FOURTH QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2021/2022 (1ST APRIL – 30TH JUNE 2022)

Direct any queries on the report to:
Director/Competition, Tariffs and Market Analysis
Tel: +254-703 042450, +254 -02042450
Email: info@ca.go.ke
Website: www.ca.go.ke

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

B2B	Business to Business
B2C	Business to Customer
C2B	Customer to Business
C2G	Citizen to Government
DoS	Denial-of-Service
DTT	Digital Terrestrial Television
DTH	Direct to Home
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 data in this report is subject to review in case of any updates from the licensees.

The Authority has developed and published a manual on definitions and methodologies for collecting and reporting administrative data on Telecommunication indicators in consultation with the International Telecommunications Union (ITU). The Manual is available on https://ca.go.ke/wp-content/uploads/2020/03/ICT-Indicators-Manual-2019-.pdf

SUMMARY OF ICT INDICATORS

This Fourth Quarter Sector Statistics Report for the Financial Year 2021/22 provides the performance and trends in the ICT sector for the period between 1st April and 30th June 2022 in:

1. Telephony services
2. Data/Internet services
3. Postal and Courier services
4. Broadcasting services
5. Frequency spectrum management
6. Electronic transactions and Cyberspace management

Indicator/Period	Q4 (Apr-Jun 2022)	Q3 (Jan - Mar 2022)	Quarterly Variation (%)
TELEPHONY SERVICES			
Subscription To Mobile Services			
Total Mobile (SIM) Subscriptions	64,673,817	64,961,031	-0.44
Machine to Machine (M2M) Subscriptions	1,341,111	1,238,161	8.31
Mobile Money Transfer Services			
Number of Registered Mobile Money Agents	301,890	293,589	2.83
Mobile Money Subscriptions	37,218,141	36,446,216	2.12
Value of C2B Transfers in KES	1,614,081,644,184	1,386,297,979,352	16.43
Value of B2C Transfers in KES	1,021,052,743,696	920,527,602,620	10.92
Value of B2B Transfers in KES	2,490,003,624,464	2,219,776,335,265	12.17
Value of G2C Transfers in KES	310,611,932	822,857,114	-62.25

Indicator/Period	Q4 (Apr-Jun 2022)	Q3 (Jan - Mar 2022)	Quarterly Variation (%)
Value of C2G Transfers in KES	12,336,661,122	13,472,032,235	-8.43
Number of P2P Transfers	1,107,170,048	1,041,544,760	6.30
Value of P2P Transfers in KES	1,151,904,135,792	1,110,239,609,627	3.75
Total value of Deposits in KES	1,434,275,952,629	1,257,851,142,039	14.03
Domestic Mobile Traffic			
Mobile Voice Traffic (Minutes)			
On-Net Voice Traffic	16,787,459,739	16,745,457,629	0.25
Off-Net Voice Traffic	2,413,468,196	2,434,572,630	-0.87
Mobile Network to Fixed Network	14,112,698	15,826,294	-10.83
Mobile SMS Traffic			
SMS On-Net	12,477,142,312	9,718,719,288	28.38
SMS Off-Net	1,493,439,357	1,209,464,333	23.48
International Mobile Traffic			
Mobile Voice Traffic (Minutes)			
International Incoming Mobile Voice Traffic	106,116,104	106,147,976	-0.03
International Outgoing Mobile Voice Traffic	169,821,009	164,359,943	3.32
Mobile SMS Traffic			
International Incoming SMS	9,143,550	7,694,724	18.83
International Outgoing SMS	5,111,392	4,950,835	3.24
Roaming Traffic			
Out-bound Roaming Traffic			
Out-bound Roaming Incoming Voice Traffic (Minutes)	125,395,944	125,772,981	-0.30
Out-bound Roaming Outgoing Voice Traffic (Minutes)	12,450,581	14,250,715	-12.63
Out-bound Roaming Incoming SMS	41,871,244	34,480,916	21.43

Indicator/Period	Q4 (Apr-Jun 2022)	Q3 (Jan - Mar 2022)	Quarterly Variation (%)
Out-bound Roaming Outgoing SMS	13,608,841	19,356,263	-29.69
Data Volumes (MB)	85,857,627	62,046,677	38.38
In-bound Roaming Traffic			
In-bound Roaming Incoming Voice Traffic (Minutes)	33,970,665	35,641,719	-4.69
In-bound Roaming Outgoing Voice Traffic (Minutes)	3,558,756	3,520,914	1.07
In-bound Roaming Incoming SMS	27,708,583	29,956,990	-7.51
In-bound Roaming Outgoing SMS	1,523,089	1,367,989	11.34
Data Volumes (MB)	121,378,027	104,049,977	16.65
Fixed Voice Subscriptions			
Fixed Line Subscriptions	12,529	13,626	-8.05
Fixed Wireless Subscriptions	1,253	1,226	2.20
Fixed VoIP Subscriptions	51,861	49,387	5.01
Domestic Fixed Voice Traffic			
Fixed line-Fixed line	94,129	104,991	-10.35
Fixed Wireless-Fixed Wireless	295,421	292,377	1.04
Fixed to Mobile	22,430,428	21,127,860	6.17
International Fixed Voice Traffic			
Incoming Fixed Voice Traffic	2,707,155	3,289,556	-17.70
Outgoing Fixed Voice Traffic	1,387,617	1,511,593	-8.20
Outgoing Fixed VOIP	596,912	610,776	-2.27
DATA/INTERNET AND BROADBAND SERVICES			
Total Data/internet subscriptions	47,644,676	46,590,085	2.26
Total Broadband subscriptions	30,105,197	30,251,455	-0.48

Indicator/Period	Q4 (Apr-Jun 2022)	Q3 (Jan - Mar 2022)	Quarterly Variation (%)
Total Available International Bandwidth (Gbps)	11,605.99	10,891.65	6.56
Total Used International Bandwidth (Gbps)	6,000.58	5,262	14.04
ELECTRONIC TRANSACTIONS AND CYBER SPACE MANAGEMENT			
. CO.KE Domain	97,596	97,439	0.16
Total Cyber Threats Detected	92,838,258	79,175,429	17.26
Total Cyber Threat Advisories	1,972,575	2,908,755	-32.18
BROADCASTING SERVICES			
Licensed Commercial Free to Air TV	286	280	2.14
Licensed Commercial FM radio	160	154	3.90
Licensed Community Free to Air TV	9	9	0.00
Licensed Community FM Radio	53	47	12.77
DTT Subscriptions	4,283,070	4,227,658	1.31
DTH Subscriptions	1,627,498	1,688,607	-3.62
Cable Subscriptions	78,063	90,745	-13.98
COURIER SERVICES			
Outgoing Domestic Letters	290,910	280,261	3.80
Outgoing Domestic Courier Items	1,122,084	1,068,674	5.00
International Outgoing Letters	438,624	444,542	-1.33
International Incoming Letters	120,378	101,432	18.68
FREQUENCY SPECTRUM MANAGEMENT			
Microwave links Deployed	198	210	-5.71
Fixed Links Decommissioned	357	4	8825.00

Indicator/Period	Q4 (Apr-Jun 2022)	Q3 (Jan - Mar 2022)	Quarterly Variation (%)
FM Sound Broadcasting Frequencies Assigned	13	30	-56.67
POPULATION			
Total Population in Kenya (Millions)*	49.4	49.4	0.00

***Economic Survey 2022**

1. TELEPHONY SERVICES

1.1 Mobile Services

1.1.1 *Mobile (SIM) Subscriptions*

During the Financial Year 2021/22, the mobile telephone service sub-sector was marked by a significant regulatory intervention that involved updating the registration details of all SIM cards in the country. This exercise resulted to deactivation of SIM cards registered under the wrong identification details. Subsequently, active mobile subscriptions declined to 64.7 million in the fourth quarter from 64.9 million recorded during the previous quarter, translating to a mobile (SIM) penetration level of 130.9 per cent.

Figure 1 illustrates the trends in Mobile (SIM) subscriptions and penetration.

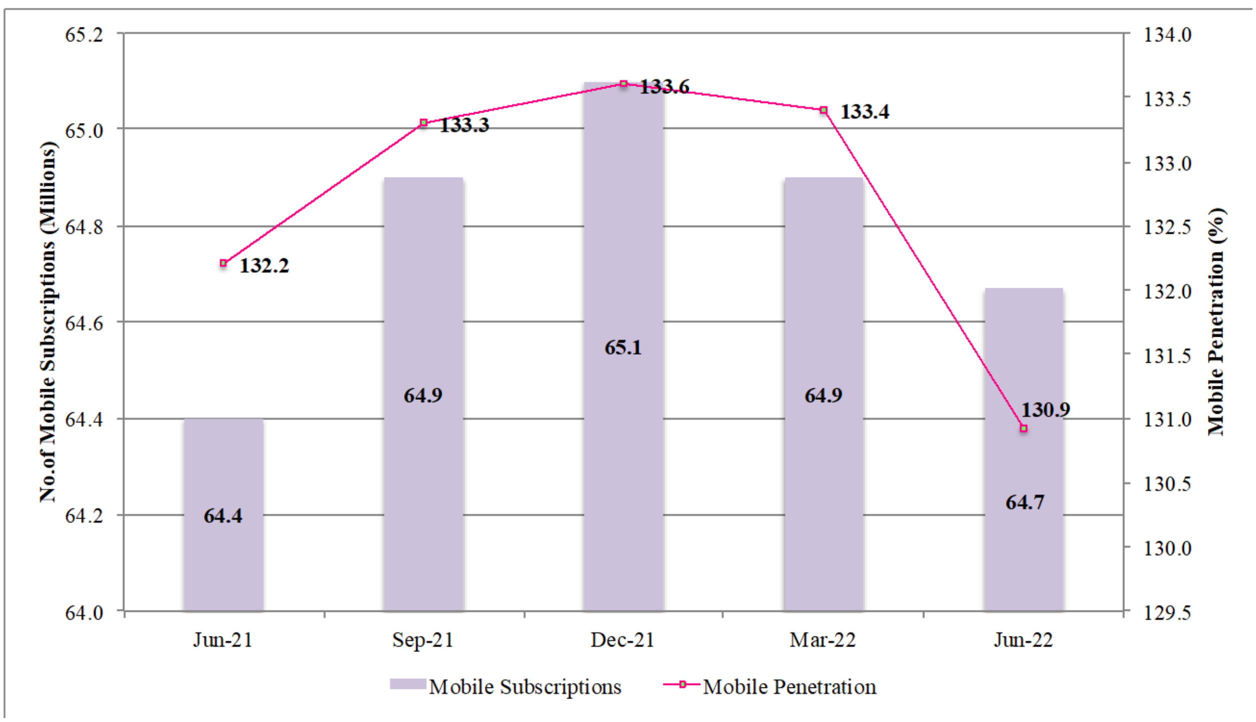


Figure 1: Mobile Subscriptions and Penetration

Figure 2 displays the number of active mobile (SIM) subscriptions per operator by contract type.

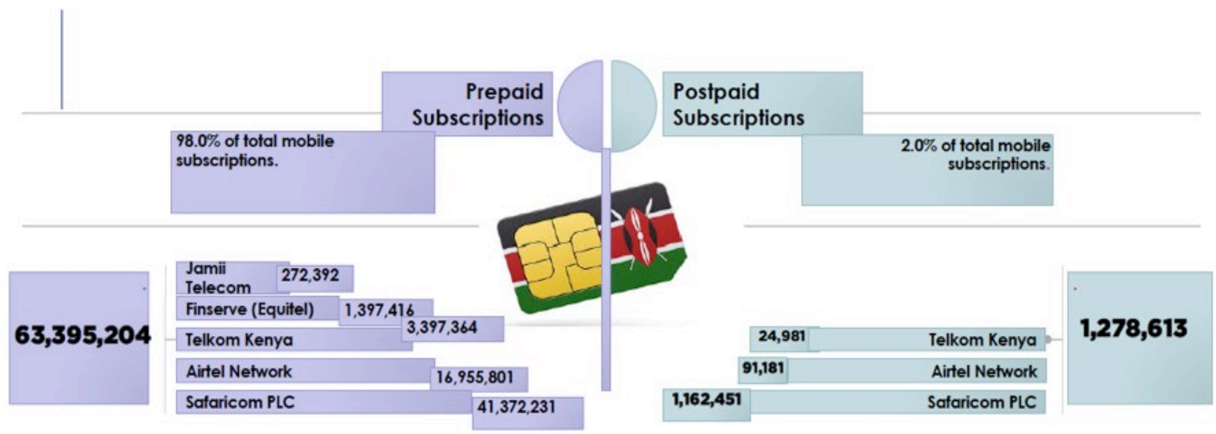


Figure 2: Mobile Subscription per Operator

1.1.2 *Machine-to-Machine Subscriptions*

Machine-to-Machine (M2M) subscriptions increased by 8.3 per cent to 1.3 million during the reference period, as shown in Table 1.

Table 1: Machine-to-Machine Subscriptions

Indicator/Period	***Jun 22***	***Mar 22***	***Quarterly Variation (%)***	***Jun 21***
Machine to Machine (M2M)	1,341,111	1,238,161	8.3	909,145

Source: CA, Operators' Returns.

1.1.3 *Mobile Money Services*

As of 30th June 2022, mobile money subscriptions maintained an upward trend and recorded 37.2 million, representing a penetration level of 75.3 per cent.

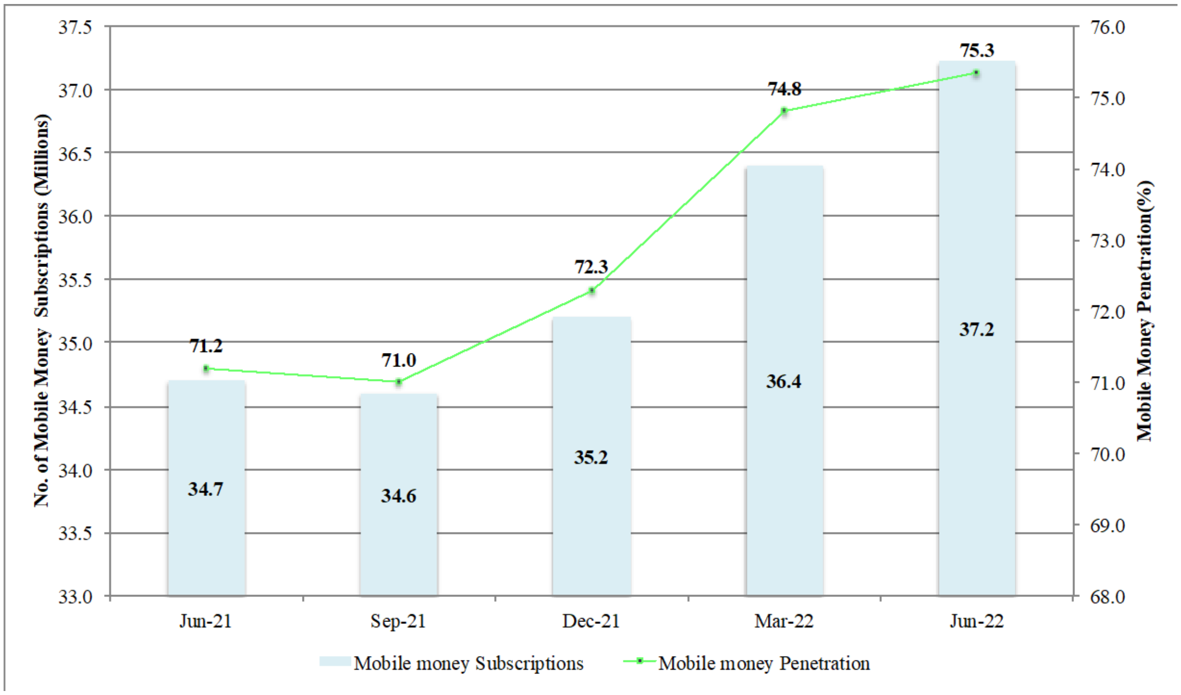


Figure 3: Mobile Money Services

Table 2 shows the mobile money transfer services.

Table 2: Mobile Money Services

Mobile Money Brand/Indicator	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*
Agents	301,890	293,589	2.8	301,890
Value of C2B Transfers in KES	1,614,081,644,184	1,386,297,979,352	16.4	5,504,230,023,427
Value of B2C Transfers in KES	1,021,052,743,696	920,527,602,620	10.9	3,659,824,701,713
Value of B2B Transfers in KES	2,490,003,624,464	2,219,776,335,265	12.2	8,823,687,260,415
Value of G2C Transfers in KES	310,611,932	882,857,114	-64.8	3,987,899,773
Value of C2GTransfers in KES	12,336,661,122	13,472,032,235	-8.4	49,886,263,081
Volume of P2P Transfers	1,107,170,048	1,041,544,760	6.3	4,071,131,767
Value of P2PTransfers in KES.	1,151,904,135,792	1,110,239,609,627	3.8	4,471,289,287,199
Total Value of Deposits in KES	1,434,275,952,629	1,257,851,142,039	14.0	5,126,942,501,437

Source: CA, Operators' Returns.

1.1.4 *Mobile Phone Devices*

The total number of mobile phones connected to mobile networks as of 30th June 2022 was 59.7 million, with feature phones and smartphones accounting for 32.9 and 26.8 million, respectively. The penetration rates for feature phones and smartphones computed as a percentage of the total population were 66.6 and 54.3 per cent, respectively.

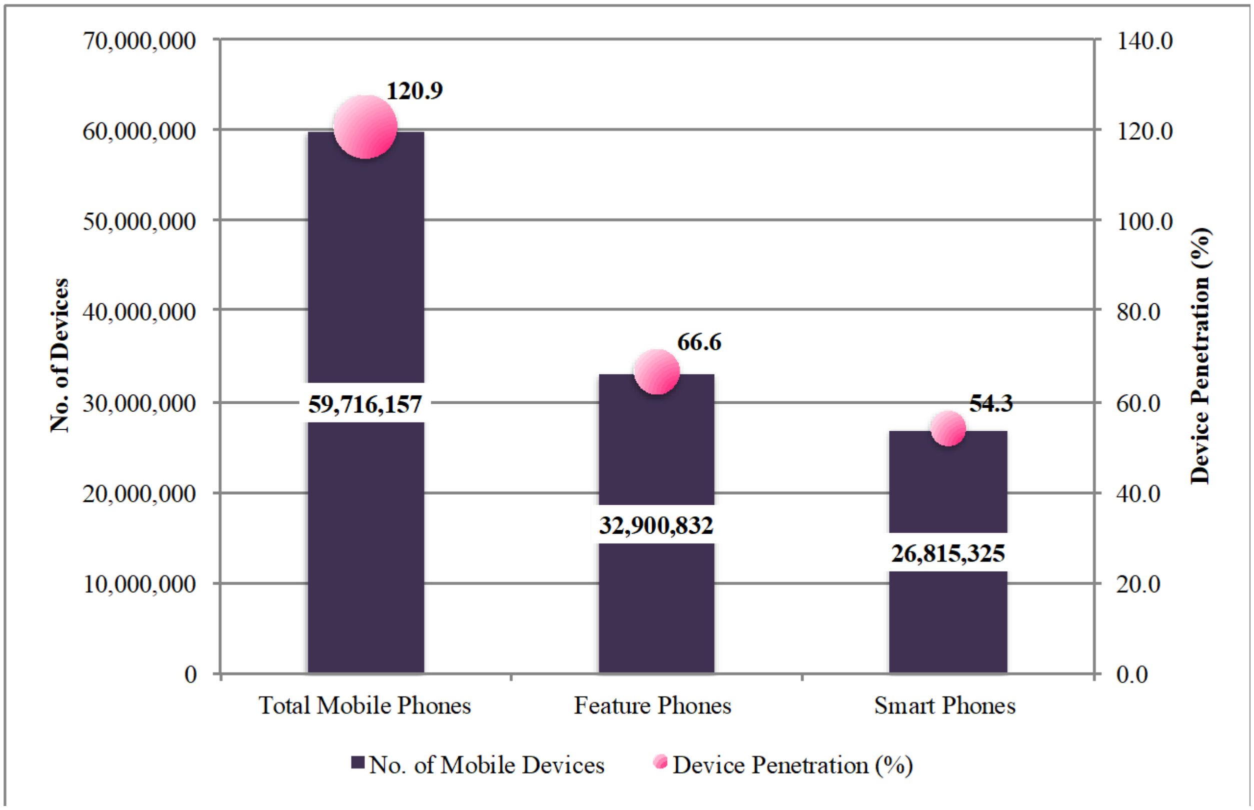


Figure 4: Mobile Phone Devices

1.1.5 *Domestic Mobile Voice Traffic (Minutes)*

Domestic mobile voice traffic on-net and off-net grew by 0.1 and 0.3 per cent, respectively, during the quarter under review, as shown in Table 3. On the other hand, Mobile to Fixed traffic continued to dwindle owing to the declining number of fixed network subscriptions.

Table 3: Domestic Mobile Voice Traffic

Mobile Traffic	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*	*FY 2020/21*	*Annual Variation (%)*
Total Outgoing Traffic	**19,215,040,633**	**19,195,856,553**	**0.1**	**79,414,537,964**	**76,826,128,093**	**3.4**
On-net	16,787,459,739	16,745,457,629	0.3	69,600,154,465	67,542,508,332	3.0
Off-net	2,413,468,196	2,434,572,630	-2.6	9,749,654,524	9,217,734,031	5.8
Mobile Network to Fixed Network	14,112,698	15,826,294	-10.8	64,728,975	65,885,730	-1.8

Source: CA, Operators' Returns,

1.1.1.1. Minutes of Use per Call per Operator

During the quarter under review, the average minutes per on-net and off-net calls remained at 1.6 and 1.0, respectively.

Table 4 outlines the average minutes of use per call by the operator.

Table 4: Minutes of Use per Call

Period	*Apr-Jun 22*		*Jan-Mar 22*	
Operator/Indicator	***On-net***	***Off-net***	***On-net***	***Off-net***
Total	**1.6**	**1.0**	**1.6**	**1.0**
Safaricom PLC	1.4	1.0	1.4	1.0
Airtel networks Limited	2.4	1.0	2.8	1.0
Telkom Kenya Limited	1.9	1.3	1.8	1.5
Equitel	2.4	1.3	2.6	1.3
Jamii Telecommunications Limited	0.1	1.2	0.1	1.2

Source: CA, Operators' Returns,

1.1.6 Mobile SMS Traffic

The volume of domestic short messages increased by 27.8 per cent to 13.97 billion from 10.93 billion recorded during the third quarter. This change is attributed to the long school holiday from the end of March to May 22. The ratio of on-net to off-net SMS was 89:11.

1.1.7 Voice and SMS Traffic per Operator

The trends in domestic voice and SMS traffic per operator are shown in Table 5.

Table 5: Domestic Mobile Traffic

Name of Operator /Indicator			*Safaricom PLC*	*Airtel Networks Kenya Limited*	*TKL*	*Equitel*	*JTL*	*Total*
Apr-Jun 22	*Voice*	*On-net*	11,969,155,430	4,618,228,561	197,738,018	2,305,182	32,548	**16,787,459,739**
		Off-net	730,584,597	1,511,387,896	143,717,412	26,391,072	1,387,219	**2,413,468,196**
		Total	**12,699,740,027**	**6,129,616,457**	**341,455,430**	**28,696,254**	**1,419,767**	**19,200,927,935**
	SMS	*On-net*	11,877,183,302	594,838,328	3,398,963	1,708,789	12,930	**12,477,142,312**
		Off-net	732,642,225	708,346,287	48,727,455	3,378,512	344,878	**1,493,439,357**
		Total	**12,609,825,527**	**1,303,184,615**	**52,126,418**	**5,087,301**	**357,808**	**13,970,581,669**
Jan-Mar 22	*Voice*	*On-net*	12,279,979,141	4,252,837,794	210,067,962	2,538,671	34,061	**16,745,457,629**
		Off-net	726,242,962	1,505,370,673	175,401,788	26,222,876	1,334,331	**2,434,572,630**

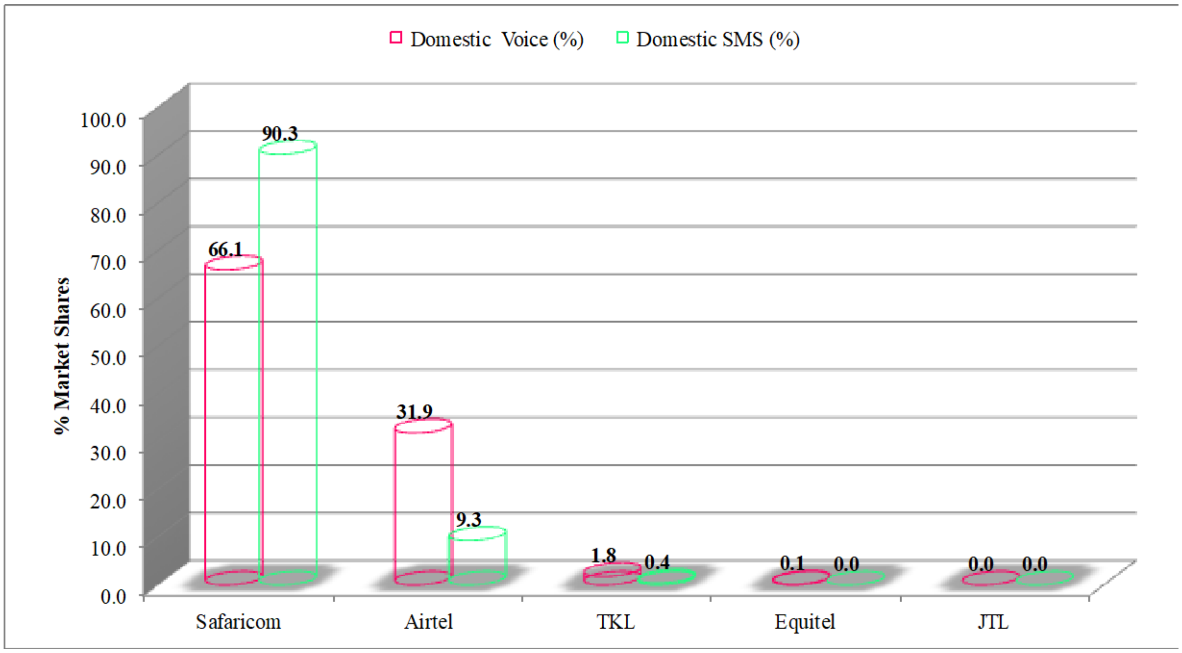
		Total	**13,006,222,103**	**5,758,208,467**	**385,469,750**	**28,761,547**	**1,368,392**	**19,180,030,259**
	SMS	*On-net*	9,202,183,616	509,510,385	5,689,019	1,323,363	12,905	**9,718,719,288**
		Off-net	575,606,105	580,709,965	50,005,687	2,824,565	318,011	**1,209,464,333**
		Total	**9,777,789,721**	**1,090,220,350**	**55,694,706**	**4,147,928**	**330,916**	**10,928,183,621**
FY 2021/22	***Voice***	*On net*	51,278,632,632	17,510,254,711	801,443,156	9,695,420	128,546	**69,600,154,465**
		Off-net	2,966,096,007	5,991,246,803	692,284,789	94,594,285	5,432,640	**9,749,654,524**
		Total	**54,244,728,639**	**23,501,501,514**	**1,493,727,945**	**104,289,705**	**5,561,186**	**79,349,808,989**
	SMS	*On-net*	37,568,260,802	2,069,102,901	20,595,572	7,272,355	50,133	**39,665,281,763**
		Off-net	2,157,056,622	2,272,769,941	192,416,513	17,708,856	1,069,875	**4,641,021,807**
		Total	**39,725,317,424**	**4,341,872,842**	**213,012,085**	**24,981,211**	**1,120,008**	**44,306,303,570**
FY 2020/21	***Voice***	*On-net*	49,763,276,293	16,859,805,950	909,573,287	9,768,245	84,557	**67,542,508,332**
		Off-net	2,683,009,548	5,638,669,984	782,460,529	100,921,087	3,672,883	**9,208,734,031**
		Total	**52,446,285,841**	**22,498,475,934**	**1,692,033,816**	**110,689,332**	**3,757,441**	**76,751,242,363**
	SMS	*On-net*	48,120,468,650	1,603,205,099	37,855,852	11,463,331	33,028	**49,773,025,960**
		Off-net	2,194,662,353	2,300,219,306	214,192,869	27,429,710	692,742	**4,737,196,980**
		Total	**50,315,131,003**	**3,903,424,405**	**252,048,721**	**38,893,041**	**725,770**	**54,510,222,940**

Source: CA, Operators' Returns,

1.1.8 Market shares in Domestic Mobile Voice and SMS Traffic

During the reference period, Safaricom PLC recorded the highest market shares in domestic mobile voice and SMS at 90.3 and 66.3%, respectively. Jamii Telecommunications Ltd recorded the least market shares at 0.0 per cent.

The market shares in domestic mobile voice and SMS are as shown in Figure 5.

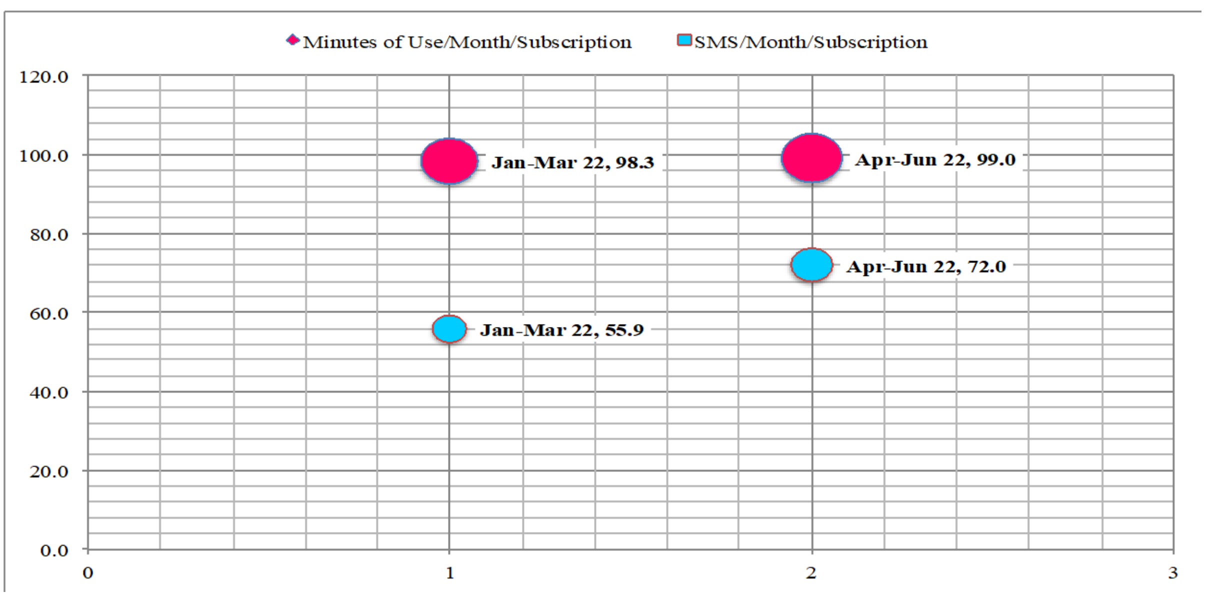


Source: CA, Operators' Returns,

Figure 5: Market Shares in Domestic Mobile Voice and SMS

1.1.9 Minutes/Month/Subscription vs SMS/Month/Subscription

The minutes of use per month per subscription increased to 99.0 from 98.3 minutes recorded during the previous quarter. Similarly, short messages sent per month per subscription increased from 55.9 to 72.0 messages.



Source: CA, Operators' Returns,

Figure 6: MoU/Month/Month vs SMS/Month/Subscription

1.1.10 International Mobile Traffic

Incoming international mobile voice traffic was recorded at 106.1 million, whereas outgoing international mobile voice traffic grew by 3.3 per cent to 169.8 million. Further, both incoming and outgoing international mobile SMS grew by 18.8 and 3.2 per cent to record 9.1 million and 5.1 million messages, respectively.

Table 6: International Mobile Traffic

Indicator/Period	*Region*	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*	*FY 2020/21*	*Annual Variation (%)*
International Incoming Mobile Voice Minutes	EAC	68,015,684	67,393,245	0.9	277,874,733	259,297,260	7.2
	Others	38,100,420	38,754,731	-1.7	176,649,417	212,291,309	-16.8
	Total	**106,116,104**	**106,147,976**	**0.0**	**454,524,150**	**471,588,569**	**-3.6**
International Outgoing Mobile Voice Minutes	EAC	87,887,419	83,738,419	5.0	322,317,803	255,195,987	26.3
	Others	81,933,590	80,621,524	1.6	295,419,095	252,260,068	17.1
	Total	**169,821,009**	**164,359,943**	**3.3**	**617,736,898**	**507,456,055**	**21.7**
International Incoming Mobile SMS		9,143,550	7,694,724	18.8	33,632,492	38,035,309	-11.6
International Outgoing Mobile SMS		5,111,392	4,950,835	3.2	20,337,713	36,504,569	-44.3

Source: CA, Operators' Returns

1.1.11 Roaming Traffic

The trends in outbound and inbound roaming traffic during the fourth quarter of FY 2021/22 are as shown in Tables 7 and 8 below.

Table 7: Outbound Roaming Traffic

Country / Indicator	*Incoming Voice (Minutes)*	*Incoming SMS*	*Outgoing Voice (Minutes)*	*Outgoing SMS*	*Data Volumes (MB)*
Uganda	113,639,256	16,468	5,018,652	2,873,684	31,715,959
Tanzania	256,658	12,403,131	689,242	1,109,275	7,606,313
Rwanda	5,555,480	-	551,970	256,924	2,791,543
Burundi	3,464	509,994	2,156	17,018	13,649
S. Sudan	4,755,661	142,022	947,789	558,284	137,498
EAC Total	**124,210,519**	**13,071,615**	**7,209,809**	**4,815,185**	**42,264,962**
Others	1,185,425	28,799,629	5,240,772	8,793,656	43,592,665
Total	**125,395,944**	**41,871,244**	**12,450,581**	**13,608,841**	**85,857,627**

Source: CA, Operators' Returns,

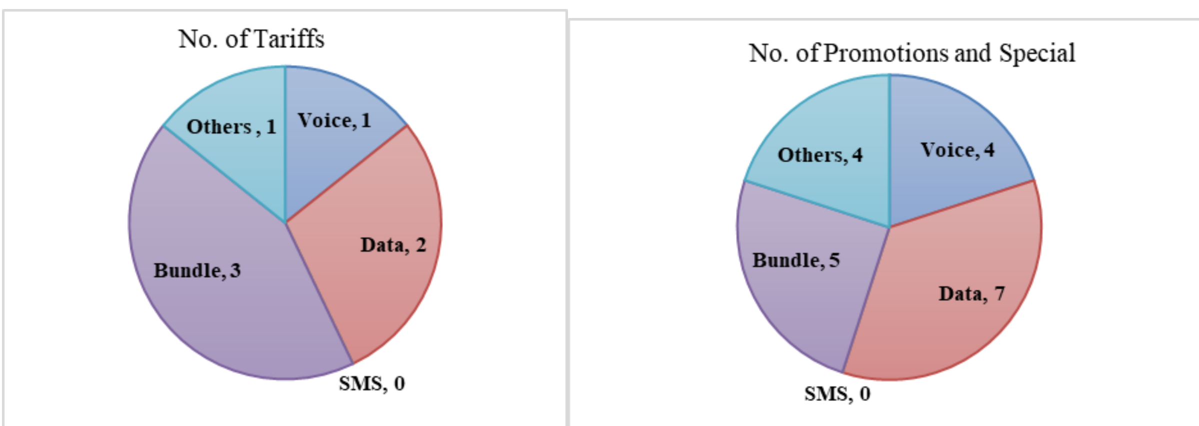
Table 8: In-bound Roaming Traffic

Country / Indicator	*Incoming Voice (Minutes)*	*Incoming SMS*	*Outgoing Voice (Minutes)*	*Outgoing SMS*	*Data Volumes (MB)*
Uganda	23,353,723	3,653,359	802,622	149,357	2,899,557
Tanzania	92,457	9,157,192	67,701	115,572	1,009,032
Rwanda	2,910,673	1,132,665	207,953	21,561	883,824
Burundi	716	7,951	562	838	136
S. Sudan	6,407,341	746,866	144,977	43,278	667,897
EAC Total	**32,764,910**	**14,698,033**	**1,223,815**	**330,606**	**5,460,446**
Others	1,205,755	13,010,550	2,334,941	1,192,483	115,917,581
Total	**33,970,665**	**27,708,583**	**3,558,756**	**1,523,089**	**121,378,027**

Source: CA, Operators' Returns,

1.1.12 Tariffs, Promotions and Special Offers

The number of approved applications for promotions and special offers, and tariffs offered by operators during the referenced period is shown in Figure 7.



Source: CA, filed tariffs, promotions and special offers

Figure 7: Distribution of Tariffs, Promotions and Special Offers

1.1.13 Mobile Service Revenue and Investment

In 2021, mobile services generated revenue of KES 315.0 billion representing an increase of 12.45 per cent compared to 2020. Further, investments in the mobile sub-sector grew by 12.41 per cent to stand at 51.6 billion from 45.9 billion Kenya shillings in 2020.

Table 9: Mobile Service Revenue and Investments

Indicator/Period	*2021*	*2020*	*Annual Variation (%)*
Mobile Service Revenue * (Billions)	315.0	280.1	12.45
Investment (Billions)	51.6	45.9	12.41

****Voice revenue includes fixed voice revenue from TKL: Data revenue also included fixed data revenue from TKL***

The breakdown in revenue based on services is as shown in figure 8 below

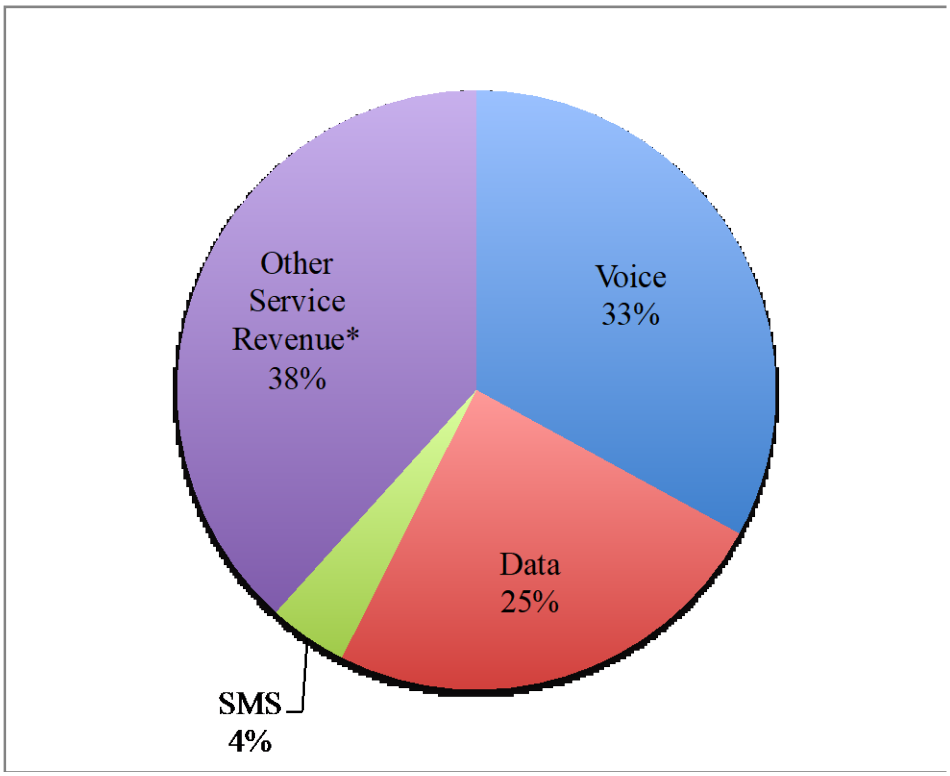
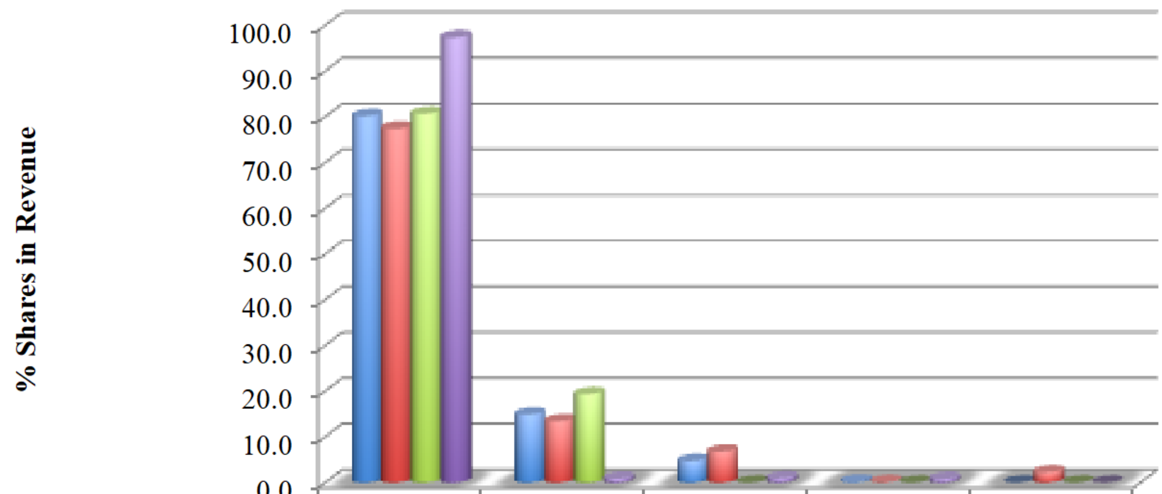


Figure 8: Revenue per Service



	Safaricom PLC	Airtel Networks	Telkom Kenya	Finserve Ltd	JTL
Voice	80.2	14.9	4.7	0.2	0.0
Data	77.4	13.4	6.8	0.1	2.3
SMS	80.7	19.3	0.0	0.0	0.0
Other Mobile Services	97.4	0.9	1.0	0.8	0.0

Figure 9: % Shares in Revenue by Operator

Figure 10 shows the five-year trend in employment within the mobile sub-sector

1.1.14 Employment in the Mobile Sub-Sector

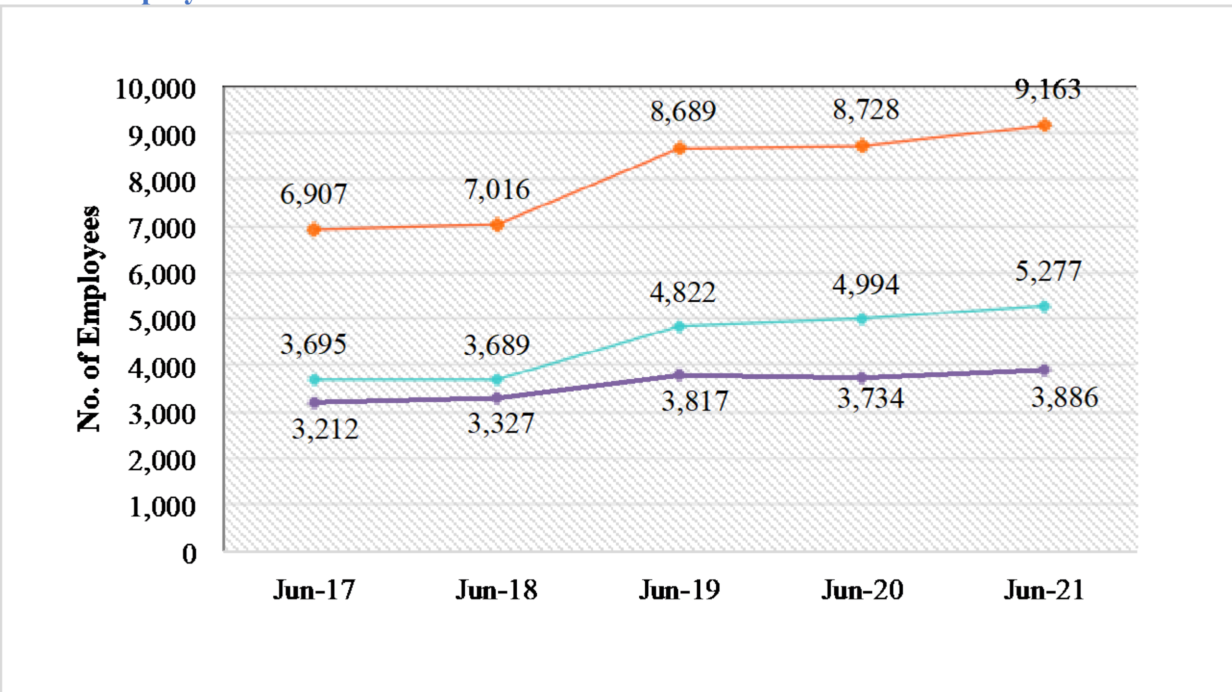


Figure 10: Employment in Mobile Sub-Sector

1.2 FIXED TELEPHONE SERVICE

1.2.1 Fixed Telephone Subscriptions

As of 30th June 2022, fixed line subscriptions were 12,529, whereas fixed wireless and VoIP subscriptions grew by 2.2 per cent and 5.0 per cent to post 1,253 and 51,861 subscriptions, respectively, as shown in Table 10.

Table 10: Fixed Voice Subscription

Subscriptions	*Jun 22*	*Mar 22*	*Quarterly Variation (%)*	*Jun 21*
Fixed Line	12,529	13,626	-8.1	14,691
Fixed Wireless	1,253	1,226	2.2	1,144
Fixed VoIP	51,861	49,387	5.0	42,162

Source: CA, Operators' Returns

1.2.2 Domestic Fixed Voice Traffic

Domestic fixed voice traffic grew by 6.2 per cent to 22.8 million minutes. Further, traffic within fixed wireless connections grew by 1.0 per cent, whereas traffic within fixed lines declined by 10.3 percent to record 94,129 minutes.

Table 11 shows trends in domestic fixed voice network traffic in minutes.

Table 11: Domestic Fixed Voice Traffic in Minutes

Domestic Fixed Network Traffic	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*	*FY 2020/21*	*Annual Variation (%)*
Fixed-Fixed	94,129	104,991	-10.3	437,044	586,050	-25.4
Fixed Wireless-Fixed Wireless	295,421	292,377	1.0	1,149,052	1,035,596	11.0
Fixed to Mobile*	22,430,428	21,127,860	6.2	83,370,508	53,222,414	56.6
Total Domestic Fixed Network Traffic	**22,819,978**	**21,525,228**	**6.0**	**84,956,604**	**54,844,060**	**54.9**

Source: CA, Operators' Returns, * Revised data

1.2.3 International Fixed Voice Traffic

During the quarter under review, international fixed voice traffic maintained a downward trend, as shown in Table 12.

Table 12: International Fixed Voice Traffic

Indicator/Period	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*	*FY 2020/21*	*Annual Variation (%)*
International Incoming Fixed Network Voice traffic	2,707,155	3,289,556	-17.7	13,354,547	18,710,023	-28.6
International Outgoing Fixed Network Voice traffic	1,387,617	1,511,593	-8.2	5,724,301	5,778,352	-0.9
International Outgoing Fixed VoIP traffic	596,912	610,776	-2.3	2,391,762	3,206,992	-25.4

Source: CA, Operators' Returns

2. DATA/INTERNET AND BROADBAND SERVICES

The total number of data/Internet rose by 2.3 per cent to 47.6 million, whereas the number of broadband subscriptions recorded a slight drop of 0.5 per cent to post 30.1 million, as shown in Table 13.

Table 13: Data and Broadband Subscriptions

Indicator/Period	*Jun 22*	*Mar 22*	*Quarterly Variation (%)*	*Jun 21*
Total Data/internet subscriptions	47,644,676	46,590,085	2.3	46,736,549
Total Broadband subscriptions	30,105,197	30,251,455	-0.5	27,481,827

Source: CA operator returns,

2.1 Mobile Broadband Subscriptions (3G[1] and 4G[2])

At the end of the fourth quarter for the FY 2021/22, 3G broadband subscriptions were recorded at 11.7 million, with 73.1 million(GB) of data volume consumed. 4G mobile broadband subscriptions stood at 17.6 million with 208.1 million (GB) data volume consumed.

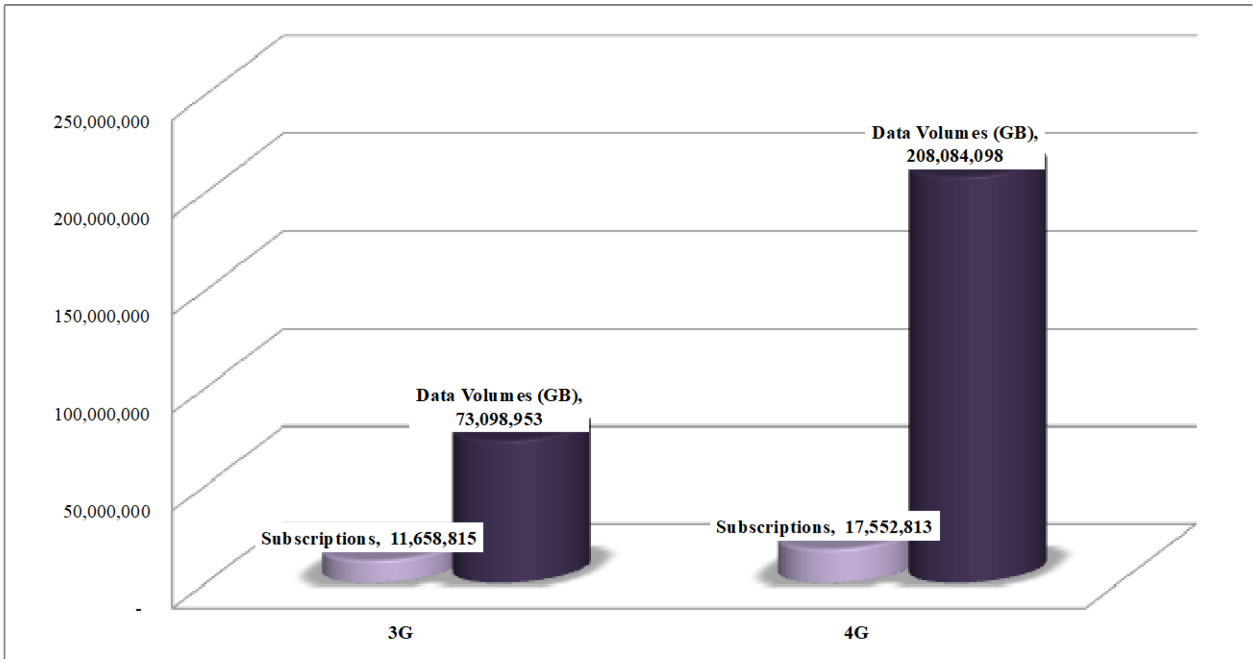


Figure 11: Mobile Broadband Subscriptions

2.2 Fixed Data/Internet and Broadband Subscriptions

Fibre to Home and Office had the highest fixed broadband subscriptions, whereas Satellite recorded the lowest number of broadband subscriptions.

Table 14 shows the technology and speed breakdown of fixed data/Internet subscriptions.

[1] **Active 3G mobile-broadband subscriptions** refer to the sum of active handset based and computer-based (USB/dongles) SIM Cards that have generated the highest broadband traffic through 3G technologies. It covers actual subscriptions, not potential subscribers, even though the latter may have broadband-enabled handsets. If a subscriber has accessed the Internet through 3G and 4G, the technology where the subscriber has generated the highest traffic will be the one to be counted.

[2] **Active 4G mobile-broadband subscriptions** refers to the sum of active handset based and computer-based (USB/dongles) SIM Cards that have generated the highest broadband traffic through 4G technology.

Table 14: Fixed Data and Broadband Subscriptions

Internet Technology/Speeds	*<256Kbps*	*=>256Kbps < 2Mbps*	*=>2 Mbps <10 Mbps*	*=>10Mbps <30 Mbps*	*=>30 Mbps <100Mbps*	*=>100 Mbps*	*Totals*
Cable Modem	-	-	66,954	129,274	15,390	511	**212,129**
Copper (DSL)	7	17	442	341	5	-	**812**
FTTH/O	-	7,580	219,279	175,520	141,601	3,871	**547,851**
Fixed Wireless	7,052	7,182	134,751	2,923	1,124	479	**153,511**
Satellite	28	239	327	-	-	-	**594**
Other Fixed	-	-	665	85	25	2	**777**
Totals	**7,087**	**15,018**	**422,418**	**308,143**	**158,145**	**4,863**	**915,674**

Source: CA, Operators' Returns

2.2.1 Fixed Data Subscriptions by Operator

Safaricom PLC recorded the highest market share in fixed data subscriptions at 34.3 per cent, followed by Wananchi Group at 27.9 per cent, as shown in Table 15.

Table 15: Fixed Data Subscriptions by Operator

Name of Service Provider	*Number of data/internet subscriptions*	*Percentage Market share (%)*
Safaricom PLC	314,120	34.3
Wananchi Group (Kenya) Ltd*	255,906	27.9
Jamii Telecommunications Ltd	200,079	21.9
Poa Internet Kenya Ltd	94,699	10.3
Liquid Telecommunications Kenya Limited	15,024	1.6
Mawingu Networks Ltd	12,574	1.4
Dimension Data Solutions East Africa Limited	12,070	1.3
Telkom Kenya Ltd	4,386	0.5
Next Thing Networks Ltd	900	0.1
Other Fixed Service providers	5,916	0.6

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

2.3 International Bandwidth

The total International Internet bandwidth in the country grew by 6.6 per cent to 11,605.99Gbps. The total utilized bandwidth capacity grew by 14.1 per cent to 6,000.62Gbps, of which 3,924.8Gbps were used in the country and 2,075.82Gbps sold outside the country, as shown in Table 16.

Table 16: International Available (Lit/Equip) Internet Bandwidth (Gbps)

Indicator/ Operator/Period	*Apr-Jun 22*		*Jan-Mar 22*		*Quarterly Variation (%)*	*Apr-Jun 21*
Total) Bandwidth Capacity	**11,605.99**		**10,891.65**		**6.6**	**10,217.46**
Undersea Bandwidth	***SEACOM***	3,920.00	***SEACOM***	3,920.00	0.0	3,920.00
	TEAMS	1,618.00	***TEAMS***	1,618.00	0.0	1,618.00

Capacity	***Telkom Kenya***	***EASSY***	4,750.00	***EASSY***	4,431.00	7.2	4,120.00
		Lion 2	553.20	***Lion 2***	657.20	-15.8	554.125
		DARE 1	760.00	***DARE 1***	260.00	192.3	-
Satellite Bandwidth Capacity	4.99			5.45		-8.4	5.33
Total Utilized Bandwidth Capacity (Gbps)							
Undersea Bandwidth Capacity	***Sold In Kenya***	***Sold in other Countries***		***Sold In Kenya***	***Sold in other Countries***		
	3,924.8	2,075.82		3,383.3	1,875.82	14.1	4,572.60
Satellite Internet Capacity	2.59			2.89		-10.4	2.56

Source: CA, Operators' Returns

3 POSTAL AND COURIER SERVICES

The volume of domestic letters and courier items rose by 3.8 and 5.0 per cent to register at 290,910 and 1.1 million items, respectively. Table 15 shows the trends in letters and courier items.

Table 17: Courier Items

Indicator/Period	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*
Outgoing Domestic Letters	290,910	280,261	3.8	1,129,852
Outgoing Domestic Courier Items	1,122,084	1,068,674	5.0	4,288,617
International Outgoing Letters	438,624	444,542	-1.3	1,576,419
International Incoming Letters	120,378	101,432	18.7	404,769

Source: CA, Operators' Returns, Data excludes Postal Corporation of Kenya (PCK)

4 BROADCASTING SERVICES

In its mandate to promote and facilitate the development of a diverse range of broadcasting services in Kenya, the Authority issues licenses to service providers continuously. Table 18 provides the number of licensed broadcasters.

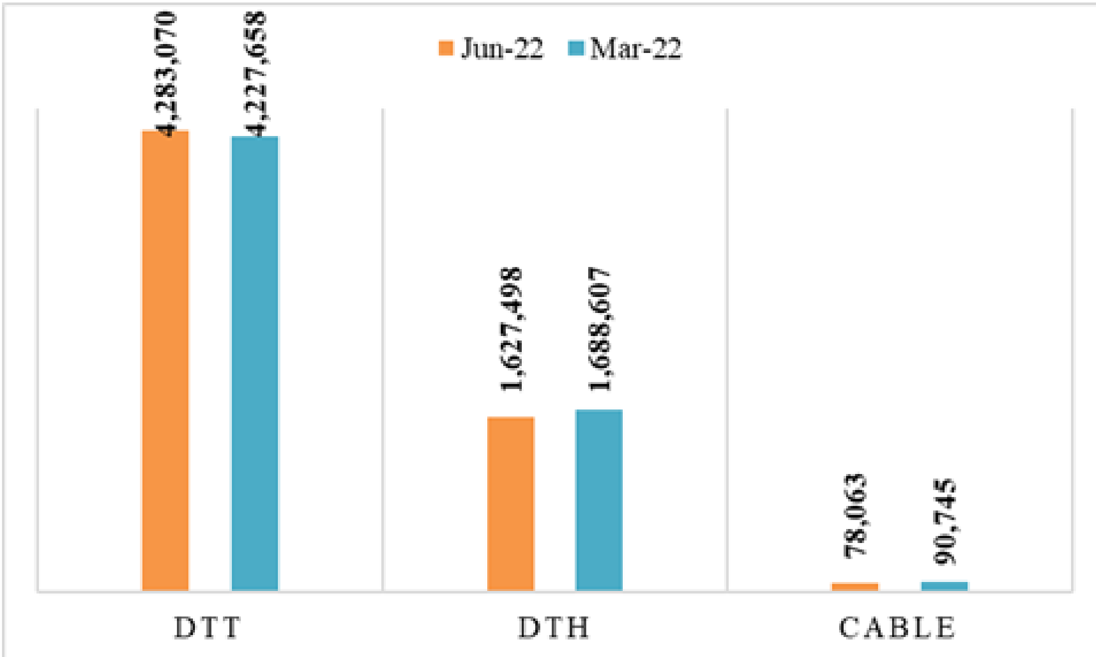
Table 18: Licensees under Broadcast License Framework

Indicator/Period	*Jun 22*	*Mar 22*	*Quarterly Variation (%)*
Broadcast Signal Distributor	2	2	0.0
Self-Provisioning Broadcast Signal Distributor	3	3	0.0
Commercial Free to Air TV	286	280	2.1
Community Free to Air TV	9	9	0.0
Commercial FM radio	160	154	3.9
Community FM Radio	53	47	12.8
Subscription Broadcasting Service	18	18	0.0
Subscription Management Service	4	4	0.0
Landing Rights Authorization	5	5	0.0

Source: CA, Operators' Returns

During the quarter under review, subscriptions to broadcasting services declined by 0.3 per cent to 5.9 million from 6.0 million reported in the preceding quarter.

Figure 9 shows the trends for broadband subscriptions.



Source: CA, Operators' Returns

Figure 12: Broadcasting Subscriptions

5 FREQUENCY SPECTRUM MANAGEMENT

The Authority assigned frequencies to various operators to deploy 198 microwave links and processed the decommissioning of 357 fixed links. In addition, the Authority assigned 13 FM sound broadcasting frequencies to broadcasters, as shown in Table 19.

Table 19: Frequency Spectrum Management

Indicator/Period	*Apr-Jun 22*	*Jan-Mar 22*
Microwave links Deployed	198	210
Fixed Links Decommissioned	357	4
FM Sound Broadcasting Frequencies Assigned	13	30

Source: CA

6 ELECTRONIC TRANSACTIONS AND CYBERSPACE MANAGEMENT

6.1 Registered Domain Names

Table 20 illustrates the various sub-domains and their respective users as of 30th June 2022.

Table 20: .KE Domains

SUB-DOMAIN	*USER*	*Jun 22*	
		Number of Users	*% Users*
CO.KE	Companies	86,983	89.13
OR.KE	Non-Profit-Making Organizations	1,891	1.94
AC.KE	Institutions of Higher Education	1,052	1.08
SC.KE	Lower and Middle-Level Institutions	1,111	1.14
NE.KE	Personal Websites and E-mail	46	0.05
ME.KE	Personal Websites and E-mail	1,247	1.28
MOBI.KE	Mobile Content	33	0.03
INFO.KE	Information	136	0.14
GO.KE	Government Institutions	624	0.64
. KE	Second level	4,473	4.57
Total		**97,596**	**100.00**

Source: CA, Operators' Returns.

6.2 National Cyber Space Landscape

The trends in cyber threats detected and advisories are shown in Tables 19 and 21, respectively.

Table 21: Cyber Threats Detected

Indicator/Period	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*	*FY 2020/21*	*Annual Variation (%)*
Malware	44,360,305	37,012,510	19.9	218,639,597	122,524,531	78.4
DDOS/Botnet	22,424,457	19,695,287	13.9	120,064,763	17,668,736	579.5
Web Application Attacks	204,592	324,836	-37.0	1,231,271	16,236,587	-92.4
System vulnerabilities	25,848,904	22,142,796	16.7	104,120,175	1,974,698	5,172.7
Totals	**92,838,258**	**79,175,429**	**17.3**	**444,055,806**	**158,404,552**	**180.3**

Source: National KE-CIRT/CC

Table 22: Cyber Threat Advisories

Cyber Threat Advisories	*Apr-Jun 22*	*Jan-Mar 22*	*Quarterly Variation (%)*	*FY 2021/22*	*FY 2020/21*	*Annual Variation (%)*
Malware	57,891	54,643	5.9	193,595	5,531	3,400.2
Botnet	19,860	25,252	-21.4	84,087	1,258	6,584.2
Web Application Attacks	23,169	28,848	-19.7	80,035	1,420	5,536.3
System Vulnerabilities	1,871,655	2,799,688	-33.1	7,615,412	85,487	8,808.3
Totals	**1,972,575**	**2,908,431**	**-32.2**	**7,973,129**	**93,696**	**8,409.6**

Source: National KE-CIRT/CC

7 CONCLUSION

The ICT sector has continued to grow as more services move to digital space, contributing to increased demand and consumption of telecommunication services. This growth has been supported mainly by the availability of Internet services that are becoming more accessible across the country. Further, cashless payments for financial transactions are widely used with MNOs integrating their mobile money services and businesses adopting mobile payment platforms in their daily operations. The sector is expected to grow exponentially with increased adoption of ICTs and the Authority's efforts to close the digital divide.