fourth (4th) with regards to pricing of a monthly data bundle of 1.5 GB relative to fourteen other countries, indicating the country's relative competitiveness with respect to affordability. The price of the average consumption bundle for Zambia was estimated at 2.99 percent of the country's Gross National Income (GNI) per capita. The average data bundle price was noted to be significantly above the UN broadband Commission target of 2 percent of GNI.

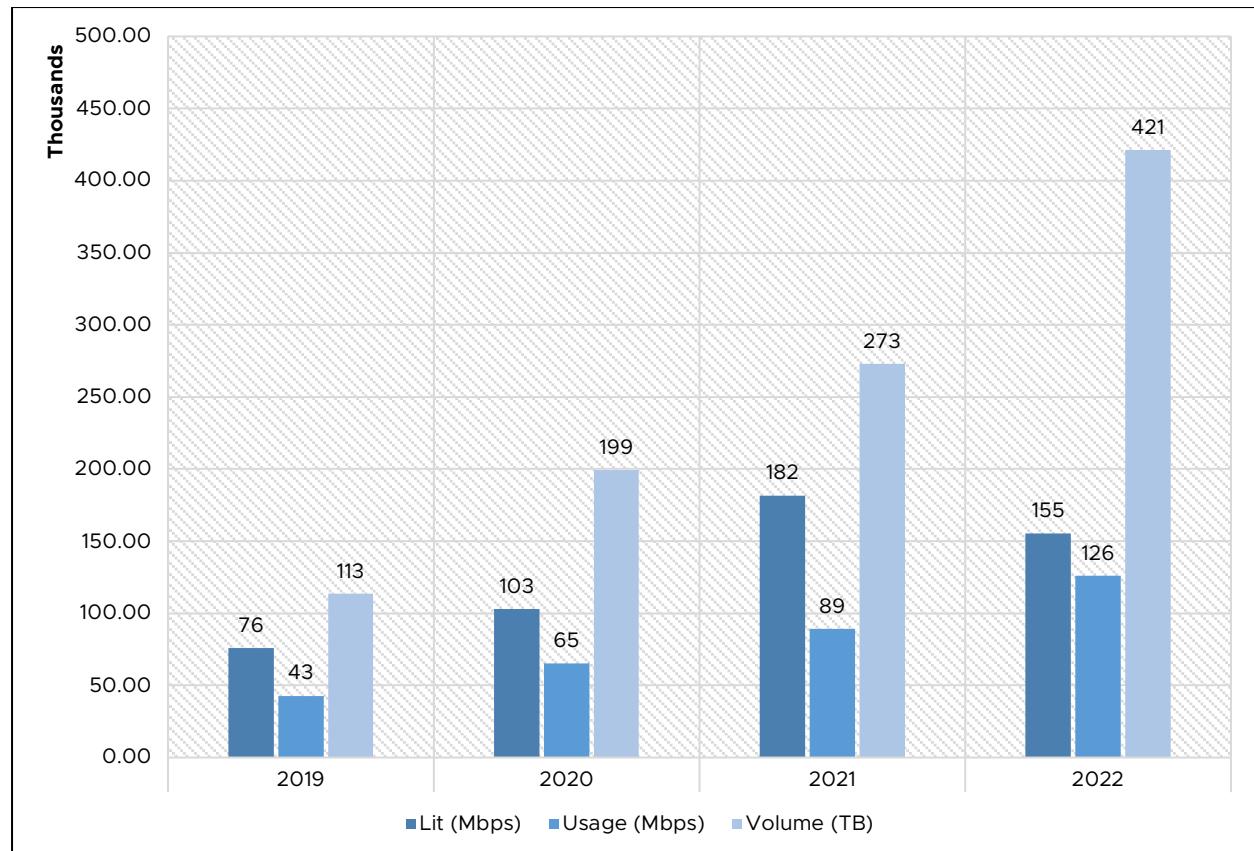
Table 7: Regional Benchmarking of Data and Voice Bundles

Country Name	Price 2GB Data Monthly Validity (USD)	Rank	Price of Data and Voice consumption Bundle as % of GNI per capita	Rank
Angola	3.7989	7	2.1302	2
Botswana	13.9947	15	2.5933	4
DR Congo	0.2858	1	2.1672	3
Eswatini	9.8039	13	4.5426	9
Kenya	2.5854	3	3.5369	6
Lesotho	8.4022	11	21.3105	15
Madagascar	4.8492	10	8.0513	12
Mozambique	4.3945	9	18.8817	14
Namibia	13.1296	14	3.7182	8
Nigeria	2.6303	5	1.8437	1
Rwanda	2.3677	2	5.8045	11
South Africa	9.7513	12	3.5375	7
Tanzania	4.0034	8	5.7193	10
Uganda	2.9226	6	14.8159	13
Zambia	2.5710	4	2.99	5

4.3.1. Bandwidth Capacity and Utilisation

The Lit/equipped capacity among the mobile network operators reduced from to 181,740 Megabits per second (Mbps) reported in 2021 to 155,487 Mbps in 2022 representing a decline of 14.4 percent. However, the capacity usage increased from 89,280 Mbps in 2021 to 126,199.82 Mbps in 2022 reflecting a growth rate of 41.4 percent. Consequently, the throughput volume of data increased significantly from 272,894.24 terabytes (TB) reported in 2021 to 421,238.65tb in 2022 representing a growth of 54.4 percent.

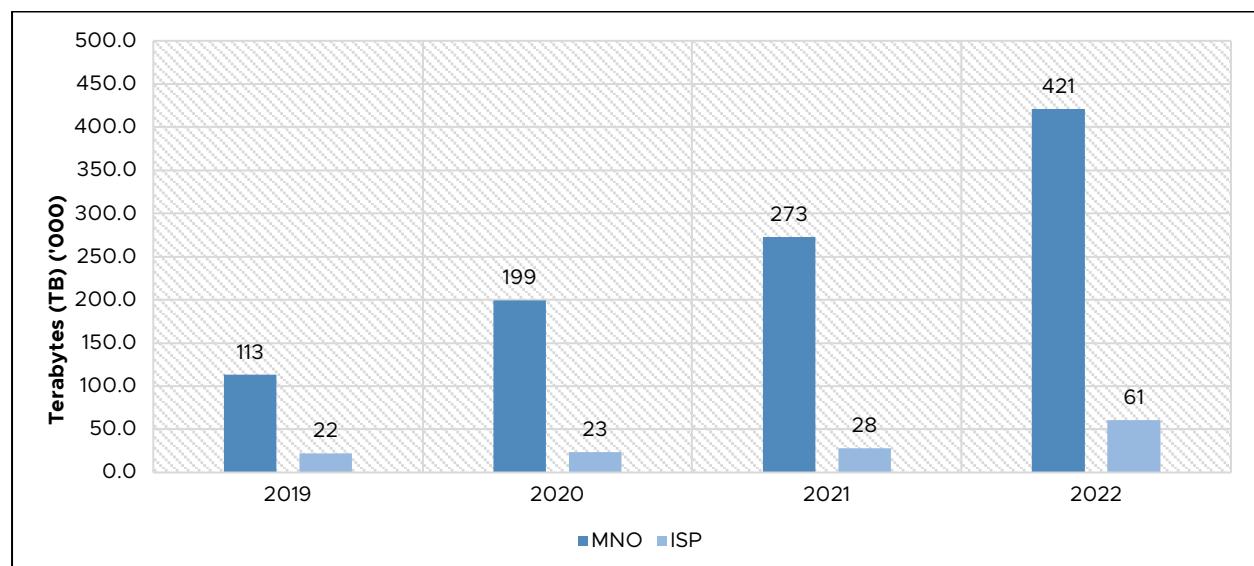
Figure 26: Bandwidth capacity and utilization by MNO: 2019 to 2022



Source: Operator submissions

Throughput volumes among internet service providers have increased consistently over time. The throughput volumes for mobile ISPs was seven-fold higher than the fixed ISPs in 2022, nine-fold higher in 2021 and over six-fold higher in 2020. Comparatively, there is more data usage among mobile internet providers than fixed internet providers.

Figure 27: Data throughput volumes: 2019 to 2022



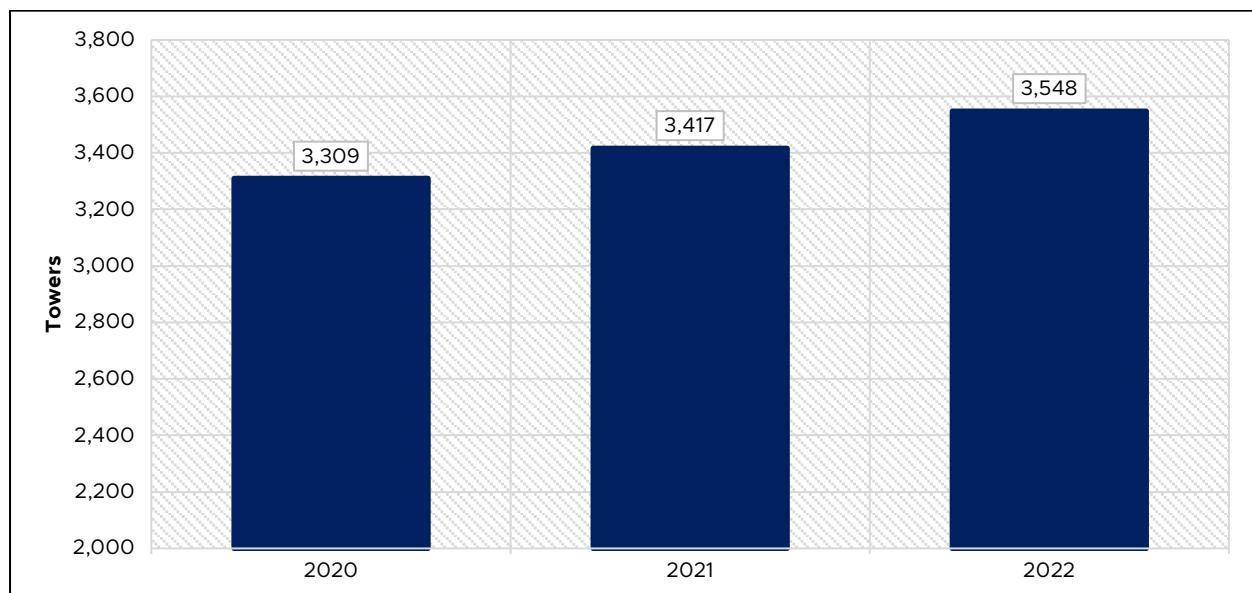
Source: Operator submissions

4.4. Passive Infrastructure

4.4.1. Ownership of Tower Infrastructure

Figure 32 shows the number of telecom towers in the country during the review period. The total number of telecom towers has continued to increase. In 2022, infrastructure operators reported 3,548 towers, an increase of 2.6 percent from total number of towers reported at the end of the 2021. Overall, the increase in the number of telecommunication towers is expected to extend access to mobile networks as well as the quality of that network.

Figure 28; Trends of Tower Infrastructure: 2020 to 2022



Source: Operator submissions

4.5. Data Storage Facilities

4.5.1. Capacity and Utilisation of Data Storage Facilities

During the period under review, cloud services providers reported declines in capacity and usage in a number of service offerings. With the exception of customer numbers (subscriptions), and usage of bandwidth and physical racks, decreases were reported for all the other characteristics of service offerings including revenues. Overall, improvement in capacities of data storage and bandwidth presents an opportunity for increased creation and usage of ICT based services.

Table 8: Data Centre service providers' performance statistics: Dec 2021 to Dec 2022

Period	Physical Racks		Own Data Storage		Bandwidth		Customers	Revenue
	Capacity	Usage	Capacity	Usage	Capacity	Usage	Number	ZMW'000
Q4-2021	237	31%	5.02 PB	1.00 PB	55 Mbps	95%	231	14,521.11
Q1-2022	221	37%	4.07 PB	1.79 PB	410 Mbps	22%	1,007	14,532.19
Q2-2022	221	42%	4.07 PB	1.72 PB	410 Mbps	22%	1,062	14,115.80
Q3-2022	221	46%	4.77 PB	2.14 PB	410 Mbps	22%	3,630	14,800.93
Q4-2022	221	46%	4.77 PB	0.10 PB	410 Mbps	22%	3,316	14,300.40

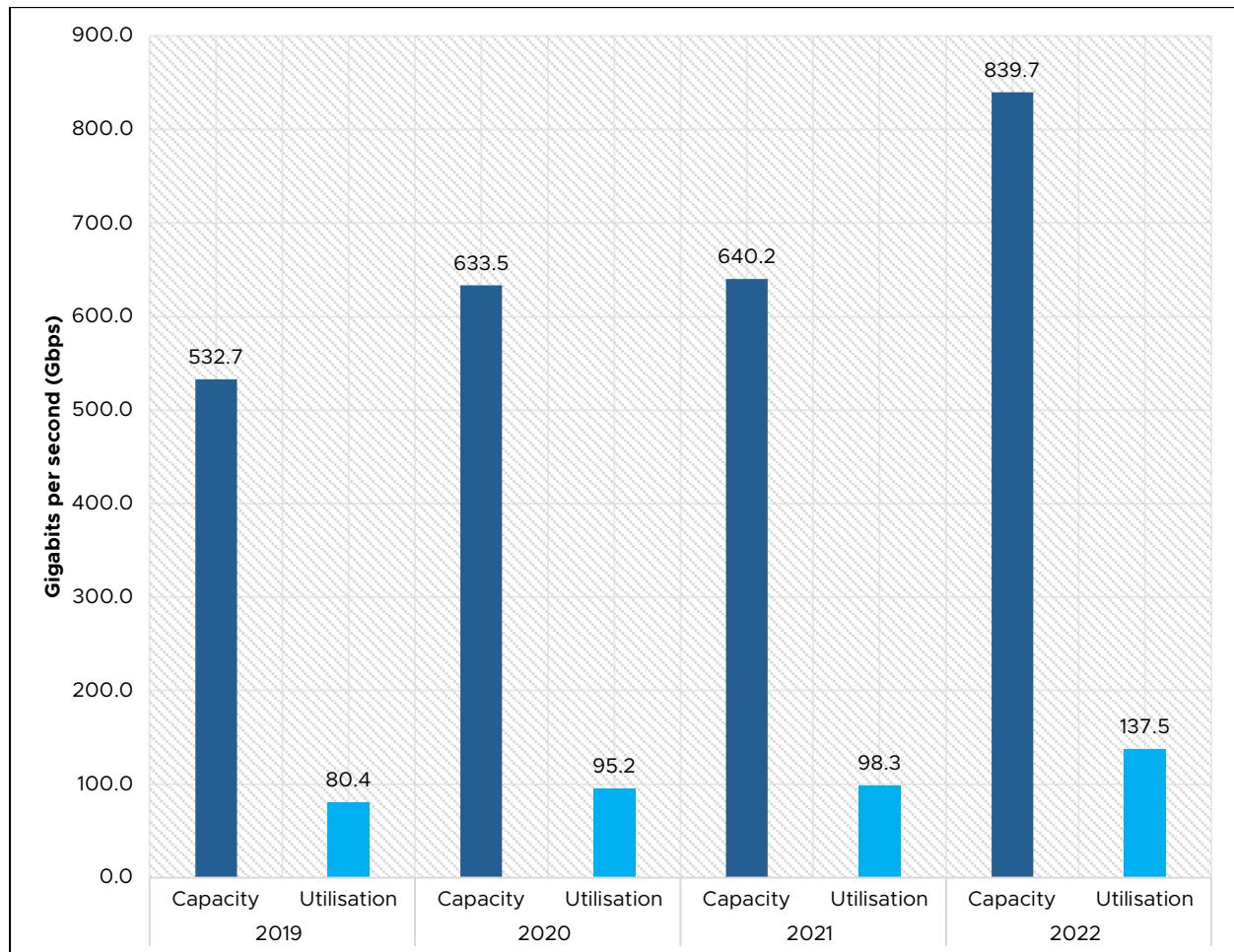
Source: Operator submissions

4.6. Transmission Network Market

4.6.1. Network Capacity and Utilization in the Transmission Network Market

The total network transmission capacity held by operators increased marginally between December 2021 and December 2022 from 640.2 Gbps to 839.7 Gbps representing a growth rate of 31.2 percent. The total network utilization also increased over the review period from 98.3 Gbps to 137.5 Gbps, reflecting an increase of 39.9 percent. The increase in transmission capacity was mostly attributed to the introduction of capacity from Global Connect and BCS into the market of over 200 Gbps while that of the other operators remained constant. The overall network transmission utilization increase was as a result of changes by Liquid Intelligent Technologies from 23.9 Gbps to 34.6 Gbps. Despite the positive performance by Liquid Intelligent Technologies during the year, Fibercom retained the highest network transmission capacity and utilization with a market proportion of 47.6 percent and 27.8 percent respectively.

Figure 29: Trends in Network Transmission Capacity and Utilization: June 2019 to June 2022



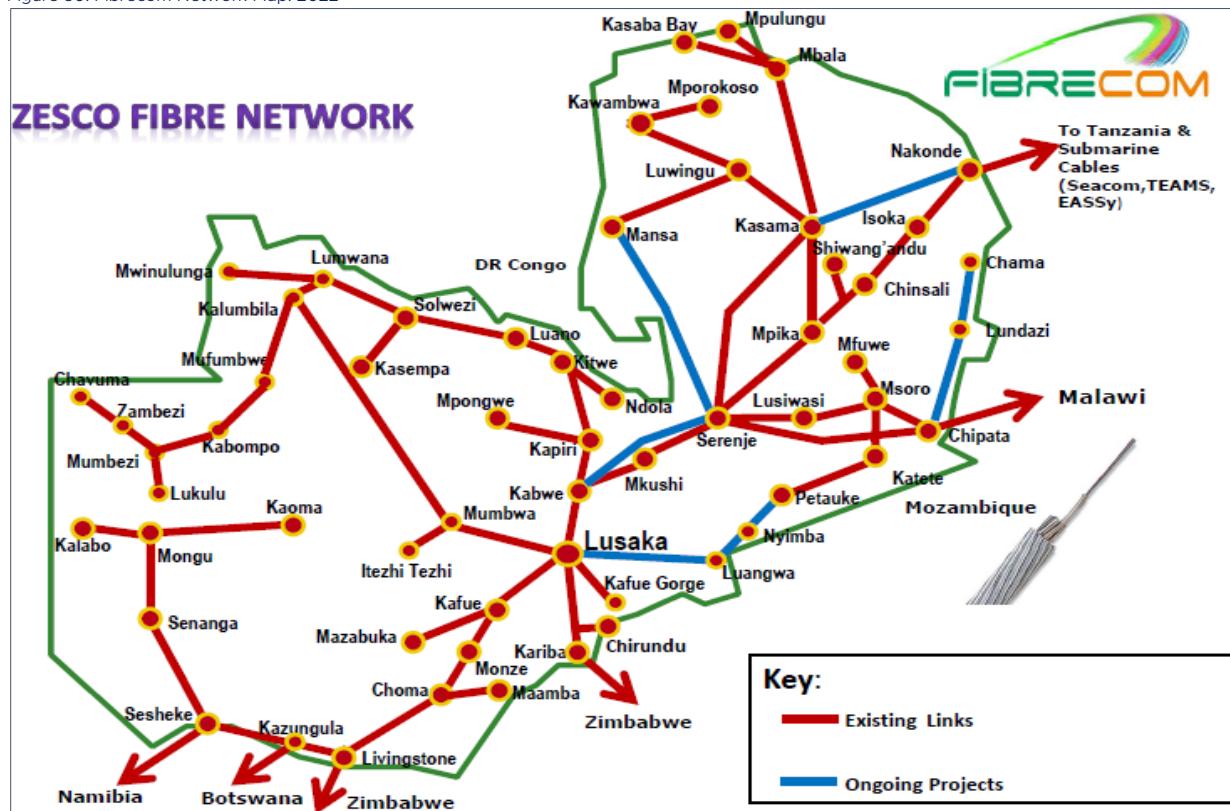
4.6.2. Wholesale Transmission Infrastructure

As at the end of 2022, there were a total of eight (8) operators in the wholesale transmission infrastructure market. Fibercom retained the most extensive fibre-optic network coverage in the country extending to a total length of over 12,000 km with various international gateways. Liquid Intelligent Technologies owned significant fibre network with a total length of over 8,000 km. MTN and Airtel Zambia continued to collaborate on an underground metropolitan network in Lusaka while ZAMTEL retained its extensive network with access to several international submarine cables. Other operators in the subsector included Smartnet which had a total of 1,583.09 km in optic fibre and Paratus who owned 157.09 km of national fibre with 130.91km of backbone ring fibre as at end of 2022.

4.6.2.1. Fibrecom Fibre Network

Fibrecom has deployed over 12,000 km of optic Fibre cables countrywide enabling a wide coverage and making it the only network that has directly connected all 10 provincial centres. The operator has continued to intensify its optic-fibre network in the Eastern, Northern and Central areas of the country. Through submarine cables, Fibercom has interconnected its optic fibre network internationally to Namibia, Botswana, Zimbabwe, Malawi, Angola and Tanzania.

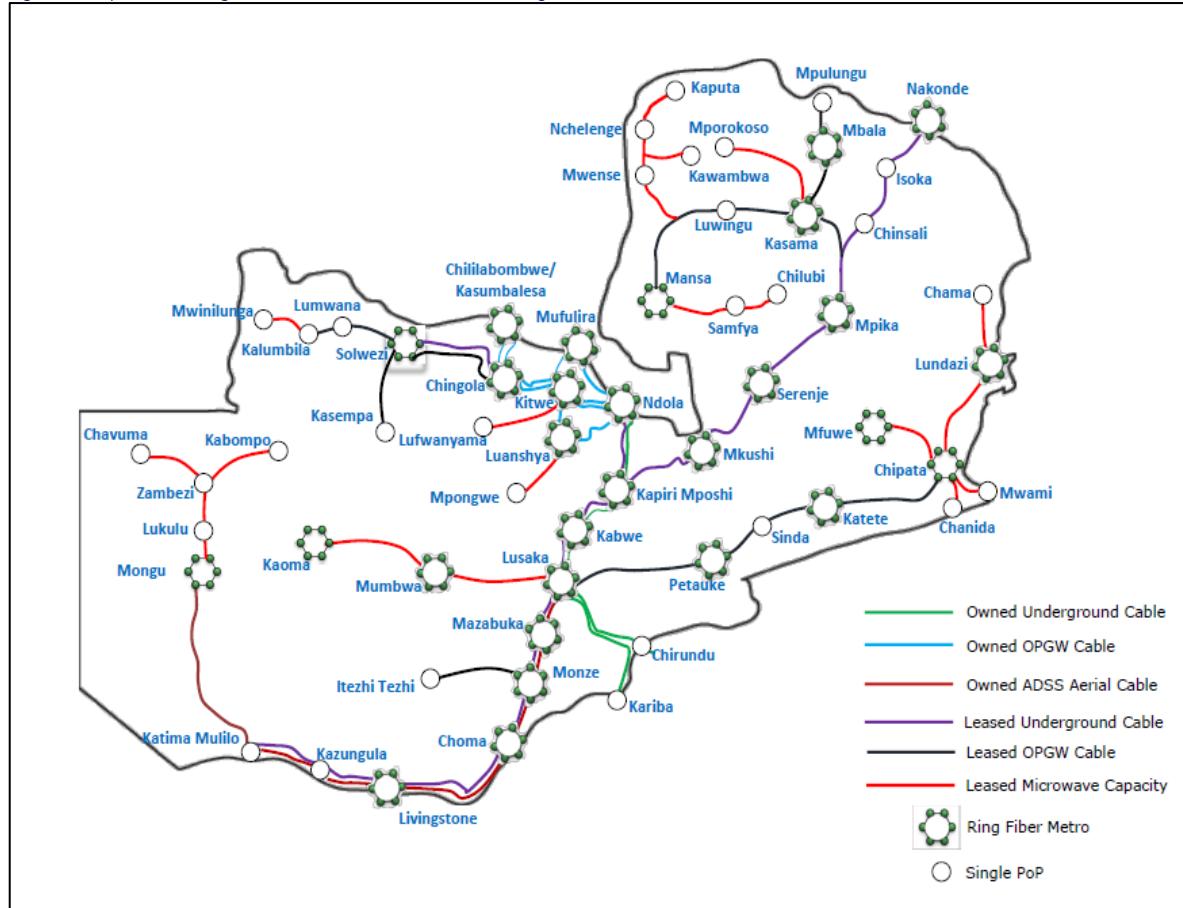
Figure 30: Fibrecom Network Map: 2022



4.6.2.2. Liquid Technologies Network

Liquid Intelligent Technologies had deployed a total optic fibre length of 8,195.6 km countrywide as at the end of 2022. The backbone network is linked to 29 ring fibre metro networks with several microwave single points-of-presence (PoP). The network also has various international links through gateways at Livingstone, Nakonde, Chililabobwe and Sesheke. These gateways provide links to Zimbabwe, Tanzania and Democratic Republic of Congo. Figure 29 below illustrated the extent of Liquid Telecom fibre network in 2022.

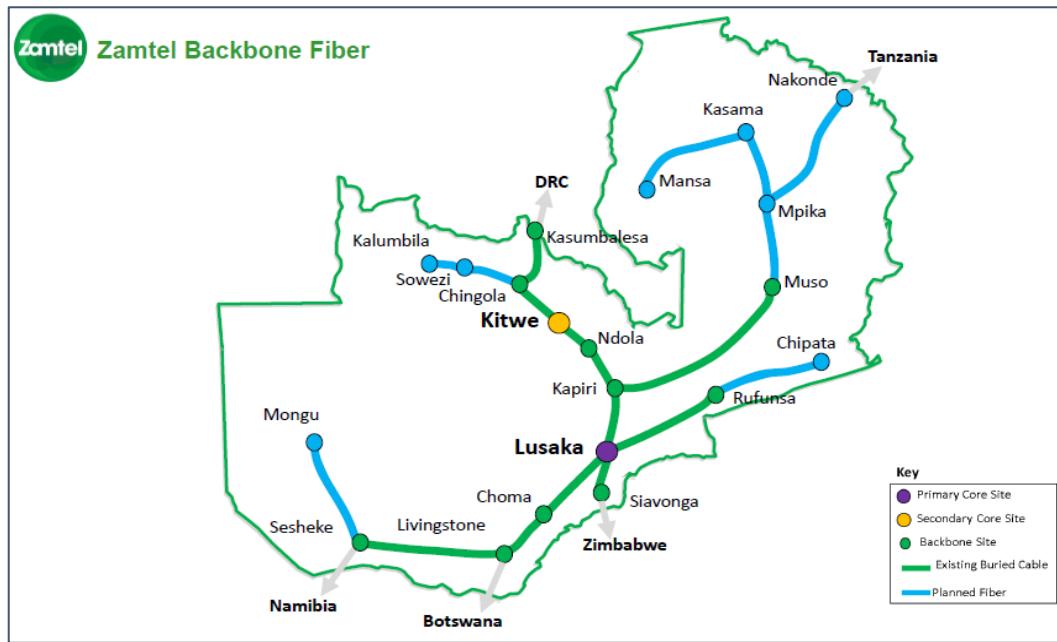
Figure 31: Liquid Technologies Metro and Backbone Network Diagram, 2022



4.6.2.3. Zamtel Fibre Network

Zamtel fibre network is similarly extensive, covering most areas along the line of rail, with access to several international submarine cables. These links have enabled access to undersea fibre-optic cables since 2011. The international fiber links connect to the Democratic Republic of Congo, Tanzania, Zimbabwe, Namibia and Botswana (see Figure 36).

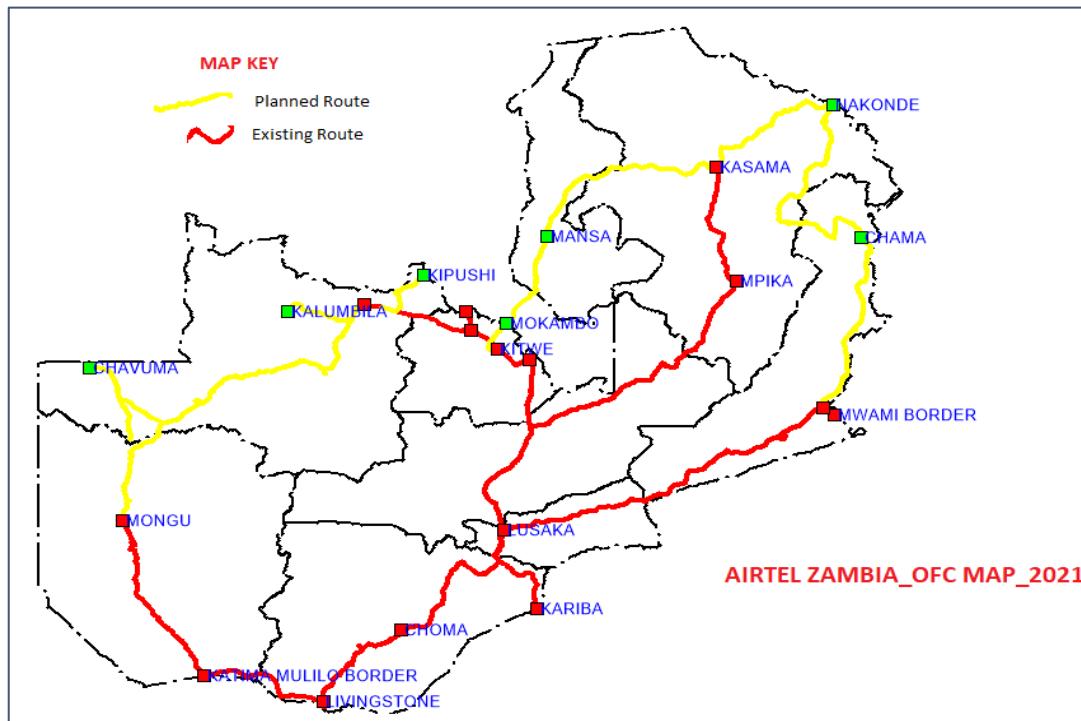
Figure 32: Zamtel Fibre Backbone Infrastructure, 2022



4.6.2.4. Airtel Networks Fibre Network

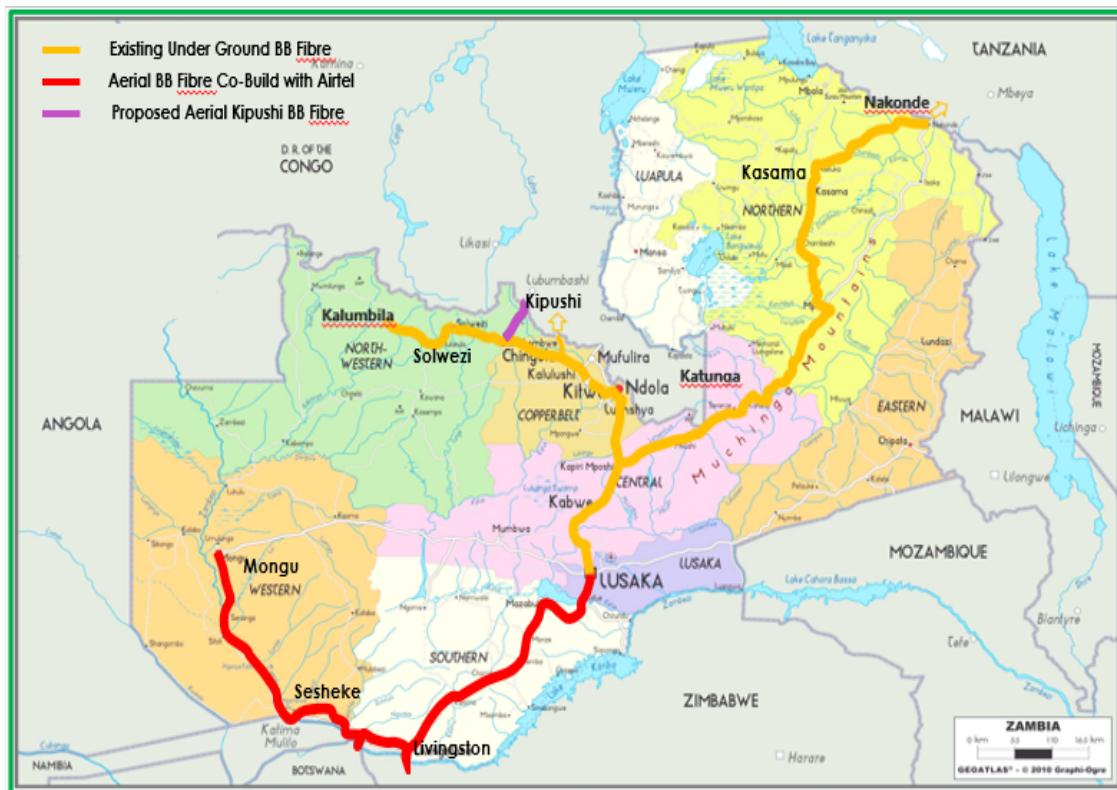
Airtel Zambia had, at the end of 2022, rolled out optic fiber network in all major towns of the country. The network also plans to expand its fiber network to other towns in the Luapula, Muchinga and North Western Provinces. Similarly, the national and international traffic fibre rings are planned for the next phase of expansion.

Figure 33: Airtel Network Planned and Existing Fibre Network Infrastructure, 2022



4.6.2.5. MTN Zambia Fibre Network

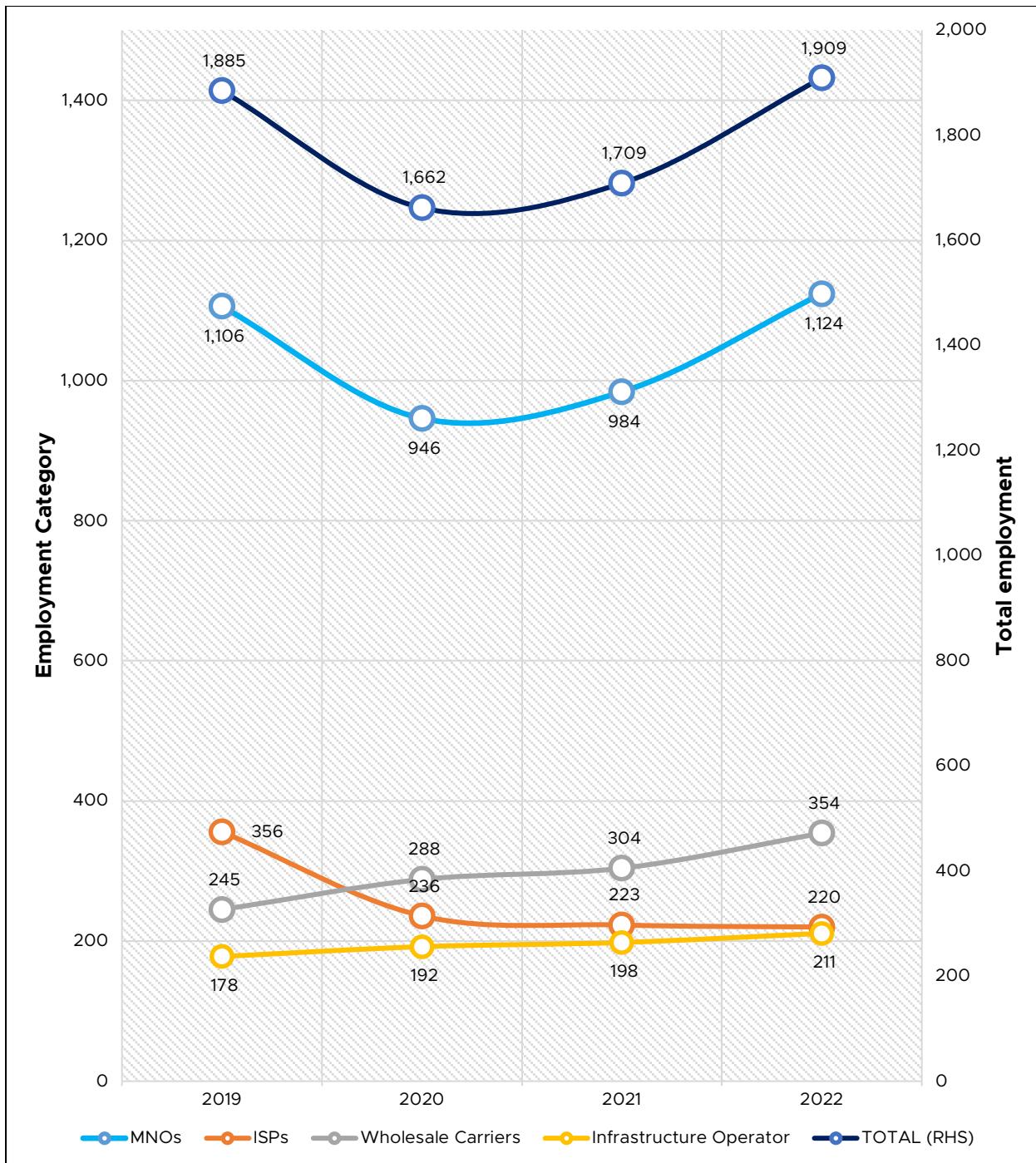
As at the end of 2022, MTN Zambia retained ownership of optic fiber network located mostly in the northern part of the country including the Copperbelt, Central, Lusaka, North-Western, Northern and Muchinga Provinces. The total infrastructure deployed by the operator as at end of 2022 was 3,136km in backbone fiber, 482km of metro fiber and 288.65km of FTTH fiber. Backbone Fiber located in the Western and Southern Provinces was mostly co-owned with Airtel Zambia. MTN Zambia has an international gateway for data to interconnect beyond the Zambian borders to Zimbabwe, Namibia, Tanzania, Botswana and the Democratic Republic of Congo (DRC) (see Figure 38).



4.7. Employment in the ICT Sector

Overall employment among licensees increased in 2022 compared to 2021. The total number of persons employed among licensees increased from 1,709 in 2021 to 1,909 in 2022 representing an improvement of 11.7 percent. The overall increase was attributed mainly to the increase in full-time employment reported by MNOs, wholesale carriers and infrastructure related operators. Specifically, employment increased by 14.2 percent among MNOs, 16.4 percent among wholesale carriers and 6.6 percent among infrastructure operators between 2021 and 2022. However, a decline in employment of 1.3 percent was reported among ISPs during the same period. This decline was mainly on account of a slowdown in employment for ISPs in the post COVID -19 pandemic period.

Figure 34: Employment in the ICT Sector: 2019 to 2022



Source: Operator submissions

5. SECTORIAL POLICY AND REGULATORY REVIEW

ZICTA undertakes periodic assessments on the policy and regulatory environment in the ICT sector that are aimed at identifying any positive enablers to the operations of the players in the sector as well as establishing any existing or emerging constraints in the business environment that could limit growth. The assessments are based on qualitative interviews with all the operators on the market. As part of the assessments, operators are also engaged to provide proposals on how the identified challenges could be addressed as well as how the general business environment could be enhanced. In December, 2022, the Authority undertook the annual sectorial policy and regulatory review which would inform part of its focus in the subsequent year. The sentiments on the business environment from the industry are outlined in the ensuing sections.

5.1. Positive Factors Influencing Growth on the Market

- a) **Investment in Telecommunication Infrastructure:** A number of operators indicated that they continued to invest in their networks to extend their reach and improve the reliability of their networks a major positive attribute to their growth in 2022. Notably there were extensive investments in fiber infrastructure aimed at increasing the data transmission capabilities of the operators as well as meeting the growing demand for data on the market. In addition, a number of telecommunication sites were deployed to align with the extending geographical boundaries for cities and towns as well as the establishment of infill sites to match the capacity needs due to the growth in demand.
- b) **Introduction of Innovative Service Offers:** Some operators reported that they had made significant changes in their product offers to respond to the changing patterns in communication needs for their customers. These innovations in product development were aimed at ensuring that the products on offer are responsive to consumer usage patterns and affordability. This was also a useful strategy for growth and ensuring that operators maximize their revenue from the market.
- c) **Monetisation of 4G Network:** Operators indicated that there has been a significant improvement in the uptake of data products in the country which has prompted the increased investments in 4G networks. The operators expressed commitment to continue investing in their 4G networks to match the growing demand for data products.
- d) **Investment in Customer Care Systems:** It was established that a number of providers of ICT services invested in the improvement for their customer service systems aimed at ensuring that they enhance consumer welfare and redress for customer complaints. Customer care services were recognized a growing key differentiator among the providers. The operators also reported that they had invested in training programmes for their customer care staff to ensure that they were adequately equipped to respond to consumer inquiries. In some instances, operators have adopted artificial intelligence driven tools for automated assistance such as chat box platforms.
- e) **Development of the ICT Policy and Digital Transformation Strategy:** Operators expressed their support and appreciation of the efforts being made by the Government through the Ministry of Technology and Science to develop the revised National ICT policy as well as the Digital Transformation Strategy. These documents were expected to provide details on the medium term strategy and focus of the Government on the ICT sector as well as ensure that the policy was aligned to current developments on the market.

5.2. Constraints Growth on the Market

- a) **High tax incidence in the ICT sector:** The ICT sector continued to face the highest corporate tax rate of 35 percent despite the reduction from 40 percent previously applied for profits above K250,000. The high corporate tax rate has the adverse effect of reducing available earnings for reinvestment by the operators which could slow down investment and growth. In addition, the excise duty of 17.5 percent applied on airtime has a direct effect of increasing the cost of services and consequently reduced the pace of adoption as well as intensity of usage of ICT services.
- b) **Macro-Economic Instability:** Operators identified challenges associated with the macroeconomic environment as a key factor that increased the cost of doing business. Notably, the effect of the extensive depreciation of the local currency towards the end of the previous year was noted to be the significant factor that affected the business environment. As most of the capital items in the ICT sector were imported, the depreciation of the local currency had the adverse effect of increasing cost of imported inputs.
- c) **Rising Energy Costs:** The cost of diesel which is a key input in the provision of services increased significantly in 2022. In addition, the frequency of adjustments in the pricing were changed to monthly leading to more periodic variations in the price of fuel. Operators indicated that the cost of fuel adversely affected the cost of providing services as fuel was a key input in the provision of ICT services.
- d) **Delays in Approval for installation of infrastructure:** Operators indicated that there were delays by ZICTA in obtaining approvals for installation of infrastructure such as the laying of fiber. The delays posed challenges in providing commitments to their customers on the delivery of services and posed a risk on their competitive advantage. In addition, there were concerns on cost and delivery time associated with the compulsory requirement for concrete poles to be used in deployment of fiber.
- e) **Low Awareness on Cyber Security Risks:** Operators identified cyber security risks as a growing challenge in the country. These incidence of these risks was particularly of concern given the growing number of users of ICT services and value added services such as mobile money. However, it was also observed that the extent of awareness of the existing risks and mitigation strategies among users of ICT services was low.

5.3. Proposals for Enhancing the Business Environment

- a) **Review of the Tax burden in the ICT sector:** Operators indicated that it would be important for the Government to continue reviewing the tax burden placed on the ICT sector with a view to stimulate investment, employment and guarantee the sustainability of ICT operators. Particularly taxes related to corporate tax, excise duty and customs duty for essential equipment and infrastructure were proposed as possible areas for continued review.
- b) **Enhance efficiency in approval for installation for infrastructure:** The Authority was requested to enhance its efficiency in the issuance of approvals for installation of infrastructure such as fibre. This was expected to assist with improving the timely delivery of services to customers. There was also a proposal for the Authority to review its decision on the compulsory use of concrete poles which as costly and require more time for deployment. Consideration was proposed for treatment of

poles or the use of steel poles to ensure that the poles are resilient to adverse weather conditions.

- c) **Designation of ICT Infrastructure as Critical Infrastructure:** The industry players recommended that consideration should be made to designating ICT sites as 'critical infrastructure' and therefore exempting it from load management. This was considered a useful avenue of managing the cost of operating the sites arising from using substitutes such as diesel.
- d) **Implementation of INRIS Project:** Operators also suggested that the prompt implementation of the INRIS project would substantially assist with reducing the costs associated with KYC compliance as the data will be obtained and verified through the national database.
- e) **Enhanced Oversight in Infrastructure Sharing Arrangements:** The Authority was urged to enhance its oversight of Infrastructure sharing arrangements to ensure that the market operators efficiently. Notably aspects related to limitations in extension of coverage as well as abuse of dominance were noted to be key for consideration.
- f) **Address Challenges with the Licensing Framework:** The Authority was requested to review any existing bottlenecks in the licensing framework that could be inhibiting investment. Operators suggested that consideration could be made for allowing walk in applications in public interest.

6.0. OUTLOOK FOR THE ICT SECTOR IN 2023

The following issues have been identified as key in informing the outlook for the developments in the ICT sector in year 2023:

- 6.1. Forecast in uptake and Usage of ICT Services:** The Authority forecasts a positive outlook in the general uptake and use of ICT services in the subsequent review period. The number of active mobile network subscriptions is expected to increase from 19.8 million reported at the end of 2022 to 20.4 million subscriptions at the end of 2023 and subsequently 21.3 million in 2024. In addition, the volume of domestic outgoing mobile voice call minutes is forecasted to increase from 28.5 billion minutes estimated at the end of 2022 to 32.1 billion projected for the year 2023 and could reach 34.5 billion minutes in 2024. These anticipated improvements in uptake and usage of ICT services are on the backdrop of increased investments by operators in the capacity and coverage of their networks, competitive pricing outcomes on the market as well as general improvement in demand for ICT services among other attributes. However, there are risks mainly with international voice traffic which has exhibited a sustained decline in the immediate past.
- 6.2. Macro-economic outlook and its implications:** The macro-economic outlook is positive amid notable improvements in the inflation rate. There is also a general positive posture on the business environment arising from the extensive investment promotion efforts by the government.
- 6.3. Cyber Related Risks:** Cyber related frauds especially on mobile money accounts are expected to persist. The SMS frauds which are targeted at mobile money users are increasingly drawing the biggest attention on consumer awareness and consumer protection. However, as adoption of ICTs increases the diversity and intensity of these risks is expected to persist.
- 6.4. Investment in Infrastructure:** The continued investments in backbone and metro fibre networks as well as telecommunication sites by operators is expected to extend coverage and improve quality of service. Extension of fibre circuits by some operators is also expected to open additional routes for redundancy while the metro access will facilitate access of fibre to the X (FTTX). It is anticipated that a number of operators will continue investing in their 4G networks aimed at extending coverage as well as improving quality of service.
- 6.5. Product and Service Diversity:** Operators are also expected to continue introducing innovative product offerings for consumers to remain viable in the competitive environment. There is also an anticipated opportunity for growth in the adoption of new and emerging technologies such as cloud computing and artificial intelligence.

6.6. Issuance of Spectrum in the 800 MHz. band, 700 MHz. band and 2600 MHz. band: ZICTA issued spectrum in the 800 MHz band, 700 MHz. and 2600 MHz band during 2022 in line with the 5G spectrum roadmap. The scarce resources are expected to assist with improving quality of service, extending coverage and facilitate the introduction of innovative products and services.

6.7. ICT Policy and Digital Transformation Strategy: The government through the Ministry of Technology and Science has been developing the ICT policy and digital transformation strategies aimed at providing a medium term direction for the ICT sector in the country. These policy documents are expected to be concluded in 2023.



ZICTA

A Regulator at the Nexus
of an Inclusive Digital Economy

Head Office

Stand No. 4909, Corner of Independence
and United Nations Avenues
P.O. Box 36871, Lusaka—Zambia
info@zicta.zm, www.zicta.zm
Toll Free: 7070
Tel: +260 211 378200

Copperbelt

Plot 2735, Liberia Road
Trade Fair Grounds
Ndola—Zambia
Tel: +260 212 651032

Muchinga

Plot 888, Nkakula Street
Chinsali—Zambia
Tel: +260 211 378244

Southern

No. 626-8, Unit G.03
Butala House
Pioneer Street
Choma—Zambia
Tel: +260 211 000000

Eastern

Plot No. 56, Bishop John Osmers
Office Complex, Church Road
Chipata—Zambia
Tel: +260 211 378246

