



**THIRD QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2022/2023  
(1<sup>ST</sup> JANUARY – 31<sup>ST</sup> MARCH 2023)**

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***Disclaimer:***

*Although every effort has been made to ensure the accuracy of the data contained in this report, the Authority is not liable for inaccuracies in any of the information contained in this report, which is contingent upon the operators'/service providers' compliance returns.*

## TABLE OF CONTENTS

<b>LIST OF TABLES .....</b>	<b>iii</b>
<b>LIST OF FIGURES .....</b>	<b>iii</b>
<b>LIST OF ACRONYMS .....</b>	<b>iv</b>
<b>PRELIMINARY NOTES.....</b>	<b>iv</b>
<b>SUMMARY OF ICT INDICATORS .....</b>	<b>v</b>
<b>1. MOBILE NETWORK SERVICES .....</b>	<b>1</b>
1.1 Mobile (SIM) Subscriptions.....	1
1.2 Machine-to-Machine (M2M) Subscriptions.....	2
1.3 Mobile Money Services .....	3
1.4 Mobile Data and Broadband Services .....	4
1.5 Market Shares in Subscriptions for Mobile Services .....	4
1.6 Mobile Phone Devices .....	5
1.7 Domestic Mobile Voice Traffic (Minutes).....	6
1.8 Minutes of Use per Call per Operator .....	6
1.9 Mobile SMS Traffic .....	6
1.10 Voice and SMS Traffic per Operator .....	7
The trends in domestic mobile voice and SMS traffic per operator are shown in Table 3. ....	7
1.11 Market Shares in Domestic Mobile Voice and SMS Traffic .....	7
1.12 Minutes/Month/Subscription vs SMS/Month/Subscription .....	8
1.13 International Mobile Traffic.....	9
1.14 Roaming Traffic .....	9
1.15 Tariffs, Promotions, and Special Offers.....	10
1.16 Average Pay-As-You-Go (PAYG) Tariffs.....	11
<b>2. FIXED NETWORK SERVICES .....</b>	<b>11</b>
2.1 Fixed Telephone Subscriptions .....	11
2.2 Domestic Fixed Voice Traffic.....	12
2.3 International Fixed Voice Traffic.....	12
2.4 Fixed Data and Broadband Subscriptions .....	12
2.5 Fixed Data Subscriptions by Operator .....	13
2.6 International Bandwidth.....	13
<b>3. POSTAL AND COURIER SERVICES .....</b>	<b>14</b>
<b>4. BROADCASTING SERVICES .....</b>	<b>14</b>
4.1 Licensees under Broadcast License Framework .....	14
4.2 Subscription to Broadcasting Services.....	15
<b>5. FREQUENCY SPECTRUM MANAGEMENT .....</b>	<b>16</b>
<b>6. ELECTRONIC TRANSACTIONS AND CYBER SPACE MANAGEMENT .....</b>	<b>16</b>
6.1 Registered Domain Names.....	16
6.2 National Cyber Space Landscape.....	16
<b>7. CONCLUSION.....</b>	<b>17</b>

## LIST OF TABLES

Table 1: Domestic Mobile Voice Traffic (Minutes).....	6
Table 2: Minutes of Use per Call (Minutes).....	6
Table 3: Domestic Mobile Traffic per Operator.....	7
Table 4: International Mobile Traffic.....	9
Table 5: Outbound Roaming Traffic.....	9
Table 6: In-bound Roaming Traffic.....	10
Table 7: Average Pay-As-You-Go (PAYG) Tariffs.....	11
Table 8: Average Pay TV Tariffs.....	11
Table 9: Domestic Fixed Voice Traffic (Minutes).....	12
Table 10: International Fixed Voice Traffic.....	12
Table 11: Fixed Data and Broadband Subscriptions.....	12
Table 12: Fixed Data Subscriptions by Operator.....	13
Table 13: International Internet Bandwidth (Gbps).....	13
Table 14: Postal and Courier Items.....	14
Table 15: Licensees under Broadcast License Framework.....	15
Table 16: Broadcasting Subscriptions.....	15
Table 17: Frequency Spectrum Management.....	16
Table 18: .KE Domains.....	16

## LIST OF FIGURES

Figure 1: Mobile Subscriptions and Penetration.....	1
Figure 2: Mobile Subscription per Operator.....	2
Figure 3: Machine-to-Machine Subscriptions.....	3
Figure 4: Mobile Money Services.....	3
Figure 5: Mobile Data Subscriptions.....	4
Figure 6: Mobile Market Shares.....	5
Figure 7: Mobile Phone Devices.....	5
Figure 8: Domestic SMS Traffic.....	7
Figure 9: Market Shares in Domestic Mobile Voice and SMS.....	8
Figure 10: MoU/Month/Subscription vs SMS/Month/Subscription.....	8
Figure 11: Distribution of Tariffs, Promotions and Special Offers.....	10
Figure 12: Fixed Voice Subscriptions.....	11
Figure 13: Cybersecurity Landscape.....	17

## LIST OF ACRONYMS

B2B	Business to Business
B2C	Business to Customer
C2B	Customer to Business
C2G	Citizen to Government
DoS	Denial-of-Service
EASSy	Eastern Africa Submarine Cable Systems
FTTH/O	Fibre-To-The-Home/Office
FY	Financial Year
Gbps	Gigabits per second
ICTs	Information Communication Technologies
KE-CIRT/CC	National Kenya Computer Incident Response Team/Coordination Centre
LION2	Lower Indian Ocean Network
Mbps	Megabits per second
MoU	Minutes of Use
MVNO	Mobile Virtual Network Operator
NCC	National Cybersecurity Centre
P2P	Person to Person
SEACOM	Sea Sub-Marine Communications Limited
SIM	Subscriber Identification Module
SMS	Short Messaging Service
TEAMS	The East African Marine System
LTE	Long Term Evolution
UMTS	Universal Mobile Telecommunication System

## PRELIMINARY NOTES

This report is based on data provided by licensees in the ICT sector as per their license conditions and obligations. The information provided herein is subject to review during the subsequent quarter in case of any revisions or updates from the licensees.

This report has been prepared in line with best practice and adheres to International Telecommunications Union standards on collection of administrative/supply side data on telecommunications/Information and Communication Technologies [https://www.itu.int/en/ITU-D/Statistics/Documents/publications/handbook/2020/ITUHandbookTelecomAdminData2020\\_E\\_rev1.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/publications/handbook/2020/ITUHandbookTelecomAdminData2020_E_rev1.pdf).

The main objective of the report is to measure and monitor availability and accessibility of ICT services by Kenyans from the perspective of supply. It is key to note that this report **does not include demand side data** (data on usage/uptake of ICTs) as this information is collected

through National ICT Surveys and reported separately as per ITU standards [https://www.itu.int/en/ITUUD/Statistics/Documents/publications/manual/ITUManualHouseholds2020\\_E.pdf](https://www.itu.int/en/ITUUD/Statistics/Documents/publications/manual/ITUManualHouseholds2020_E.pdf).

The Authority collaborates with the Kenyan National Bureau of Statistics (KNBS) to collect the demand side data through National Surveys.

## SUMMARY OF ICT INDICATORS

This Third Quarter Sector Statistics Report for the 2022/2023 Financial Year provides the performance and trends in the ICT sector for the period 1<sup>st</sup> January to 31<sup>st</sup> March 2023 in:

1. Mobile Network services
2. Fixed Network services
3. Postal and Courier services
4. Broadcasting services
5. Frequency spectrum management
6. Electronic transactions and Cyberspace management

<i>Indicator/Period</i>	<i>Q3 (Jan-Mar 23)</i>	<i>Q2 (Oct-Dec22)</i>	<i>Quarterly Variation (%)</i>
<b>MOBILE NETWORK SERVICES</b>			
<b>Subscriptions to Mobile Services</b>			
Total Mobile (SIM) Subscriptions	66,053,649	65,737,164	0.5
Machine-to-Machine (M2M) Subscriptions	1,538,968	1,510,236	1.9
<b>Mobile Money Transfer Services</b>			
Number of Registered Mobile Money Agents	331,065	318,607	3.9
Mobile Money Subscriptions	38,432,728	38,645,654	-0.6
<b>Mobile Data and Broadband Subscriptions</b>			
Mobile Data Subscriptions	47,960,863	47,760,337	0.4
Mobile Broadband Subscriptions	32,192,772	31,888,468	1.0
<b>Mobile Phone Devices</b>			
Feature Phones	33,475,476	33,618,061	-0.4
Smartphones	29,487,846	29,742,690	-0.9
<b>Domestic Mobile Traffic</b>			

<i>Indicator/Period</i>	<i>Q3 (Jan-Mar 23)</i>	<i>Q2 (Oct-Dec22)</i>	<i>Quarterly Variation (%)</i>
<b>Mobile Voice Traffic (Minutes)</b>			
On-Net Voice Traffic	18,643,493,661	18,078,317,940	3.1
Off-Net Voice Traffic	2,888,560,081	2,752,607,034	4.9
Mobile to Fixed Network	15,316,510	15,389,719	-0.5
<b>Mobile SMS Traffic</b>			
SMS On-Net	12,070,360,878	10,699,243,196	12.8
SMS Off-Net	1,650,638,678	1,414,535,794	16.7
<b>International Mobile Traffic</b>			
<b>Mobile Voice Traffic (Minutes)</b>			
International Incoming Mobile Voice Traffic	75,008,695	98,519,787	-23.9
International Outgoing Mobile Voice Traffic	162,020,392	177,525,228	-8.7
<b>Mobile SMS Traffic</b>			
International Incoming SMS	8,627,473	8,681,273	-0.6
International Outgoing SMS	4,625,962	4,709,102	-1.8
<b>Roaming Traffic</b>			
<b>Out-bound Roaming Traffic</b>			
Out-bound Roaming Incoming Voice Traffic (Minutes)	136,089,615	137,131,182	-0.8
Out-bound Roaming Outgoing Voice Traffic (Minutes)	15,152,712	14,905,053	1.7
Out-bound Roaming Incoming SMS	49,592,838	51,606,679	-3.9
Out-bound Roaming Outgoing SMS	6,630,919	6,834,474	-3.0
Data Volumes (MB)	128,876,812	109,547,537	17.6
<b>In-bound Roaming Traffic</b>			
In-bound Roaming Incoming Voice Traffic (Minutes)	42,903,151	39,865,338	7.6

<i>Indicator/Period</i>	<i>Q3 (Jan-Mar 23)</i>	<i>Q2 (Oct-Dec22)</i>	<i>Quarterly Variation (%)</i>
In-bound Roaming Outgoing Voice Traffic (Minutes)	4,024,055	4,173,389	-3.6
In-bound Roaming Incoming SMS	34,835,092	36,399,899	-4.3
In-bound Roaming Outgoing SMS	1,871,661	1,889,054	-0.9
Data Volumes (MB)	208,565,678	172,426,769	21.0
<b>FIXED NETWORK SERVICES</b>			
<b>Fixed Voice Subscriptions</b>			
Fixed Line Subscriptions	10,406	10,676	-2.5
Fixed Wireless Subscriptions	1,351	1,287	5.0
Fixed VoIP Subscriptions	52,054	51,144	1.8
<b>Domestic Fixed Voice Traffic</b>			
Fixed line-Fixed line	96,309	71,881	34.0
Fixed Wireless-Fixed Wireless	283,353	283,117	0.1
Fixed to Mobile	20,935,051	26,648,830	-21.4
<b>International Fixed Voice Traffic</b>			
Incoming Fixed Voice Traffic	3,296,747	3,665,685	-10.1
Outgoing Fixed Voice Traffic	1,549,674	2,090,566	-25.9
Outgoing Fixed VOIP	554,801	527,585	5.2
<b>Fixed Data and Broadband Services</b>			
Fixed Data/internet subscriptions	1,112,288	809,197	37.5
Total Available International Bandwidth (Gbps)	14,413.05	11,970.53	20.4
Total Used International Bandwidth (Gbps)	8,115.84	6,469.94	25.5
<b>COURIER SERVICES</b>			

<i>Indicator/Period</i>	<i>Q3 (Jan-Mar 23)</i>	<i>Q2 (Oct-Dec22)</i>	<i>Quarterly Variation (%)</i>
Outgoing Domestic Letters	625,823	402,024	55.7
Outgoing Domestic Courier Items	1,097,222	1,322,038	-17.0
International Outgoing Letters	447,267	446,184	0.2
International Incoming Letters	122,142	114,633	6.6
<b>BROADCASTING SERVICES</b>			
Licensed Commercial Free to Air TV	318	306	3.9
Licensed Commercial FM radio	190	180	5.6
Licensed Community Free to Air TV	9	9	0.0
Licensed Community FM Radio	67	63	6.3
DTT Subscriptions	4,407,645	4,385,491	0.5
DTH Subscriptions	1,740,913	1,746,179	-0.3
Cable Subscriptions	57,004	59,440	-4.1
<b>FREQUENCY SPECTRUM MANAGEMENT</b>			
Microwave links Deployed	81	166	-51.2
Fixed Links Decommissioned	23	74	-68.9
FM Sound Broadcasting Frequencies Assigned	14	7	100
<b>ELECTRONIC TRANSACTIONS AND CYBERSPACE MANAGEMENT</b>			
. CO.KE Domain	104,725	100,420	4.3
Total Cyber Threats Detected	187,757,659	249,991,852	-24.9
Total Cyber Threat Advisories	3,584,966	3,553,999	0.9
<b>POPULATION</b>			
Total Population in Kenya (Millions)	50.6*	49.4	2.4

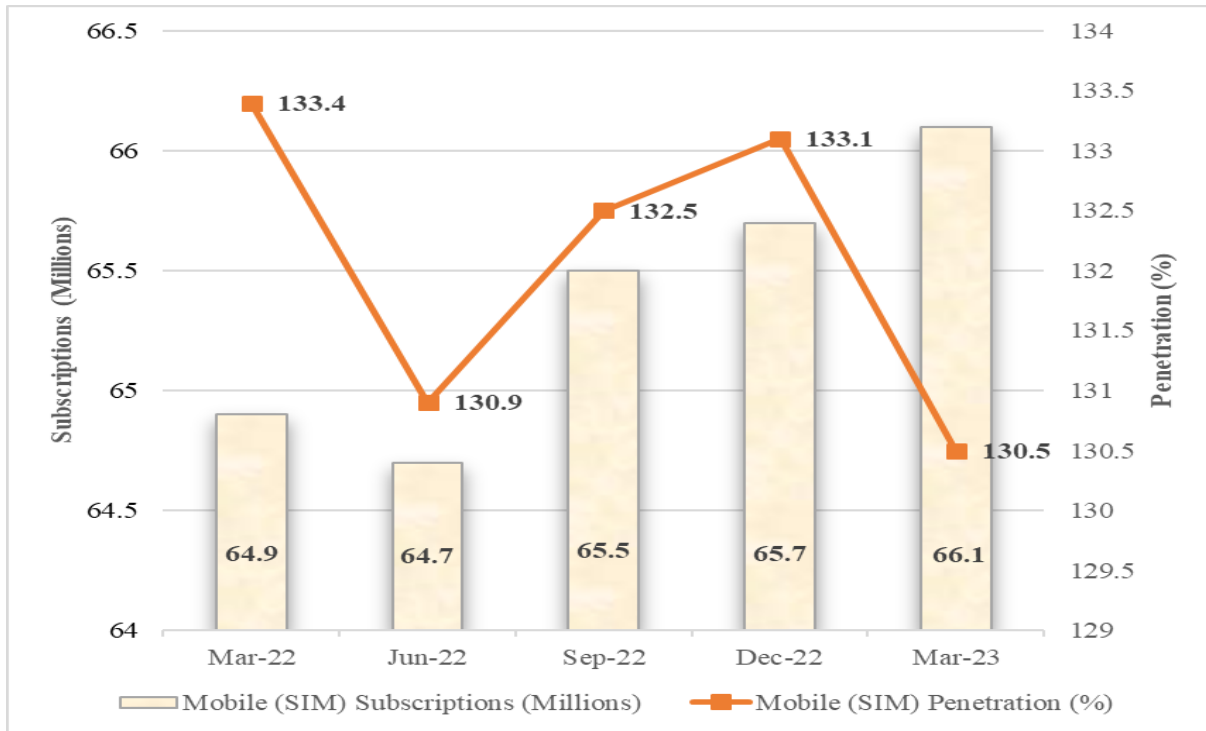
*\*Economic Survey 2023*



# 1. MOBILE NETWORK SERVICES

## 1.1 Mobile (SIM) Subscriptions

As at 31st March 2023, active<sup>1</sup> mobile (SIM) subscriptions increased to 66.1 million from 65.7 million reported last quarter. This translated to a mobile (SIM) penetration rate of 130.5 percent, representing a drop of 2.6 percentage points. The drop of penetration rate is attributed to the review of the country’s population figures from 49.4 million to 50.6 million as per the Economic Survey 2023.

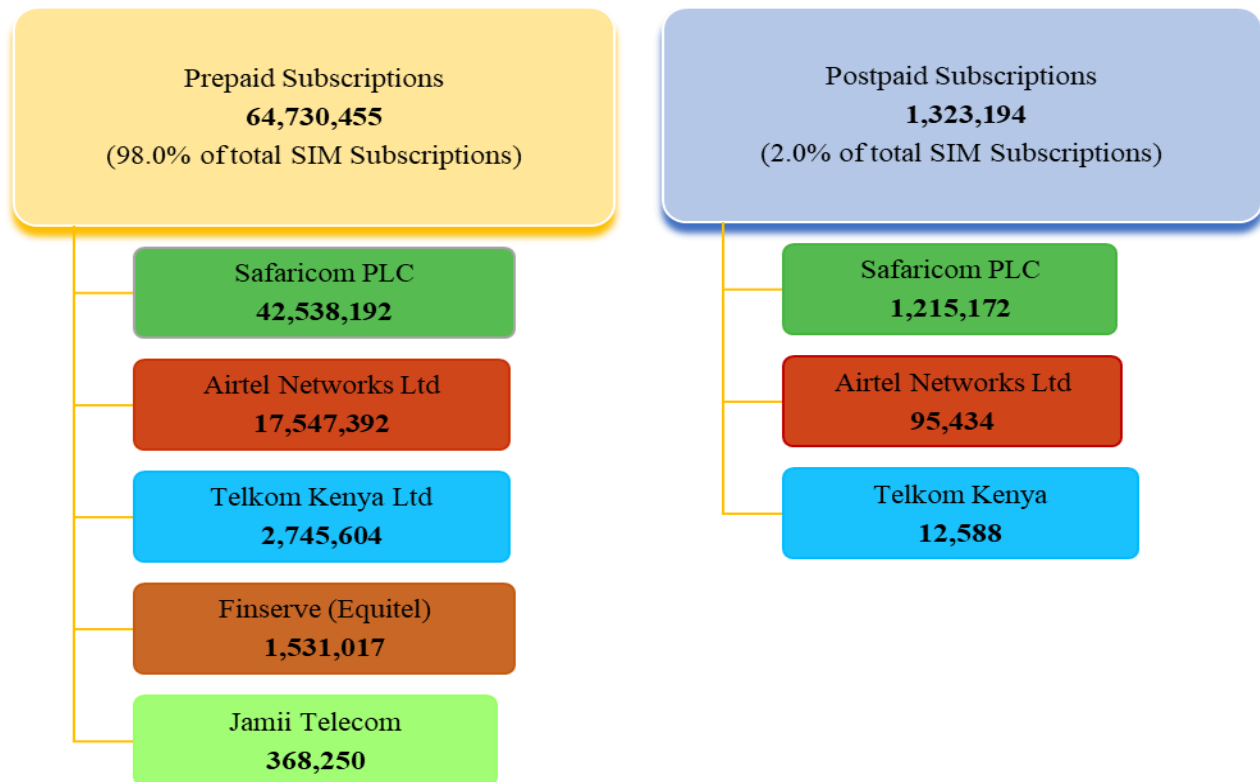


Source: CA, Operators’ Returns

Figure 1: Mobile Subscriptions and Penetration

The number of active mobile (SIM) subscriptions per operator by contract type is as shown in Figure 2.

<sup>1</sup> **Active SIM (Mobile) Subscriptions** refers to those SIM Cards used at least once in the last three months and have generated revenue through making or receiving a call or carrying out a non-voice activity such as sending or receiving an SMS, accessing the Internet, Airtime top-up, transacting using mobile money and mobile banking). Activities that do not result in revenue generation such as balance enquiry, unanswered calls, and password resets, amongst other free services, do not qualify a customer account as active.



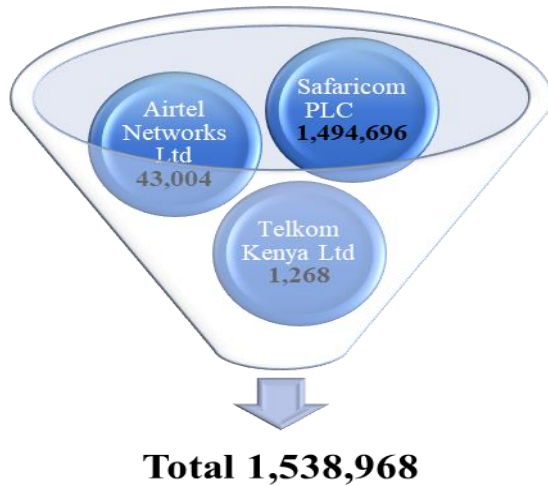
Source: CA, Operators' Returns

Figure 2: Mobile Subscription per Operator

## 1.2 Machine-to-Machine (M2M<sup>2</sup>) Subscriptions

The number of SIM cards used for Machine to Machine (M2M) purposes grew by 1.9 percent to 1.53 million by end of March 2023.

<sup>2</sup> **Machine to Machine mobile-network subscriptions (M2M subscriptions)** refer to the number of mobile cellular machine-to-machine subscriptions that are assigned for use in machines and devices (cars, smart meters, consumer electronics) for the exchange of data between networked devices, and are not part of a consumer subscription. For instance, SIM-cards in personal navigation devices, smart meters, trains and automobiles are included while mobile dongles and tablet subscriptions are excluded. Only active subscriptions are counted



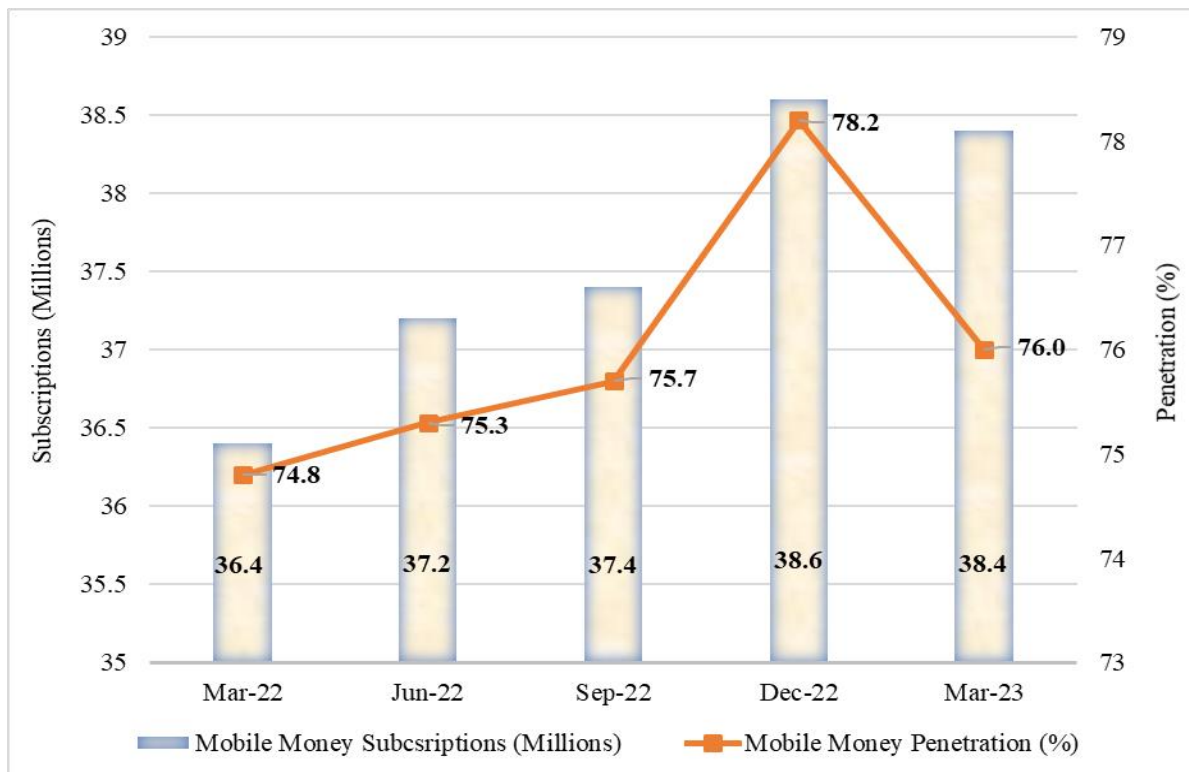
The number of Machine-to-machine SIM cards used stood at 1,538,968 as at 31<sup>st</sup> March 2023.

Source: CA, Operators' Returns. \*Provisional Data for Telkom Kenya Limited

Figure 3: Machine-to-Machine Subscriptions

### 1.3 Mobile Money Services

Mobile money subscriptions stood at 38.4 million translating to a penetration rate of 76.0 percent which was a drop of 2.2 percentage points as shown in Figure 4. The decline in the subscriptions is attributed to reduced activities in mobile money services during the quarter under review.

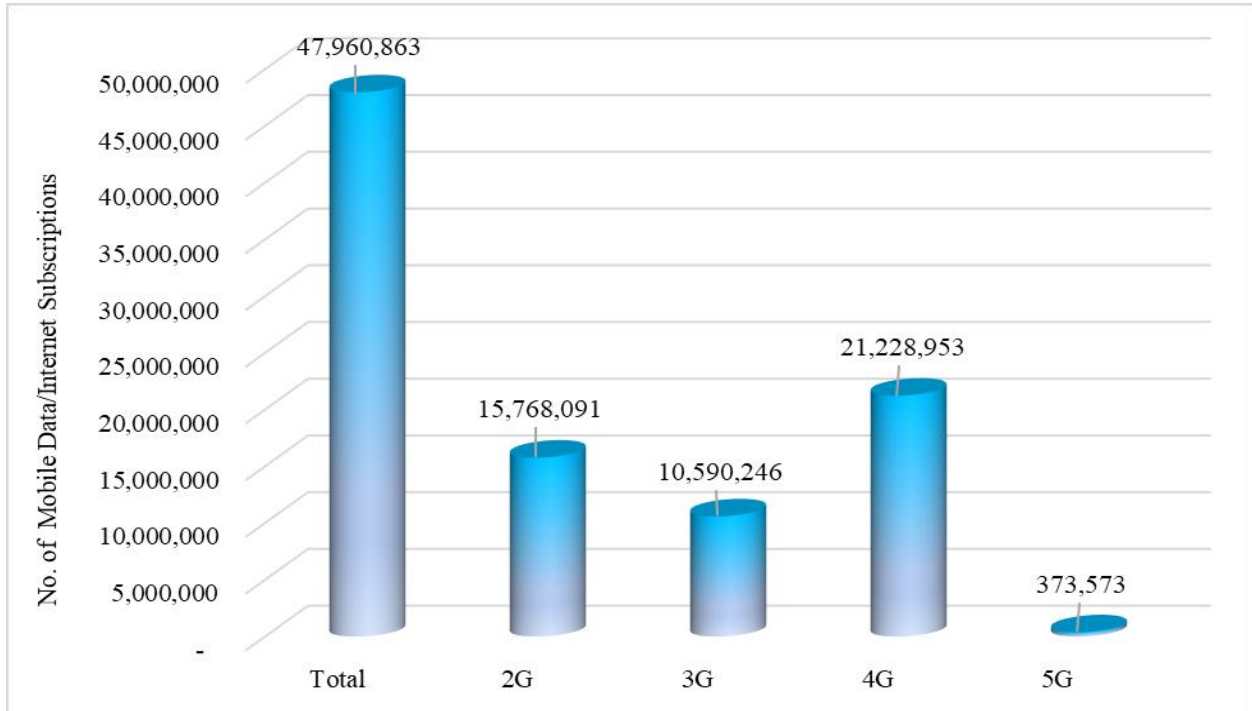


Source: CA, Operators' Returns

Figure 4: Mobile Money Services

### 1.4 Mobile Data and Broadband<sup>3</sup> Services

During the referenced period, the total mobile data/Internet subscriptions stood at 47.96 million out of which 67.1 percent were on mobile broadband. The uptake of mobile broadband has continued to increase as the consumers desire faster Internet speeds.



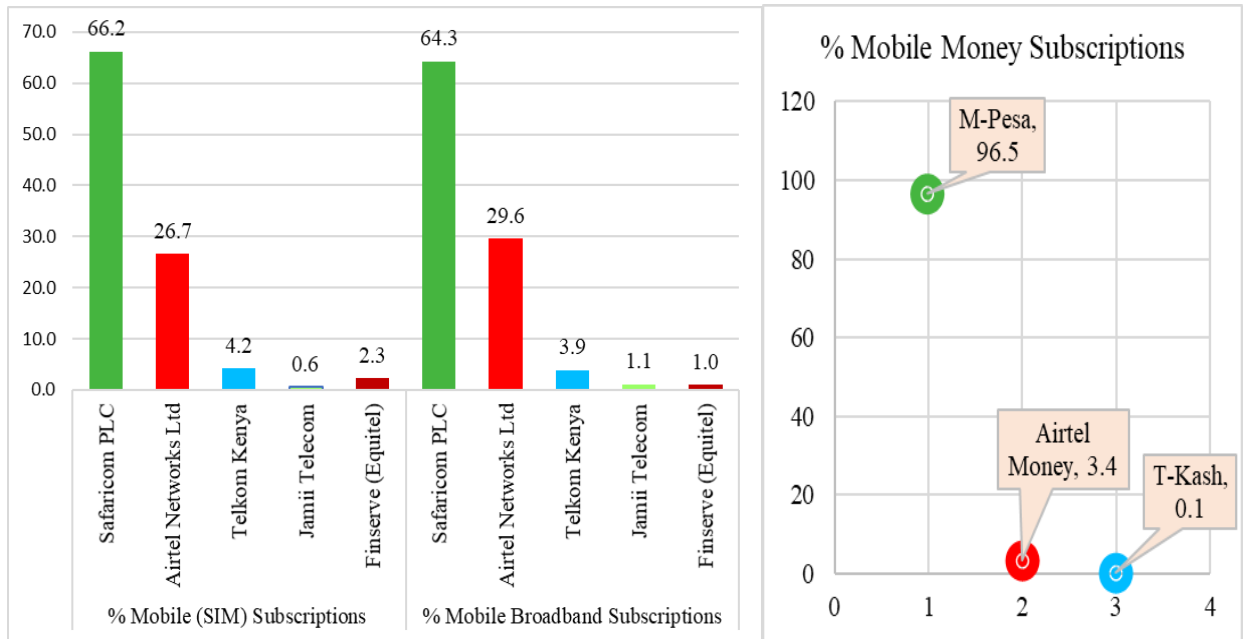
Source: CA, Operators' Returns

Figure 5: Mobile Data Subscriptions

### 1.5 Market Shares in Subscriptions for Mobile Services

The market shares in subscriptions for the respective mobile services is as shown in Figure 6.

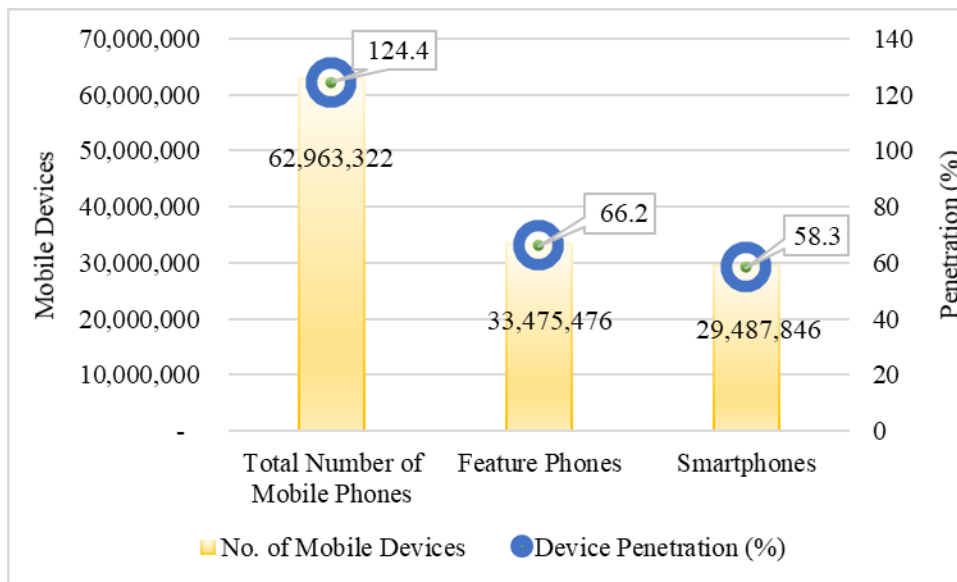
<sup>3</sup> **Mobile broadband** includes 3G, 4G and 5G. Broadband refers to connectivity that delivers interactive, secure, quality and affordable services at a minimum speed of 2Mbps (The National Broadband Strategy 2018-2023)



Source: CA, Operators' Returns

Figure 6: Mobile Market Shares

### 1.6 Mobile Phone Devices



The total mobile phone devices stood at 62.96 million as at the end of the reference period. This translates to device penetration rate of 124.5%. Penetration for feature phones and smartphones stood at 66.2% and 58.3% respectively.

Source: CA, Operators' Returns

Figure 7: Mobile Phone Devices

## 1.7 Domestic Mobile Voice Traffic (Minutes)

The total outgoing domestic mobile voice traffic grew by 3.4 percent to record 21.5 billion from 20.8 billion minutes posted during the preceding quarter. The growth is attributed to the various voice promotions and special offers launched by the market players during the reference period.

Table 1: Domestic Mobile Voice Traffic (Minutes)

<i>Indicator/Period</i>	<i>Jan-Mar 23</i>	<i>Oct-Dec 22</i>	<i>Quarterly Variation (%)</i>
<b>Total Outgoing Traffic</b>	<b>21,547,370,252</b>	<b>20,846,314,693</b>	<b>3.4</b>
<i>On-net (Own Network – Own Network)</i>	18,643,493,661	18,078,317,940	3.1
<i>Off-net (Own Network to Other Mobile Networks)</i>	2,888,560,081	2,752,607,034	4.9
<i>Mobile Network to Fixed Network</i>	15,316,510	15,389,719	-0.5

Source: CA, Operators' Returns

## 1.8 Minutes of Use per Call per Operator

Mobile users spent an average of 1.7 minutes on on-net calls and 1.1 minutes on off-net calls. Airtel customers spent more time on a single on-net call averaging 2.8 minutes whereas customers of Jamii Telecommunications Limited recorded the highest number of off-net minutes per call at 1.4.

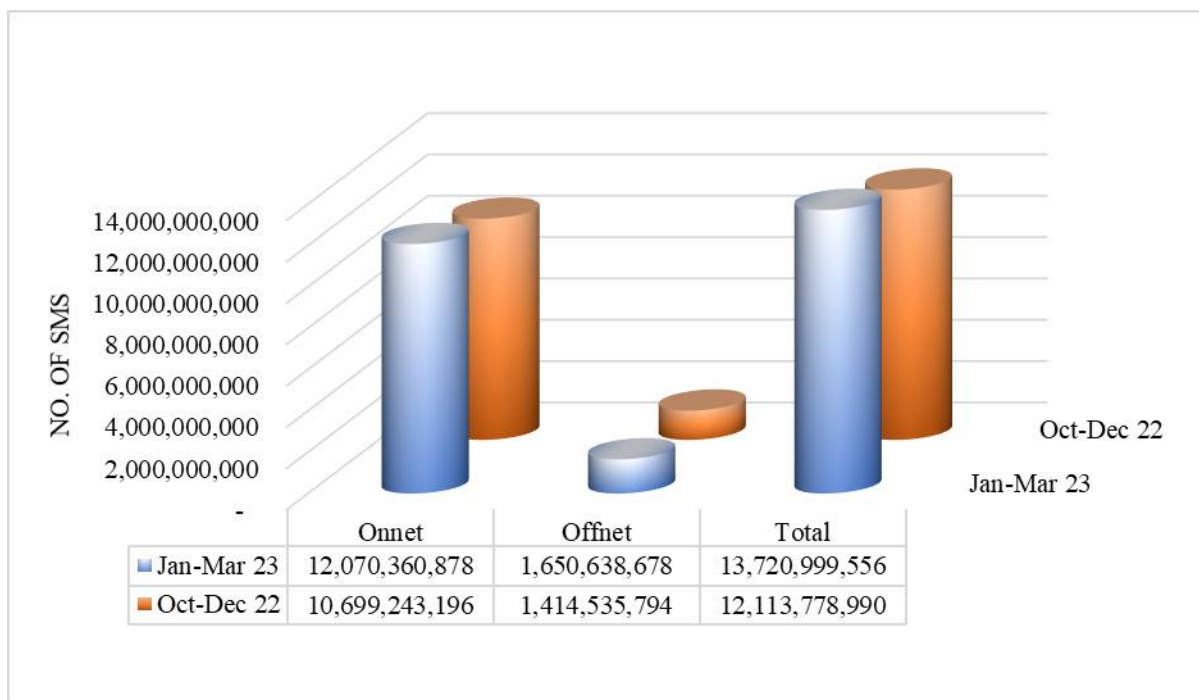
Table 2: Minutes of Use per Call (Minutes)

<i>Period Operator/Indicator</i>	<i>Jan-Mar 23</i>		<i>Oct-Dec 22</i>	
	<i>On-net (Minutes)</i>	<i>Off-net (Minutes)</i>	<i>On-net (Minutes)</i>	<i>Off-net (Minutes)</i>
<b>Total Average</b>	<b>1.7</b>	<b>1.1</b>	<b>1.7</b>	<b>1.1</b>
<i>Safaricom PLC</i>	1.5	1.2	1.5	1.1
<i>Airtel networks Limited</i>	2.8	1.0	2.8	1.0
<i>Telkom Kenya Limited</i>	1.6	1.3	2.0	1.3
<i>Equitel</i>	2.2	1.3	2.5	1.3
<i>Jamii Telecommunications Limited</i>	0.1	1.4	0.1	1.2

Source: CA, Operators' Returns

## 1.9 Mobile SMS Traffic

Domestic SMS traffic grew by 13.3 percent to record 13.70 billion from 12.11 billion messages reported last quarter. The growth is attributed to the the various voice promotions and special offers launched by the market players together with the extended school holiday to Quarter 3. The ratio of on net to off net SMS was 88:12.



Source: CA, Operators' Returns

Figure 8: Domestic SMS Traffic

### 1.10 Voice and SMS Traffic per Operator

The trends in domestic mobile voice and SMS traffic per operator are shown in Table 3.

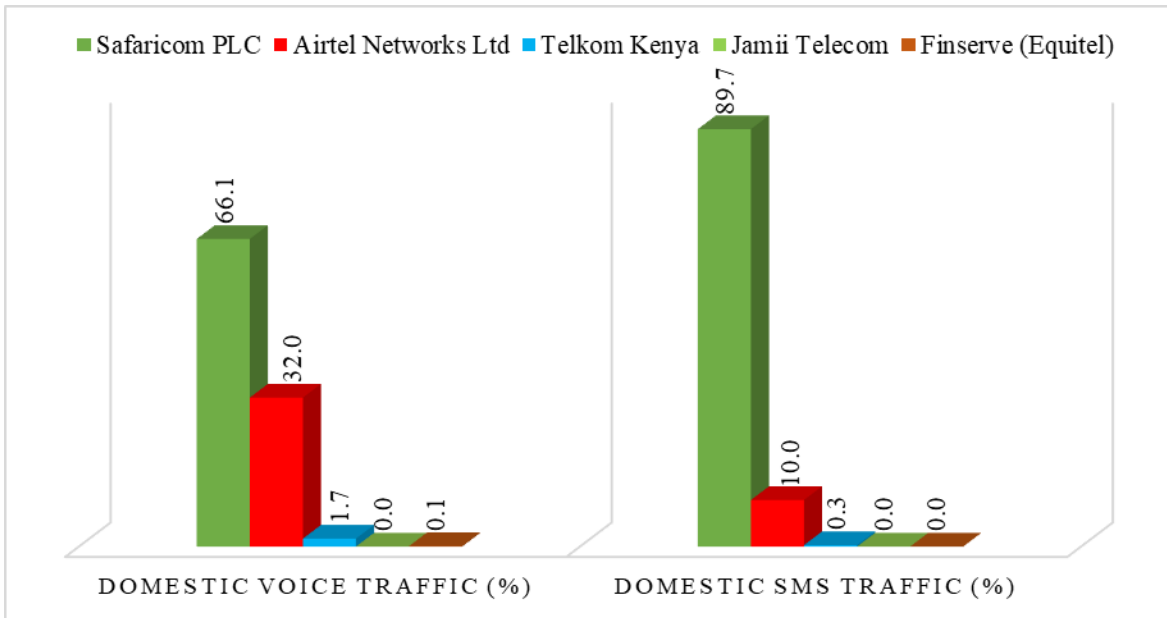
Table 3: Domestic Mobile Traffic per Operator

Indicator/Operator		Safaricom PLC	Airtel Networks Kenya	Telkom Kenya Limited	Equitel	Jamii Telecom	Total
Voice	On-net	13,302,030,021	5,117,812,942	221,195,093	2,408,543	47,062	18,643,493,661
	Off-net	940,952,157	1,770,193,661	146,761,451	27,706,509	2,946,303	2,888,560,081
	<b>Total</b>	<b>14,242,982,178</b>	<b>6,888,006,603</b>	<b>367,956,544</b>	<b>30,115,052</b>	<b>2,993,365</b>	<b>21,532,053,742</b>
SMS	On-net	11,501,545,180	564,340,215	2,504,668	1,940,099	30,716	12,070,360,878
	Off-net	812,430,621	800,932,191	32,540,339	4,147,818	587,709	1,650,638,678
	<b>Total</b>	<b>12,313,975,801</b>	<b>1,365,272,406</b>	<b>35,045,007</b>	<b>6,087,917</b>	<b>618,425</b>	<b>13,720,999,556</b>

Source: CA, Operators' Returns

### 1.11 Market shares in Domestic Mobile Voice and SMS Traffic

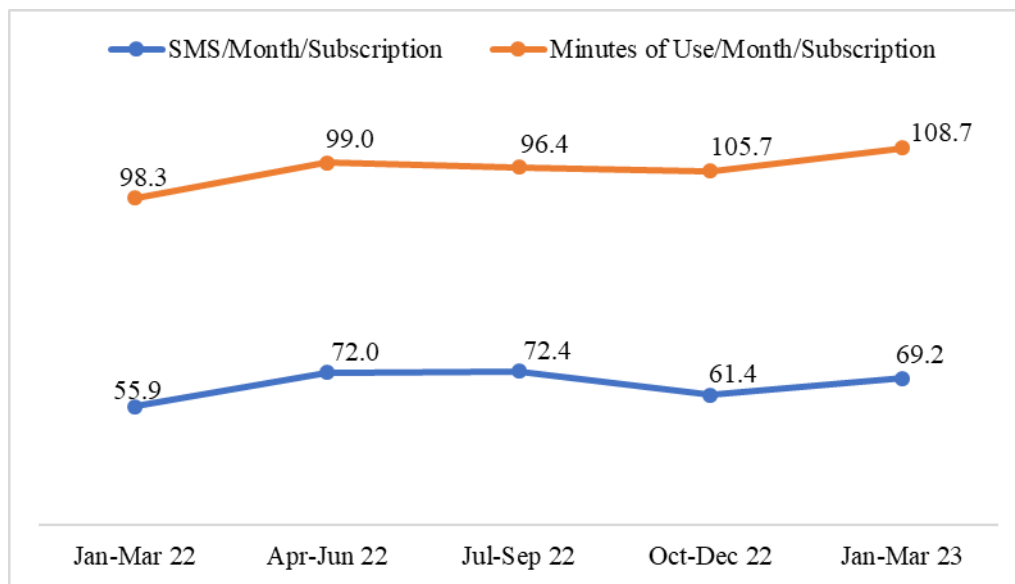
The market shares in domestic mobile voice and SMS traffic are as shown in Figure 9.



Source: CA, Operators' Returns

Figure 9: Market Shares in Domestic Mobile Voice and SMS

### 1.12 Minutes/Month/Subscription vs SMS/Month/Subscription



The Minutes of Use per Month per Subscription grew to post 108.7 minutes from 105.7 minutes recorded in the last quarter. Similarly, short messages sent per month per subscription increased from 61.4 to 69.2 messages during the referenced period.

Source: CA, Operators' Returns

Figure 10: MoU/Month/Subscription vs SMS/Month/Subscription



### 1.13 International Mobile Traffic

During the period, there was a general decline in international mobile traffic mainly attributed to the increased preference and uptake of Over The Top (OTTs) channels due to their convenience and fair cost especially among people who have Internet connections. The traffic levels also normalized following the conclusion of the busy festive season which normally falls within the previous quarter.

Table 4: International Mobile Traffic

<i>Indicator/Period</i>	<i>Region</i>	<i>Jan-Mar 23</i>	<i>Oct-Dec 22</i>	<i>Quarterly Variation (%)</i>
International Incoming Mobile Voice Minutes	<i>EAC</i>	49,318,142	69,632,376	-29.2
	<i>Others</i>	25,690,553	28,887,411	-11.1
	<b><i>Total</i></b>	<b>75,008,695</b>	<b>98,519,787</b>	<b>-23.9</b>
International Outgoing Mobile Voice Minutes	<i>EAC</i>	92,265,379	100,714,458	-8.4
	<i>Others</i>	69755013	76,810,770	-9.2
	<b><i>Total</i></b>	<b>162,020,392</b>	<b>177,525,228</b>	<b>-8.7</b>
International Incoming Mobile SMS		8,627,473	8,681,273	-0.6
International Outgoing Mobile SMS		4,625,962	4,709,102	-1.8

Source: CA, Operators' Returns

### 1.14 Roaming Traffic

The trends in outbound and inbound roaming traffic are as shown in Tables 5 and 6.

Table 5: Outbound Roaming Traffic

<i>Country / Indicator</i>	<i>Incoming Voice (Minutes)</i>	<i>Incoming SMS</i>	<i>Outgoing Voice (Minutes)</i>	<i>Outgoing SMS</i>	<i>Data Volumes (MB)</i>
Uganda	123,330,770	6,138,918	5,967,553	1,870,756	39,240,741
Tanzania	220,340	10,418,210	1,153,489	696,944	10,112,052
Rwanda	5,068,849	-	682,184	184,107	7,409,887
Burundi	3,671	807,753	3,483	8,815	14,380
S. Sudan	6,330,577	781	1,362,222	341,721	84,637
Democratic Republic of Congo	6,035	117,379	213,749	40,042	30,528,446
<b>EAC Total</b>	<b>134,960,242</b>	<b>17,483,041</b>	<b>9,382,680</b>	<b>3,142,385</b>	<b>87,390,143</b>
Others	1,129,373	32,109,797	5,770,032	3,488,534	41,486,669
<b>Total</b>	<b>136,089,615</b>	<b>49,592,838</b>	<b>15,152,712</b>	<b>6,630,919</b>	<b>128,876,812</b>

Source: CA, Operators' Returns

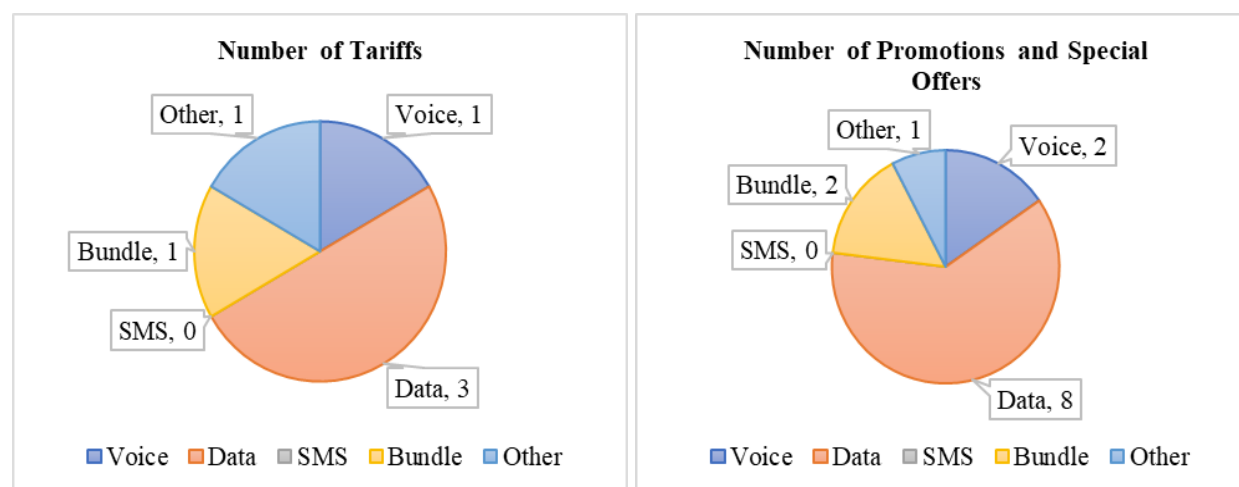
Table 6: In-bound Roaming Traffic

Country / Indicator	Incoming Voice (Minutes)	Incoming SMS	Outgoing Voice (Minutes)	Outgoing SMS	Data Volumes (MB)
Uganda	27,758,051	4,299,145	1,037,641	183,627	6,897,300
Tanzania	74,959	12,351,869	67,651	101,912	983,507
Rwanda	10,703,139	2,267,015	207,016	39,256	837,790
Burundi	788	22,599	2008	1368	44
S. Sudan	3,161,762	842,817	183,457	15,966	724,295
Democratic Republic of Congo	9,858	205,442	64,305	11,900	115,896
<b>EAC Total</b>	<b>41,708,557</b>	<b>19,988,887</b>	<b>1,562,078</b>	<b>354,029</b>	<b>9,558,832</b>
Others	1,194,594	14,846,205	2,461,977	1,517,632	199,006,846
<b>Total</b>	<b>42,903,151</b>	<b>34,835,092</b>	<b>4,024,055</b>	<b>1,871,661</b>	<b>208,565,678</b>

Source: CA, Operators' Returns

### 1.15 Tariffs, Promotions and Special Offers

The number of approved applications for tariffs and, promotions and special offers filed by MNOs during the referenced period is as shown in Figure 11.



Source: CA, filed tariffs, promotions and special offers

Figure 11: Distribution of Tariffs, Promotions and Special Offers

### 1.16 Average Pay-As-You-Go (PAYG) Tariffs

Table 7: Average Pay-As-You-Go (PAYG) Tariffs

Market	Tariff (Ksh.)
Voice (KES/Min)	3.92
SMS (KES/SMS)	1.19
Data (KES/MB)	4.59

Source: CA

Table 8: Average Pay TV Tariffs

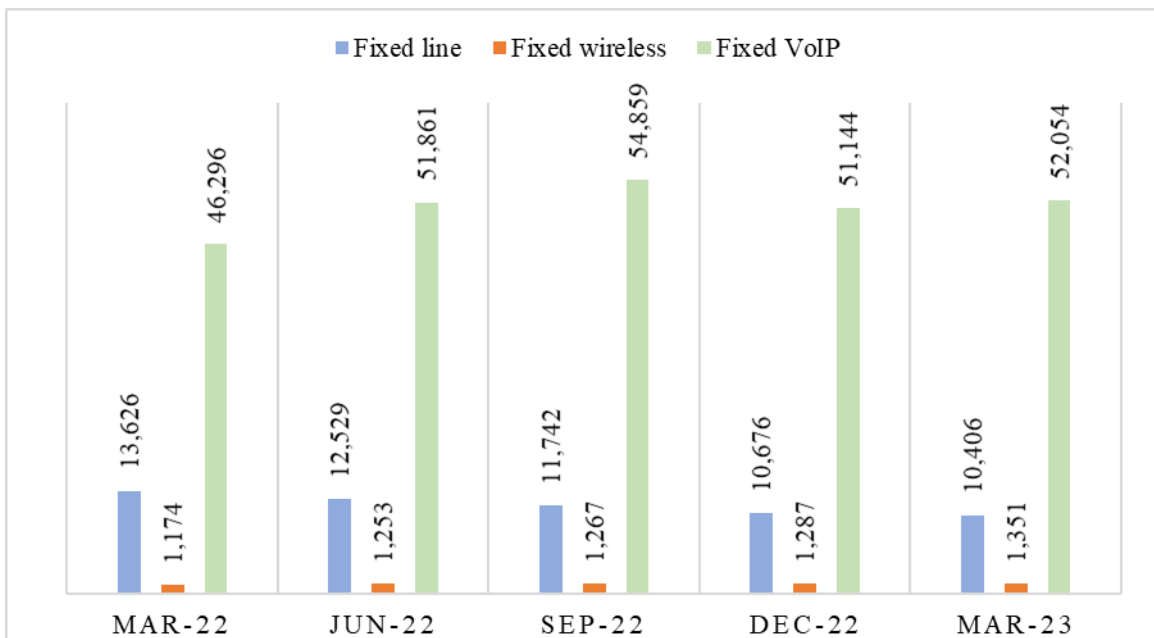
Market	Tariff (Ksh.)
Average Lowest Monthly Bouquet (KES)	249
Average Highest Monthly Bouquet (KES)	1,249

Source: CA

## 2. FIXED NETWORK SERVICES

### 2.1 Fixed Telephone Subscriptions

Figure 12 shows fixed telephone subscriptions as at 31<sup>st</sup> March 2023.



Source: CA, Operators' Returns

Figure 12: Fixed Voice Subscriptions

## 2.2 Domestic Fixed Voice Traffic

The total domestic fixed network traffic dropped to 21.3 million from 27.0 million minutes as shown in Table 9.

Table 9: Domestic Fixed Voice Traffic (Minutes)

<i>Domestic Fixed Voice Traffic (Minutes)</i>	<i>Jan – Mar 23</i>	<i>Oct – Dec 22</i>	<i>Quarterly Variation (%)</i>
Fixed-Fixed	96,309	71,881	34.0
Fixed Wireless-Fixed Wireless	283,353	283,117	0.1
Fixed to Mobile	20,935,051	26,648,830	-21.4
<b>Total Domestic Fixed Network Traffic</b>	<b>21,314,713</b>	<b>27,003,828</b>	<b>-21.1</b>

Source: CA, Operators' Returns

## 2.3 International Fixed Voice Traffic

During the period under review, international incoming and outgoing fixed voice recorded an upward trend whereas fixed VoIP traffic recorded a downward trend as shown in Table 10.

Table 10: International Fixed Voice Traffic

<i>Indicator/Period</i>	<i>Jan – Mar 23</i>	<i>Oct - Dec 22</i>	<i>Quarterly Variation (%)</i>
<i>International Incoming Fixed Network Voice traffic</i>	3,296,747	3,013,147	9.4
<i>International Outgoing Fixed Network Voice traffic</i>	1,549,674	1,241,835	24.8
<i>International Outgoing Fixed VoIP traffic</i>	554,801	580,687	-4.5

Source: CA, Operators' Returns

## 2.4 Fixed Data and Broadband Subscriptions

Fiber to the Home (FTTH) recorded the highest number of fixed broadband subscriptions whereas most fixed broadband subscribers were subscribed to speeds between 2Mbps and 10Mbps.

Table 11: Fixed Data and Broadband Subscriptions

<i>Internet Technology/Speeds</i>	<i>&lt;256Kbps</i>	<i>=&gt;256Kbps &lt; 2Mbps</i>	<i>=&gt;2 Mbps &lt;10 Mbps</i>	<i>=&gt;10Mbps &lt;30 Mbps</i>	<i>=&gt;30 Mbps &lt;100Mbps</i>	<i>=&gt;100 Mbps &lt;1Gbps</i>	<i>=&gt;1 Gbps</i>	<i>Totals</i>
<i>Cable Modem</i>	-	18	51,010	131,049	12,711	329	-	<b>195,117</b>
<i>Copper (DSL)</i>	11	23	406	339	18	-	-	<b>797</b>
<i>FTTH</i>	-	1,806	242,358	196,524	174,064	3,011	-	<b>617,763</b>
<i>FTTO</i>	142	4,641	26,652	30,719	4,474	1,357	102	<b>67,887</b>
<i>Fixed Wireless</i>	7,862	8,274	200,761	9,494	2,743	392	-	<b>229,526</b>
<i>Satellite</i>	31	226	22	132	-	-	-	<b>411</b>
<i>Other Fixed</i>	-	-	675	85	25	2	-	<b>787</b>

<b>Totals</b>	<b>8,046</b>	<b>14,988</b>	<b>521,684</b>	<b>368,342</b>	<b>194,035</b>	<b>5,091</b>	<b>102</b>	<b>1,112,288</b>
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Source: CA, Operators' Returns.

## 2.5 Fixed Data Subscriptions by Operator

Safaricom PLC recorded the highest market shares in fixed data subscriptions at 35.9 percent followed by Jamii Telecommunications Ltd at 23.2 percent by the end of the third quarter.

Table 12: Fixed Data Subscriptions by Operator

Service Provider/Indicator	Number of data subscriptions	Percentage Market share (%)
Safaricom PLC	399,333	35.9
Jamii Telecommunications Ltd	257,951	23.2
Wananchi Group (Kenya) Limited*	252,066	22.7
Poa Internet Kenya Ltd	136,022	12.2
Liquid Telecommunications Kenya	17,594	1.6
Mawingu Networks Ltd	16,255	1.5
Dimension Data Solutions East Africa Limited	14,891	1.3
Vilcom Network Limited	4,760	0.4
Telkom Kenya Ltd	4,545	0.4
Other Fixed Service providers	8,871	0.8

Source: CA Operators' Returns, \* includes Wananchi Group, Wananchi Telecom, ISAT and Simbanet.

## 2.6 International Bandwidth

During the reference period, the total international Internet bandwidth available in the country grew by 20.4 percent to 14,413.053Gbps. The increase is due to capacity upgrade on the cable by TEAMS during the period. Similarly, the total utilized undersea bandwidth capacity increased by 25.5 percent to record 5,161.918Gbps and 2,953.820Gbps used in the country and sold outside the country respectively.

Table 13: International Internet Bandwidth (Gbps)

Indicator/ Period	Jan – Mar 23		Oct – Dec 22		Quarterly Variation (%)
<b>Total Available (Lit/Equip) Bandwidth Capacity (Gbps)</b>	<b>14,413.053</b>		<b>11,970.53</b>		<b>20.4</b>
Undersea Bandwidth Capacity	SEACOM		SEACOM	3,920.00	0.0
	TEAMS		TEAMS	1,618.00	151.1
	Telkom Kenya	EASSY	EASSY	4,990.00	0.0
		Lion 2	Lion 2	571.50	0.0
	DARE 1	DARE 1	866.04	0.0	
Satellite Bandwidth Capacity	2.513		2.513		0.0

Total Utilized Bandwidth Capacity (Gbps)					
Undersea Bandwidth Capacity	Sold In Kenya	Sold in other Countries	Sold In Kenya	Sold in other Countries	
	5,161.918	2,953.820	4,361.54	2,105.82	25.5
Satellite Internet Capacity	0.105		0.105		0.0

Source: CA, Operators' Returns,

### 3. POSTAL AND COURIER SERVICES

The domestic outgoing letters increased significantly by 55.7 percent which is attributed to increased activities during the reference period compared to the last quarter. Postal and courier items are as shown in Table 14.

Table 14: Postal and Courier Items

Indicator/Period	Jan-Mar 23	Oct-Dec 22*	Quarterly Variation (%)
Outgoing Domestic Letters	625,823	402,024	55.7
Outgoing Domestic Courier Items	1,097,222	1,322,038	-17.0
International Outgoing Letters	447,267	446,184	0.2
International Incoming Letters	122,142	114,633	6.6

Source: CA, Operators' Returns, \*Data revised to include Postal Corporation of Kenya (PCK)

### 4. BROADCASTING SERVICES

The Authority in its mandate to promote and facilitate the development of diverse range of broadcasting services in Kenya and fostering a competitive broadcasting market issues licenses to service providers on a continuous basis.

#### 4.1 Licensees under Broadcast License Framework

Table 15: Licensees under Broadcast License Framework

<i>Indicator/Period</i>	<i>Mar-23</i>	<i>Dec-22</i>	<i>Quarterly Variation (%)</i>
Broadcast Signal Distributor	2	2	0.0
Self-Provisioning Broadcast Signal Distributor	3	3	0.0
Commercial Free to Air TV	318	306	3.9
Community Free to Air TV	9	9	0.0
Commercial FM radio	190	180	5.6
Community FM Radio	67	63	6.3
Subscription Broadcasting Service	18	18	0.0
Subscription Management Service	4	4	0.0
Landing Rights Authorization	5	5	0.0
<b>Total</b>	<b>616</b>	<b>590</b>	<b>4.4</b>

Source: CA

## 4.2 Subscription to Broadcasting Services

The total subscriptions to broadcasting services grew by 0.2 percent to a total of 6.205 million from 6.191 million reported during the preceding quarter. Table 16 shows the subscriptions breakdown per category per operator.

Table 16: Broadcasting Subscriptions

<i>Indicator/Period</i>	<i>Mar-23</i>	<i>Dec-22</i>	<i>Quarterly Variation (%)</i>
<b>DTT</b>			
Go TV	2,671,697	2,654,583	0.6
Star Times	1,735,948	1,730,908	0.3
<b>Sub-Total</b>	<b>4,407,645</b>	<b>4,385,491</b>	<b>0.5</b>
<b>DTH</b>			
Azam	70,789	68,599	3.2
MultiChoice (DSTV)	1,072,138	1,080,494	-0.8
Star Times	297,515	291,984	1.9
Wananchi (Zuku)	300,471	305,102	-1.5
<b>Sub-Total</b>	<b>1,740,913</b>	<b>1,746,179</b>	<b>-0.3</b>
<b>Cable</b>			
Cable One	2,315	2,484	-6.8
CTN (MSA)	2,301	2,002	14.9
Wananchi (ZUKU)	48,788	51,259	-4.8
Hirani	3,600	3,600	0.0
Matrucchaya	0	0	0.0
Wadani Cable	0	95	-100.0
<b>Sub-Total</b>	<b>57,004</b>	<b>59,440</b>	<b>-4.1</b>
<b>Total</b>	<b>6,205,562</b>	<b>6,191,110</b>	<b>0.2</b>

Source: CA

## 5. FREQUENCY SPECTRUM MANAGEMENT

During the period under review, the Authority assigned frequencies to various operators for deployment of 81 microwave links and processed the decommissioning of 23 fixed links. Further, the Authority assigned 14 FM sound broadcasting frequencies to broadcasters.

Table 17: Frequency Spectrum Management

<i>Indicator/Period</i>	<i>Jan-Mar 23</i>	<i>Oct-Dec 22</i>	<i>Quarterly Variation (%)</i>
Microwave links Deployed	81	166	-51.2
Fixed Links Decommissioned	23	74	-68.9
FM Sound Broadcasting Frequencies Assigned	14	7	100.0

Source: CA

## 6. ELECTRONIC TRANSACTIONS AND CYBER SPACE MANAGEMENT

### 6.1 Registered Domain Names

The total number of users for *.KE* domains was recorded at 104,725 as at 31<sup>st</sup> March, 2023 with *.CO.KE* sub-domain recording the highest market share of users at 89.9 percent. Table 18 illustrates the various sub-domains and their respective users.

Table 18: *.KE* Domains

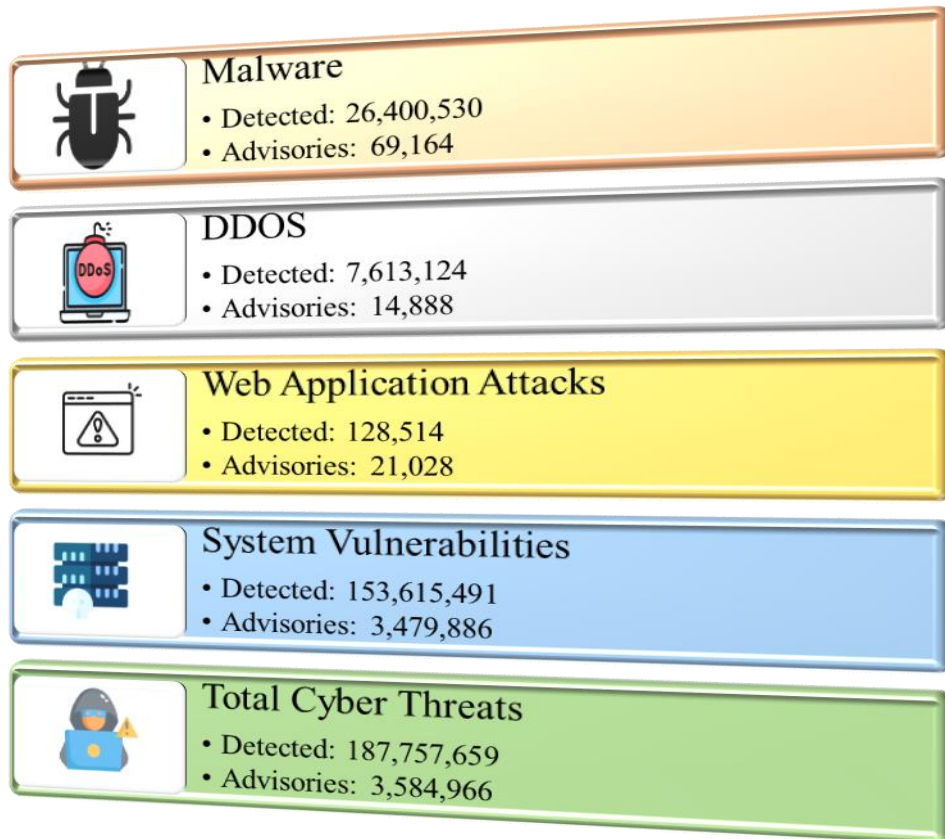
<i>SUB-DOMAIN</i>	<i>USER</i>	<i>Mar-23</i>	
		<i>Number of Users</i>	<i>% Users</i>
CO.KE	Companies	94,200	89.9
.KE	Second level	4,552	4.3
OR.KE	Non-Profit-Making Organizations	1,875	1.8
ME.KE	Personal Websites and E-mail	1,168	1.1
AC.KE	Institutions of Higher Education	1,088	1.0
SC.KE	Lower and Middle Level Institutions	958	0.9
GO.KE	Government Institutions	681	0.7
INFO.KE	Information	124	0.1
NE.KE	Personal Websites and E-mail	48	0.0
MOBI.KE	Mobile Content	31	0.0
<b>Total</b>		<b>104,725</b>	<b>100.0</b>

Source: Kenic.

### 6.2 National Cyber Space Landscape

The trends in cyber threats detected and cyber threat advisories are as shown in Figure 13.





Source: National KE-CIRT/CC

Figure 13: Cybersecurity Landscape

## 7. CONCLUSION

During the period under review, the ICT sector in the country has continued to connect people, facilitate ecommerce, remote working and learning as well as financial services. In order to meet the growing demand for mobile voice and data services, communications service providers have embarked on expanding and upgrading their network infrastructure.

Noting that there has been a tremendous shift from voice to data, new projects have been initiated including rural tower expansion, 4G, 5G and fibre infrastructure rollout. As seen during the referenced period, TEAMS upgraded their cable of the available bandwidth to meet the consumers needs as the demand for data/Internet services steadily increases.