THIRD QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2020/2021
(JANUARY-MARCH 2021)

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***Disclaimer*:**
Although every effort has been made to ensure 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.

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LIST OF ACRONYMS

B2B	Business to Business
B2C	Business to Customer
C2B	Customer to Business
C2G	Citizen to Government
DoS	Denial-of-Service
DTH	Direct To Home
DTT	Digital Terrestrial Television
EASSy	Eastern Africa Submarine Cable Systems
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
LTE	Long-Term evolution
Mbps	Megabits per second
MMS	Multimedia Services
MoU	Minutes of Use
MVNO	Mobile Virtual Network Operator
NCC	National Cybersecurity Centre
OTT	Over-The-Top
P2P	Person to Person
SEACOM	Sea Sub-Marine Communications Limited
SIM	Subscriber Identification Module
SMS	Short Messaging Service
STBs	Set Top Boxes
TCP	Transmission Control Protocol
TEAMS	The East African Marine System

PRELIMINARY NOTES

- This report is based on data provided by the service providers in the ICT sector as per their license conditions.
- The information provided in this report is subject to review in case of any revisions or updates from the service providers.
- The Authority has also published and shared a manual on definitions and methodologies of collecting and reporting telecommunication indicators with service providers and the public for purposes of common understanding of ICT indicators. The manual was developed in consultation with the International Telecommunications Union (ITU) and it adheres to the set international standards. The Manual is available on CA website https://ca.go.ke/wp-content/uploads/2020/03/ICT-Indicators-Manual-2019-.pdf

REPORT SUMMARY

The Sector Statistics Report for the Third Quarter of the 2020/21 Financial Year provides an overview of the performance and trends in the ICT sector for the period 1st January to 31st March 2021, on the following service categories:

- Mobile Telephony Services.
- Fixed Telephony Services.
- Data/Internet Services.
- Cyber Security Landscape.
- Postal and Courier Services.
- Frequency Spectrum Management.
- Broadcasting Services.

Summary of Key Communication Sector Indicators

INDICATORS	Jan-Mar 2021 Q3	Oct-Dec 2020 Q2	% Change Q2 to Q3
Mobile Subscriptions (Millions)	61.96	61.41	2.5
Fixed Line Subscriptions	14,446	16,003	-9.7
Fixed Wireless Subscriptions	1,117	1,066	4.8
Fixed VoIP Subscriptions	44,222	49,577	-10.8
MOBILE MONEY TRANSFER SERVICES			
Number of Registered Mobile Money Agents	275,907	264,390	4.4
Number of Active Registered Mobile Money Subscriptions (Millions)	33.10	32.46	2.0
Value of C2B Transfers in KShs. (Billions)	1,083.84	983.78	10.2
Value of B2C Transfers in KShs. (Billions)	664.67	648.82	2.4
Value of B2B Transfers in KShs. (Billions)	1,773.66	1,704.04	4.1
Value of G2C Transfers in KShs (Billions)	3.36	7.15	-53.0
Value of C2G Transfers in KShs (Billions)	12.14	13.18	-7.9
Volume of P2P Transfers (Millions)	787.76	871.47	-9.6
Value of P2P Transfers in KShs. (Billions)	970.97	1,031.82	-5.9
Total value of Deposits in KShs. (Billions)	1,213.40	1,101.14	10.2
VOICE TRAFFIC IN MINUTES			
Mobile On-Net Voice Traffic (Billions)	17.21	17.33	-0.7
Mobile Off-Net Voice Traffic (Billions)	2.26	2.32	-2.6
Mobile Network to Fixed Network (Million)	15.28	16.91	-9.6
International Incoming Mobile Voice Traffic (Millions)	112.06	106.80	4.9
International Outgoing Mobile Voice Traffic (Millions)	125.10	125.06	0.0
Out-bound Roaming Incoming Voice Traffic (Minutes) (Millions)	91.96	85.84	7.1
Out-bound Roaming Outgoing Voice Traffic (Minutes) (Millions)	12.64	12.64	0.0
In-bound Roaming Incoming Voice Traffic (Minutes) (Millions)	45.23	38.18	18.5
In-bound Roaming Outgoing Voice Traffic (Minutes) (Millions)	3.79	2.36	60.6
Total Local Fixed network traffic (Millions)	5.54	5.57	-0.5
MOBILE SMS TRAFFIC			
SMS On-Net (Billions)	9.65	12.92	-25.3
SMS Off-Net (Billions)	0.92	1.26	-27.0
International Incoming SMS (Millions)	8.36	9.46	-11.6
International Outgoing SMS (Millions)	9.35	10.09	-7.3
Out-bound Roaming Incoming SMS (Millions)	29.71	31.69	-6.2
Out-bound Roaming Outgoing SMS (Millions)	14.89	15.24	-2.3
In-bound Roaming Incoming SMS (Millions)	28.20	17.68	59.5
In-bound Roaming Outgoing SMS (Millions)	1.61	1.09	47.7
DATA/INTERNET SERVICES			
Data/ Internet Total Subscriptions (Millions)	43.74	44.38	-1.4
Total Broadband Subscriptions	25.77	25.78	0.0
Total Available International Bandwidth (Gbps)	8,820.46	8,091.43	9.0
Total Used International Bandwidth (Gbps)	4,299.26	4,008.01	7.3
CYBER SECURITY			
Total Cyber Threats Detected (Millions)	28.25	56.21	-49.7
Total Cyber Threat Advisories	25,506	21,513	18.6

Total Investigation Category	298	224	33.0
POSTAL AND COURIER SERVICES			
Number of Letters (Up to 350 gms) Posted Locally	231,506	231,851	-0.1
Total Courier Items Sent Locally (Millions)	1.00	0.79	26.6
International Incoming Letters (Up to 350 gms)	106,044	92,989	14.0
International Outgoing Letters (Up to 350 gms)	376,512	350,496	7.4
BROADCASTING SERVICES			
FTA TV Stations on Air	130	122	6.6
Broadcasting Subscriptions (Millions)	5.54	5.15	7.6
Total Population in Kenya (Millions)*	**47.6**	**47.6**	**0.0**

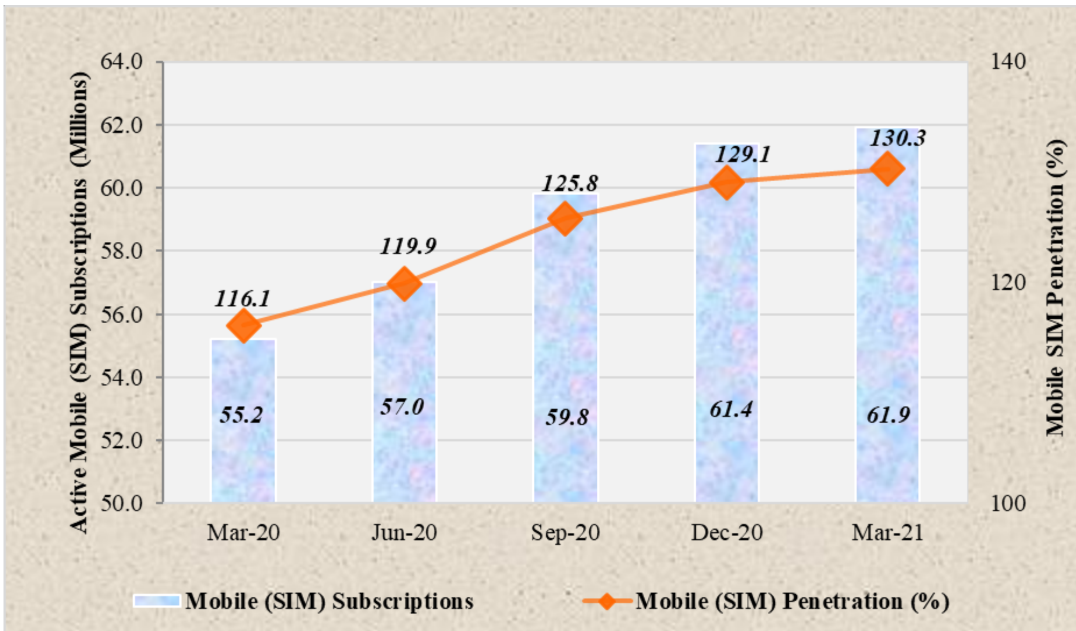
Source: 2019 Census Report

1 CELLULAR MOBILE SERVICES

1.1 Mobile Subscriptions

As at 31st March 2021, the number of active mobile subscriptions (SIMs) stood at 62.0 million representing a 0.9 percent increase from last quarter. Subsequently, mobile (SIM) penetration stood at 130.3 percent up from 129.1 percent recorded in quarter two.

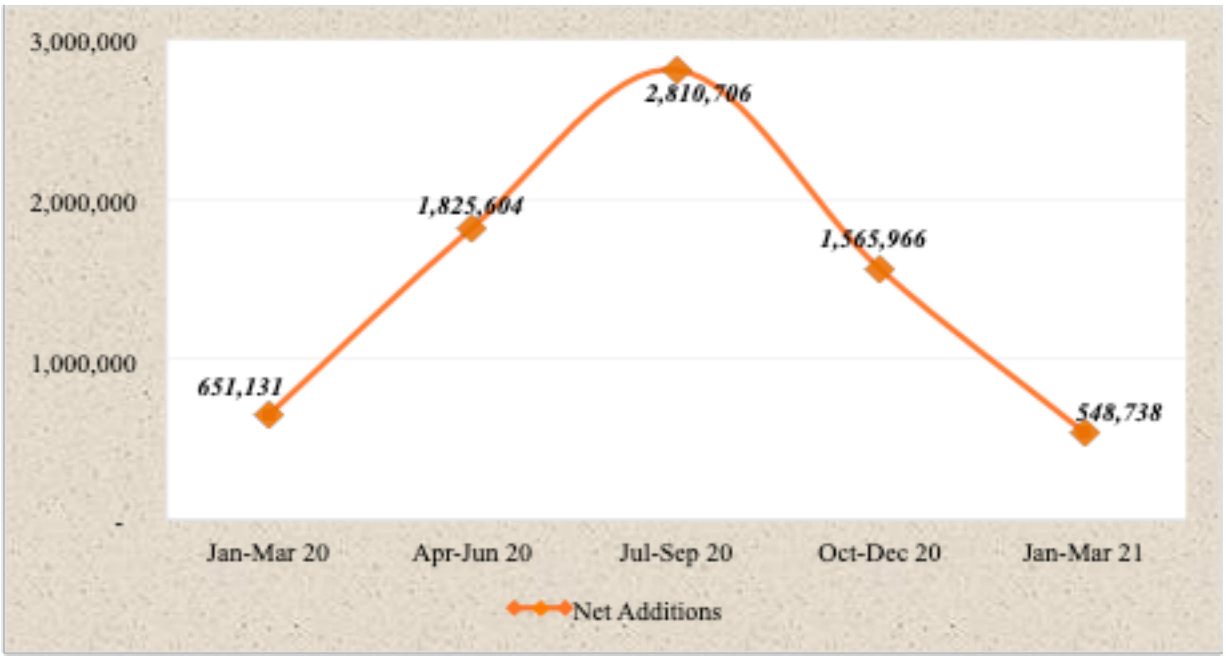
Figure 1 illustrates the trends in mobile subscriptions and penetration levels.



Source: CA, Operators' Returns

Figure 1: Mobile Subscriptions and Penetration Level

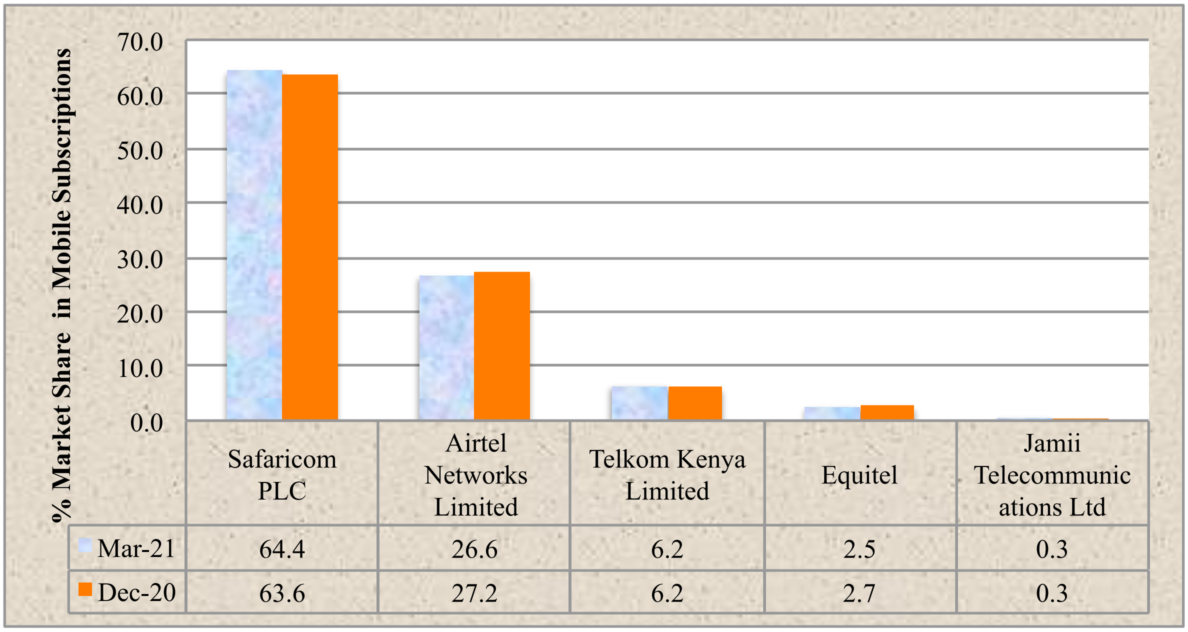
As shown in Figure 2, the number of SIM additions declined to 548,738 from 1,565,966 net additions recorded during the preceding quarter. The decline is as a result of resumption of physical learning schools leading to increased number of inactive SIM Cards.



Source: CA, Operators' Returns

Figure 2: Net Additions

Figure 3 illustrates the trends in the market shares by operator over the two quarters.



Source: CA, Operators' Returns

Figure 3: Market Shares in Mobile Subscriptions per Operator

Table 1 provides the number of active mobile subscriptions by contract type and operator.

Table 1: Mobile Subscriptions by Contract Type and Operator

Operator Name /Indicator	***Mar-21***			***Dec-20***			***Quarterly Variation (%)***
	Pre-paid	***Post-paid***	***Total***	***Pre-paid***	***Post-paid***	***Total***	
Total Mobile Subscriptions	**60,713,225**	**1,244,417**	**61,957,642**	**60,167,160**	**1,241,744**	**61,408,904**	**0.9**
Safaricom PLC	38,798,116	1,103,853	39,901,969	37,991,385	1,077,957	39,069,342	2.1
Airtel Networks Limited	16,392,065	95,091	16,487,156	16,578,051	99,006	16,677,057	-1.1
Telkom Kenya Limited	3,798,970	45,473	3,844,443	3,758,676	64,781	3,823,457	0.5
Equitel	1,546,009	-	1,546,009	1,678,127	-	1,678,127	-7.9
JamiiTelecommunications Ltd	178,065	-	178,065	160,921	-	160,921	10.7

Source: CA, Operators' Returns

1.2 Mobile Money Services

The number of active mobile money subscriptions grew by 2.0 percent to stand at 33.1 million, whereas active mobile money agents stood at 257,907 up from 264,390. Notably, the value of G2C dropped during the period due to reduction in disbursals to vulnerable citizens as the management of the COVID-19 pandemic takes shape. The value of C2B, B2C transfers, B2B transfers and the total value of deposits recorded growths whereas the value of C2G transfers, volume of P2P transfers and value of P2P transfers registered declines during the quarter under review. This is attributed to the end of the festive season during which relative and friends tend to send each other money as a form of gift or for purposes of organizing celebrations.

Table 2 shows a summary of mobile money transfer services.

Table 2: Mobile Money Transfer Services

Mobile Money Brand/Indicator	***Mar-21***	***Sep-20***	***Quarterly Variation (%)***
Agents	275,907	264,390	**4.4**
Active Registered Mobile Money Subscriptions	33,101,996	32,460,015	**2.0**
Value of C2B Transfers in KShs.	1,083,836,720,258	983,777,277,397	**10.2**
Value of B2C Transfers in Kshs	664,671,196,737	648,818,098,982	**2.4**
Value of B2B Transfers in Kshs.	1,773,659,201,982	1,704,036,296,548	**4.1**
Value of G2C Transfers in Kshs	3,356,262,437	7,150,984,960	**-53.1**
Value of C2GTransfers in Kshs.	12,139,387,418	13,175,754,206	**-7.9**
Volume of P2P Transfers	787,758,859	871,466,799	**-9.6**
Value of P2PTransfers in Kshs.	970,970,044,365	1,031,820,276,516	**-5.9**
Total value of Deposits in Kshs	1,213,400,394,387	1,101,141,086,262	**10.2**

Source: CA, Operators' Returns,

1.3 Mobile Number Portability

As illustrated in Figure 4, a total of 388 numbers were ported between mobile networks during the quarter under review. Safaricom PLC registered the highest number of in-ports at 333.

Source: CA, Operators' Returns,

Figure 4: Mobile Number Portability

1.4 Mobile Traffic and Usage Pattern

1.4.1 Local Voice Traffic

Local mobile voice traffic dropped by 0.9 percent to 19.5billion minutes. The decline is mainly attributed to conclusions of "*Safaricom@20 Promotion*" that ended in 20th January 2021, which aimed at availing new subscribers with attractive voice and data bundle offers, while offering similar incentives to their existing customers. Further, resumption of physical learning in schools that led to an increase in the number of inactive SIM cards also affected mobile voice traffic.

The volume of on-net mobile voice traffic stood at 17.2 billion minutes down from 17.3 billion minutes registered in the previous quarter. Similarly, off-net mobile voice traffic declined to 2.26 billion minutes from 2.32 billion minutes reported in the last quarter. Mobile to fixed network voice traffic declined as well by 9.6 percent to 15.3 million minutes, from 16.9 million minutes posted during the previous period.

Table 3 shows summary trends in local mobile voice traffic.

Table 3: Local Mobile Voice Traffic (Minutes)

Mobile Traffic	***Jan-Mar 21***	***Oct-Dec 20***	***Quarterly Variation (%)***
Total Outgoing Traffic	**19,482,094,546**	**19,661,950,974**	-0.9
Own Network – Own Network	17,209,794,517	17,325,415,414	-0.7
Own Network to Other Mobile Networks	2,257,015,169	2,319,629,906	-2.7
Mobile Network to Fixed Network	15,284,860	16,905,654	-9.6

Source: CA, Operators' Returns

1.4.2 Voice Traffic by Operator

The local traffic volumes by service provider and the respective market shares are outlined in Table 4

Table 4: Local Mobile Voice Traffic by Operator

Period	*Name of Operator /Indicator*	*Safaricom PLC*	*Airtel Networks Kenya Limited*	*Telkom Kenya Limited*	*Equitel*	*Jamii Telecommunications Ltd*	*Total*
Jan-Mar 21	On-net	13,122,842,378	3,901,965,550	182,619,152	2,338,655	28,782	**17,209,794,517**
	Off-net	670,918,080	1,381,821,924	178,095,384	25,018,872	1,160,909	**2,257,015,169**
	Total	**13,793,760,458**	**5,283,787,474**	**360,714,536**	**27,357,527**	**1,189,691**	**19,466,809,686**
	Market share (%)	70.9	27.1	1.9	0.1	0.0	
Oct-Dec 20	On-net	12,907,136,339	4,182,633,631	233,526,679	2,094,972	23,793	**17,325,415,414**
	Off-net	690,971,548	1,409,635,793	194,970,329	22,935,084	1,117,152	**2,319,629,906**
	Total	**13,598,107,887**	**5,592,269,424**	**428,497,008**	**25,030,056**	**1,140,945**	**19,645,045,320**
	Market share (%)	69.2	28.5	2.2	0.1	0.0	

Source: CA, Operators' Returns

The average minutes of use per call for on-net and off-net local mobile voice traffic stood at 1.7 and 1.0 minutes respectively.

Table 5: Minutes of Use per Call per Operator

	Jan-Mar 21		***Oct-Dec 20***	
Operator	***On-net***	***Off-net***	***On-net***	***Off-net***
Total	**1.7**	**1.0**	**1.7**	**1.0**
Safaricom PLC	1.5	1.0	1.5	0.9
Airtel networks Limited	2.6	1.0	2.7	1.0
Telkom Kenya Limited	1.6	1.4	1.6	1.2
Equitel	2.3	1.3	2.1	1.3
Jamii Telecommunications Ltd	0.1	1.4	0.1	1.4

Source: CA, Operators' Returns

1.4.3 Domestic Short Messaging Service (SMS) Traffic

The total number of short messages sent between January and March 2021 stood at 10.6 billion, down from 14.2 billion messages sent between October and December 2020. The significant drop is attributed to conclusion of the "*Safaricom SMS* promotion" where consumers were put on a draw and stood a chance to win airtime or monthly SMS bundle after the purchase. Further, resumption of physical learning in schools that led to an increase in the number of inactive SIM cards also affected mobile SMS traffic. Lastly, the end of the festive season October-December 2020 during which friends and relatively exchange well wish messages contributed to the decline in SMS traffic in quarter three.

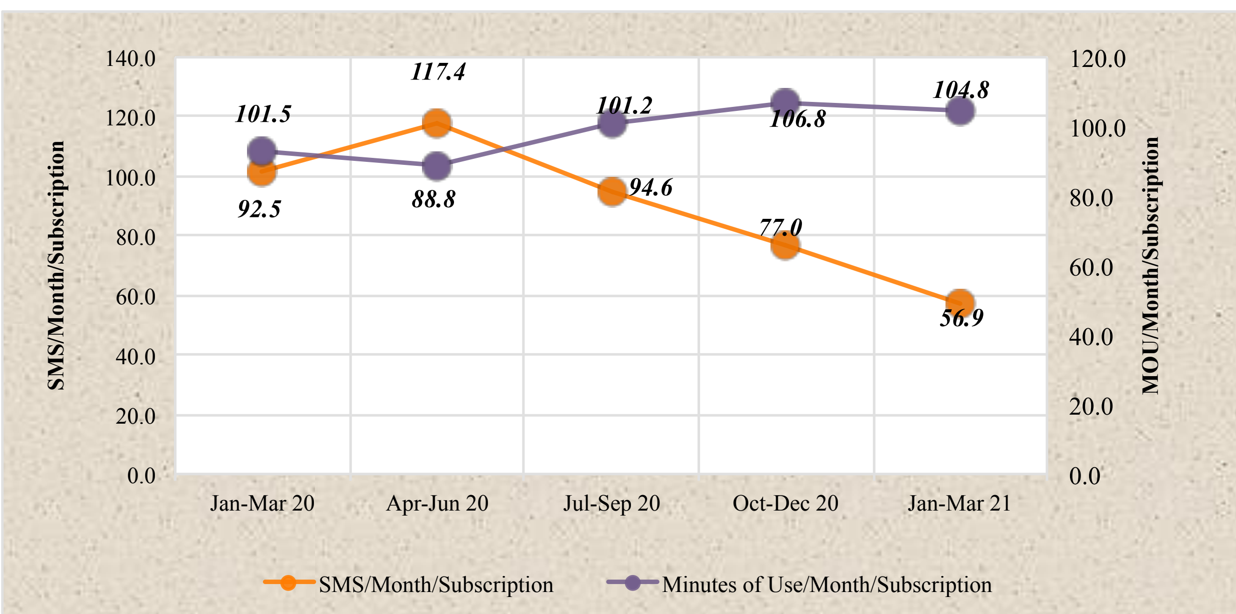
SMS traffic and the corresponding market shares per operator are as shown in Table 6.

Table 6: Local Mobile SMS Traffic by Operator

Period	*Name of Operator /Indicator*	*Safaricom PLC*	*Airtel Networks Kenya Limited*	*Telkom Kenya Limited*	*Equitel*	*Jamii Telecom municati ons Ltd*	*Total*
Jan-Mar 21	On-net	9,287,550,496	355,409,867	7,105,647	2,141,990	10,160	**9,652,218,160**
	Off-net	463,945,044	416,067,452	30,479,089	6,538,318	245,283	**917,275,186**
	Total	**9,751,495,540**	**771,477,319**	**37,584,736**	**8,680,308**	**255,443**	**10,569,493,346**
	Market share (%)	92.3	7.3	0.4	0.1	0.0	
Oct-Dec 20	On-net	12,504,363,015	399,260,526	10,368,264	2,822,756	12,050	**12,916,826,611**
	Off-net	568,588,001	621,519,823	67,806,027	6,813,252	265,601	**1,264,992,704**
	Total	**13,072,951,016**	**1,020,780,349**	**78,174,291**	**9,636,008**	**277,651**	**14,181,819,315**
	Market share (%)	92.2	7.2	0.6	0.1	0.0	

Source: CA, Operators' Returns

The number of short messages sent per subscription per month dropped to 56.9 from 77.0 messages posted last quarter. The drop is attributed to conclusion of the "*Safaricom SMS* promotion". The Minutes of Use per Month per Subscription dropped to 104.8 from 106.8 posted in the last quarter as shown in Figure 5.



Source: CA, Operators' Returns

Figure 5: SMS/Month/Subscription vs Minutes of Use/Month/Subscription

1.4.4 International Mobile Traffic

Traffic originating from other countries grew by 4.9 percent during the period under review to stand at 112.1 million minutes. There was marginal increase in voice traffic terminating to other countries that stood at 125.1 million minutes during the referenced period. On the other hand, international incoming and outgoing mobile SMS stood at 8.4 million and 9.3 million SMS respectively.

The trends in international mobile voice and SMS traffic within the EAC region and other countries across the globe are as outlined in Table 7. International SMS traffic declined following the end of the festive season.

Table 7: International Mobile Traffic

Traffic	*Region*	*Jan-Mar 21*	*Oct-Dec 20*	*Quarterly Variation (%)*
International Incoming Mobile Voice Minutes	*EAC*	59,688,645	54,172,446	**10.2**
	Others	52,367,822	52,631,556	**-0.5**
	Total	**112,056,467**	**106,804,002**	**4.9**
International Outgoing Mobile Voice Minutes	*EAC*	64,395,403	61,410,399	**4.9**
	Others	60,699,723	63,652,278	**-4.6**
	Total	**125,095,126**	**125,062,677**	**0.0**
International Incoming Mobile SMS		8,363,508	9,460,932	**-11.6**
International Outgoing Mobile SMS		9,346,220	10,092,180	**-7.4**

Source: CA, Operators' Returns

1.4.5 Roaming Traffic

The summary of out-bound and in-bound roaming for voice, SMS and data services is as outlined in Tables 8 and 9.

Table 8: Outbound Roaming Traffic

Country/Indicator	Incoming Voice (Minutes)	Incoming SMS	Outgoing Voice (Minutes)	Outgoing SMS	Data Volumes (MB)
Uganda	79,528,527	3,212,582	5,545,712	4,157,900	15,419,069
Tanzania	339,592	7,371,865	389,111	1,314,266	2,022,196
Rwanda	5,463,218	373	397,826	269,850	831,580
Burundi	6,952	327,619	3,828	30,720	3,252
S. Sudan	5,297,811	686,575	1,050,404	903,923	132,634
EAC Total	**90,636,100**	**11,599,014**	**7,386,881**	**6,676,659**	**18,408,731**
Others	1,323,246	18,107,931	5,250,919	8,217,404	9,350,113
Totals	**91,959,346**	**29,706,945**	**12,637,800**	**14,894,063**	**27,758,844**

Source: CA, Operators' Returns

Table 9: Inbound Roaming Traffic

Country/Indicator	Incoming Voice (Minutes)	Incoming SMS	Outgoing Voice (Minutes)	Outgoing SMS	Data Volumes (MB)
Uganda	30,103,425	5,304,167	1,068,287	555,065	806,720
Tanzania	80,424	10,932,112	85,918	89,745	239,178
Rwanda	9,191,608	1,368,111	206,666	27,955	135,513
Burundi	694	17,870	1,174	465	86
S. Sudan	4,726,588	274,091	121,316	210,187	168,869
EAC Total	**44,102,739**	**17,896,351**	**1,483,361**	**883,417**	**1,350,366**
Others	1,130,240	10,308,279	2,305,487	722,622	69,441,697
Totals	**45,232,979**	**28,204,630**	**3,788,848**	**1,606,039**	**70,792,063**

Source: CA, Operators' Returns

2 FIXED TELEPHONE SERVICE

2.1 Fixed Network Subscriptions

Fixed line and fixed VoIP subscriptions declined during the reference period following increased uptake of mobile services which are more convenient in terms of mobility especially during the pandemic period when people are required to work from home from time to time.

Table 10 provides the number of fixed network subscriptions.

Table 10: Fixed Network Subscriptions

Subscriptions	***Mar-21***	***Dec-20***	***Quarterly Variation (%)***
Fixed Line	14,446	16,003	-9.7
Fixed Wireless	1,117	1,066	4.8
Fixed VoIP	44,222	49,577	-10.8

Source: CA, Operators' Returns

2.2 Fixed Network Traffic

In comparison to last quarter, the total local fixed network traffic declined by 0.5 percent during the referenced period to record 5.5 million minutes.

Table 11: Local Fixed Network Traffic (Minutes)

Local Fixed Network Traffic	***Jan-Mar 21***	***Oct-Dec 20***	***Quarterly Variation (%)***
Fixed-Fixed	145,929	144,392	1.1
Fixed Wireless-Fixed Wireless	266,249	268,632	-0.9
Fixed to Mobile	5,128,871	5,157,013	-0.5
Total Local Fixed Network Traffic	**5,541,049**	**5,570,037**	**-0.5**

Source: CA, Operators' Returns

2.3 International Fixed Voice Traffic

Table 12 shows the trends of international fixed voice network traffic.

Table 12: International Fixed Voice Network Traffic (Minutes)

International Fixed Network traffic	***Jan-Mar 21***	***Oct-Dec 20***	***Quarterly Variation (%)***
International Incoming Fixed Network Voice Traffic	4,393,219	4,283,828	2.6
International Outgoing Fixed Network Voice Traffic	1,288,849	1,152,530	11.8
International Outgoing Fixed VoIP Traffic	781,920	861,672	-9.3

Source: CA, Operators' Returns

3 DATA/INTERNET SERVICES

3.1 Data Services

The total number of Internet/data subscriptions stood at 43.7 million at the end of the third quarter of the financial year 2020/21. This was a decline of 1.5 per cent from 44.4 million subscriptions recorded during the second quarter. The decline is attributed to the increase in inactive mobile data/Internet subscriptions following the resumption of physical learning in schools from the beginning of the year

Table 13 shows a breakdown of data/Internet subscriptions based on the type of technology.

Table 13: Data/Internet Subscriptions

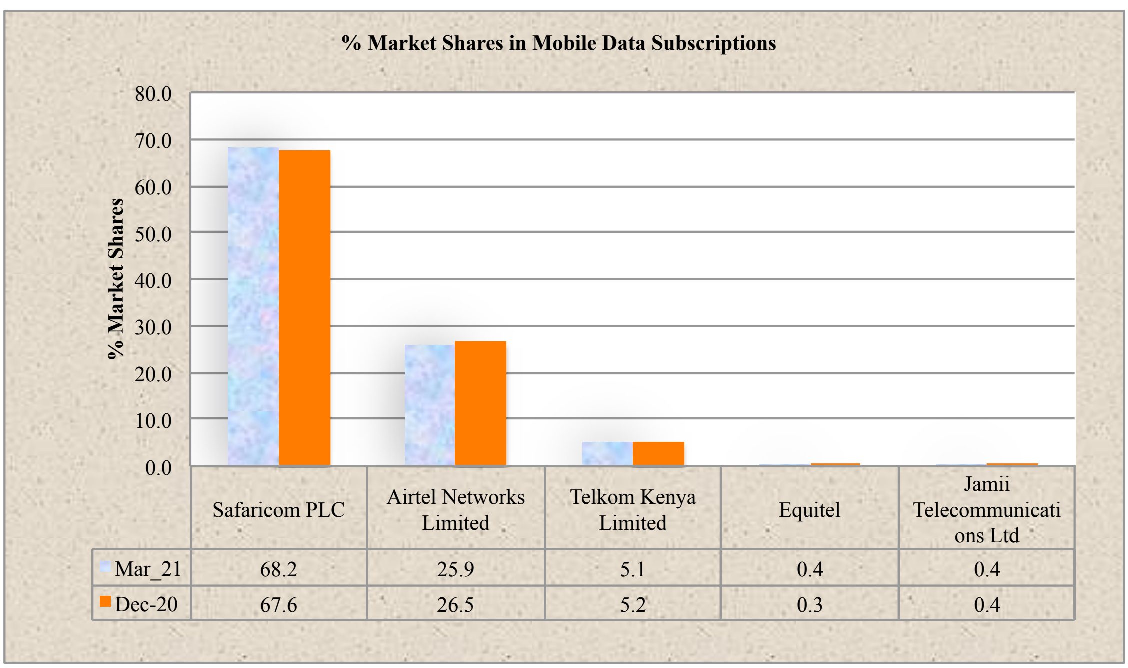
Indicator/Period	*Jan-Mar 21*	*Oct-Dec 20*	*Quarterly Variation (%)*
Total Wireless Subscriptions	**43,138,739**	**43,811,237**	**-1.5**
Mobile Data Subscriptions	43,029,579	43,707,173	-1.6
Terrestrial Wireless Data Subscribers	107,912	102,794	5.0
Satellite Data Subscribers	1,248	1,270	-1.7
Total Fixed (Wired) Subscriptions	**604,095**	**580,253**	**4.1**
Fixed DSL Data Subscribers (Copper)	472	870	-45.7
Fixed Fibre Optic Data Subscribers	418,394	400,355	4.5
Fixed Cable Modem Subscribers	184,425	178,224	3.5
Other Fixed Data Subscribers (e.g. Radio)	804	804	0.0
Total Subscriptions	**43,742,834**	**44,391,490**	**-1.5**

Source: CA, Operators' Returns

3.2 Market Shares in Mobile Data/Internet Subscriptions by Operator

During the period under review, Safaricom PLC recorded the highest market share in terms of mobile data subscription with 68.2 per cent, whereas Jamii Telecommunications Limited and Equitel Ltd recorded the least market share at 0.4 per cent.

Figure 6 illustrates the market shares trends in mobile Data/Internet Subscriptions by Operator.



Source: CA, Operators' Returns

Figure 6: Market Shares in Mobile Data Subscriptions per Operator

3.3 Fixed Data/Internet Subscriptions by Speed

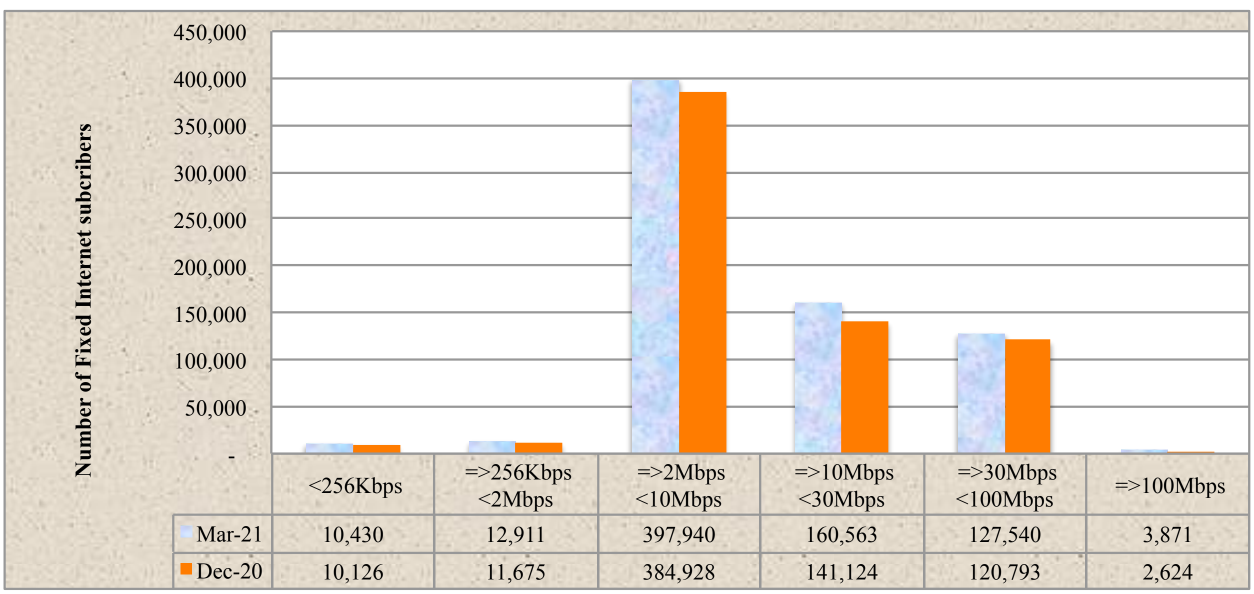
As at the end of the third quarter, a majority of customers subscribed to data/Internet speeds equal to or greater than 2Mbps and less than10 Mbps. Moreover, data/Internet speeds equal to or higher than 100Mbps had the least number of customers.

Table 14 and Figure 8 illustrate the breakdown of fixed data/Internet subscriptions by speed and technology.

Table 14: Fixed Data/Internet Subscriptions by Speed and Technology

Internet Technology/Speeds	*<256Kbps*	*=>256Kbps < 2Mbps*	*=>2 Mbps <10 Mbps*	*=>10Mbps <30 Mbps*	*=>30 Mbps <100Mbps*	*=>100 Mbps*	*Totals*
Cable Modem	-	-	124,514	37,443	21,773	695	184,425
Copper (DSL)	29	40	369	34	-	-	472
FTTH/O	5	4,741	183,955	121,145	105,490	3,058	418,394
Fixed Wireless	10,359	7,597	88,097	1,610	193	56	107,912
Satellite	37	428	650	133	-	-	1,248
Other Fixed	0	105	355	198	84	62	804
Totals	**10,430**	**12,911**	**397,940**	**160,563**	**127,540**	**3,871**	**713,255**

Source: CA, Operators' Returns



Source: CA, Operators' Returns

Figure 7: Fixed Data/Internet Subscriptions by Speed

Table 15 shows Fixed Data Subscriptions by Service Provider and their respective market shares

Table 15: Fixed Data Subscriptions per Service Provider

Name of service Provider	Number of data/internet subscriptions	Percentage Market share
Safaricom PLC	255,594	35.8
Wananchi Group (Kenya) Ltd*	216,219	30.3
Jamii Telecommunications Ltd	135,602	19.0
Poa Internet Kenya Ltd	61,867	8.7
Liquid Telecommunications Kenya	14,921	2.1
Mawingu Networks Ltd	11,708	1.6
Dimension Data Solutions East Africa Limited	9,439	1.3
Telkom Kenya Ltd	4,739	0.7
Mobile Telephone Network (MTN)	474	0.1
Other Fixed Service providers	2,692	0.4

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

3.4 Broadband[1] Services

3.4.1 Mobile Broadband

During the quarter under review, total broadband subscriptions stood at 25.76 million, down from 25.77 million subscriptions reported in the preceding quarter. The number of 3G broadband subscriptions declined to 13.3 million from 14.3 million subscriptions posted last quarter whereas, 4G broadband subscriptions grew by 8.3 in the referenced period to post 11.7 million subscriptions. The decline in 3G subscriptions is attributed to the increase in inactive mobile data/internet subscriptions following the resumption of physical learning in schools from the beginning of the year.

During the reference period, the Authority adopted the new broadband definition as outlined in the Kenya Broadband Strategy 2018-2023 and this also contributed to the decline in the number of fixed broadband subscriptions.

As shown in Table 16, the volume of mobile data consumed dropped by 1.3 percent to stand at 163.6 million from 165.8 million GB used in the second quarter.

[1] National Broadband Strategy 2018-2023 defines broadband as data/internet speeds equal to or greater than 2Mbps. National Broadband Strategy 2013-2017 as well as the ITU define broadband as data/internet speeds equal to or greater than 256Kbps. Broadband in this report has been defined using The National Broadband Strategy 2018-2023

Table 16: Broadband Subscriptions

Indicator/Period	Jan-Mar 21	Oct-Dec 20	Quarterly Variation (%)
Total Broadband Subscriptions	**25,760,072**	**25,775,873**	**-0.1**
Total Mobile Broadband Subscriptions	**25,070,158**	**25,114,693**	**-0.2**
3G Broadband Subscriptions	13,326,007	14,270,593	-6.6
4G Broadband Subscriptions	11,744,151	10,844,100	8.3
Fixed Broadband Subscriptions	**689,914**	**661,180**	**4.3**
Consumed Mobile Data Volumes (GB)	163,556,151	165,783,102	-1.3

Source: CA, Operators' Returns

3.4.2 Fixed Broadband Subscriptions

Table 17 illustrates broadband subscriptions by speed and technology.

Table 17: Fixed Broadband Subscriptions by Speed and Technology

Internet Technology/Speeds	=>256Kbps < 2Mbps	=>2 Mbps <10 Mbps	=>10Mbps <30 Mbps	=>30 Mbps <100Mbps	=>100Mbps	Totals
Cable Modem	-	124,514	33,443	21,773	695	184,425
Copper (DSL)	40	369	34	-	-	443
FTTH/O	4,741	183,955	121,145	105,490	3,058	418,389
Fixed Wireless	7,597	88,097	1,610	193	56	97,553
Satellite	428	650	133	-	-	1,211
Other Fixed	105	355	198	84	62	804
Totals	**12,911**	**397,940**	**160,563**	**127,540**	**3,871**	**702,825**

Source: CA, Operators' Returns

3.5 International Bandwidth

During the review period, the total International Internet bandwidth available in the country recorded a growth of 21.4 percent to stand at 9,820.46Gbps from 8,091.43Gbps posted in the last quarter. The growth is due to regular upgrade of SEACOM's network to enhance their capacity. On the contrary, Lion 2 lit capacity slightly declined due to termination of some Synchronous Digital Hierarchy (SDH) links that were ceased and are now in the process of being upgraded into new technology.

The total utilized bandwidth capacity increased by 7.3 percent to 4,299.26Gbps out of which, 2,611.47Gbps used in the country and 1,687.79Gbps sold outside the country.

The trends in International Lit/Equip and Used Bandwidth are as shown in Table 18.

Table 18: International Internet Bandwidth (Gbps)

Indicator/ Operator	Jan-Mar 21		Oct-Dec 20		Quarterly Variation (%)
Total Available (Lit/Equip) Bandwidth Capacity	**9,820.46**		**8,091.43**		**21.4**
Undersea Bandwidth Capacity	**SEACOM**	3,920.00	2,940.00		33.3
	TEAMS	1,618.00	1,618.00		0.0
	EASSY	3,950.00	3,160.00		25.0
	Lion 2	326.89	367.97		-11.2
Satellite Bandwidth Capacity	**5.57**		**5.46**		**2.0**
Utilized Bandwidth in Gbps					
Total Utilized Bandwidth Capacity					
Undersea Bandwidth Capacity	**Sold In Kenya**	**Sold to other Countries**	**Sold In Kenya**	**Sold to other Countries**	
	2,611.47	1,687.79	2,522.35	1,485.66	7.3
Satellite Internet Capacity	**2.69**		**2.58**		**4.3**

Source: CA, Operators' Returns

3.6 Registered Domain Names

The distribution of sub-domains in the country as at 31st March 2021 is as shown in Table 19

Table 19: .KE Domains

SUB-DOMAIN	USE	Jan-Mar 21		Oct-Dec 20	
		Domains	% Users	Domains	% Users
CO.KE	Companies	90,479	95.0	93,776	95.2
OR.KE	Non-Profit-Making Organizations	1,904	2.0	1,930	2.0
AC.KE	Institutions of Higher Education	951	1.0	962	1.0
SC.KE	Lower and Middle Level Institutions	850	0.9	838	0.9
NE.KE	Personal Websites and E-mail	52	0.1	51	0.1
ME.KE	Personal Websites and E-mail	176	0.2	182	0.2
MOBI.KE	Mobile Content	44	0.0	43	0.0
INFO.KE	Information	147	0.2	156	0.2
GO.KE	Government Institutions	598	0.6	606	0.6
Total		**95,201**		**98,544**	

Source: CA, Operators' Returns

4 National Cyber Threat Landscape

4.1 Cyber Threats Statistics

During the period under review, the National KE-CIRT/CC detected 28,247,819 cyber threat events. This was a 49.7 percent decrease from the previous period, where 56,206,097 cyber threat events had been detected as illustrated in the Table 20. It was however noted that cyber threat actors are increasingly developing and adopting sophisticated tools and methods that are designed to avoid detection while maximizing harm. In recognition of this trend, the National KE-CIRT/CC is upgrading its detection systems.

Trends in detected Cyber threats are illustrated in Table 20

Table 20: Cyber Threats Detected

Cyber Threat	*Jan-Mar 21*	*Oct-Dec 20*	*Quarterly Variation (%)*
Total	**28,247,819**	**56,206,097**	**-49.7**
Malware	21,559,181	46,069,525	-53.2
DDOS/Botnet	2,890,847	2,260,036	27.9
Web Application Attacks	3,767,588	7,847,457	52.0
System vulnerabilities	30,203	29,079	3.9

Source: National KE-CIRT/CC

In response to the detected cyber threat attempts, the National KE-CIRT/CC issued 25,506 advisories. This was an 18.56 percent increase compared to the 21,513 advisories that were issued during the period of October - December 2020. Cyber threats advisories is illustrated in Table 21

Table 21: Cyber Threats Advisories

Cyber Threat Advisories	*Jan-Mar 21*	*Oct-Dec 20*	*Quarterly Variation (%)*
Total	**25,506**	**21,513**	**18.6**
Malware	1,463	850	72.1
DDOS/Botnet	420	234	79.5
Web Application Attacks	267	625	-57.3
System Vulnerabilities	23,039	19,521	18.0
Others	317	283	12.0

Source: National KE-CIRT/CC

Further, during the period January – March 2021, the National KE-CIRT/CC received 298 digital investigation related requests as compared to 224 requests in the previous period, which represents a 33.0 percent increase. This increase is attributed to the notable rise in impersonation and online fraud as a result of the continued reliance on digital tools and online platforms amidst the COVID-19 pandemic. The National KE-CIRT/CC continues to carry out cyber awareness in an effort to counter these harmful online practices.

Table 22: Investigation Category

Investigation Category	*Jan-Mar 21*	*Oct-Dec 20*	*Quarterly Variation (%)*
Total	**298**	**224**	**33.0**
Impersonation	162	121	33.9
Online Fraud	63	32	96.9
Online Abuse	70	69	1.4
Child Abuse	3	2	50.0

Source: National KE-CIRT/CC

5 POSTAL AND COURIER SERVICES

During the quarter under review, the total number of letters posted locally was 231,506, down from 231,851 in the previous quarter, representing a decline of 0.1 percent. Other than the pandemics' impact on the economic activities, the Government's directive on adoption of ICTs as a means of communication and service delivery has also impacted postal services negatively, especially domestic mail services. On the other hand, the uptake of courier services grew significantly during the reference period as more Kenyans take preference on e-commerce as a way of curbing the spread of COVID-19.

The volume of international incoming letters grew by 14 percent to register 106,044, up from 92,989 registered during the previous period. Similarly, the number of letters sent to other countries increased by 7.4 percent to record 376,512 letters in the period under review as shown in Table 23.

Table 23: Postal and Courier Traffic

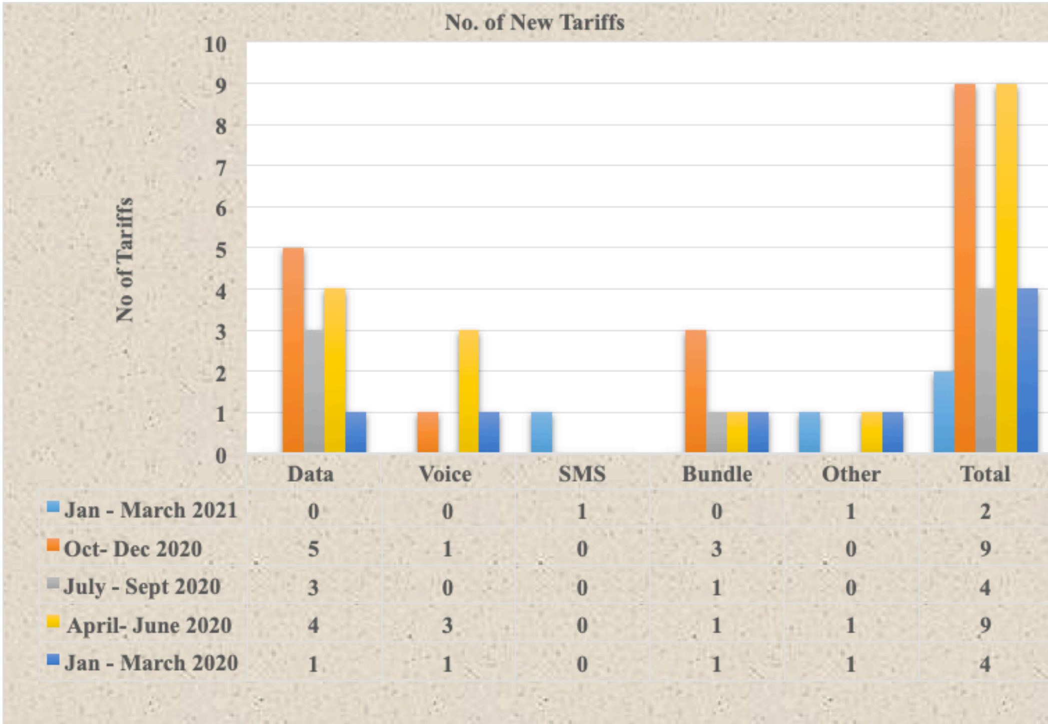
Postal and Courier Traffic	***Jan-Mar 21***	***Oct-Dec 20***	***Quarterly Variation (%)***
Number of Letters (Up to 350 gms) Posted Locally	231,506	231,851	-0.1
Total Courier Items Sent Locally	1,005,864	789,413	27.4
International Incoming Letters (Up to 350 gms)	106,044	92,989	14.0
International Outgoing Letters (Up to 350 gms)	376,512	350,496	7.4

Source: CA, Operators' Returns

6 TARIFFS, PROMOTIONS AND SPECIAL OFFERS

During the quarter under review, the Authority received 14 applications for new tariffs, and promotions & special offers, as compared to 27 applications received in the previous quarter. This represented a decline of 48.15 percent in the number of new applications received. In addition, the Authority received seven (7) applications for revisions of tariffs, and 1 withdrawal of existing tariff, during the third quarter of the FY 2020/21.

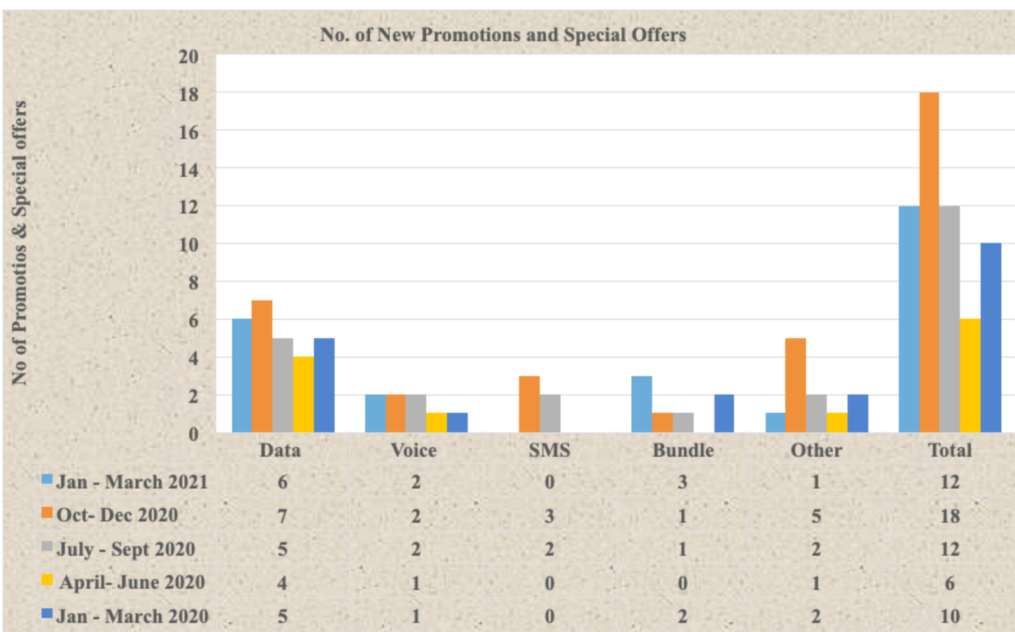
A detailed distribution of new applications for tariffs, and promotions & special offers over the past five quarters is illustrated in Figures 8 and 9 respectively.



	Data	Voice	SMS	Bundle	Other	Total
Jan - March 2021	0	0	1	0	1	2
Oct- Dec 2020	5	1	0	3	0	9
July - Sept 2020	3	0	0	1	0	4
April- June 2020	4	3	0	1	1	9
Jan - March 2020	1	1	0	1	1	4

Source: CA, filed tariffs, promotions and special offers

Figure 8: Tariffs



	Data	Voice	SMS	Bundle	Other	Total
Jan - March 2021	6	2	0	3	1	12
Oct- Dec 2020	7	2	3	1	5	18
July - Sept 2020	5	2	2	1	2	12
April- June 2020	4	1	0	0	1	6
Jan - March 2020	5	1	0	2	2	10

Source: CA, filed tariffs, promotions and special offers

Figure 9: Promotions and Special Offers

7 FREQUENCY SPECTRUM MANAGEMENT

To facilitate provision of communications services, the Authority made offer for frequencies for 289 microwave links to various operators for deployment during the reference period. Similarly, the Authority processed the decommissioning of 2 fixed links in the quarter. Further, during the quarter, the Authority assigned 16 FM sound broadcasting frequencies and authorized 15 assignments of frequencies with respect to digital broadcasting.

8 BROADCASTING SERVICES

By the end of quarter 3, the number of commercial free-to-air (FTA) television stations on air stood at 130, an increase from 122 in quarter 2 of FY2020/21. The number of other television broadcasting categories remained at three (3) and two (2) for Public FTA TV and Community FTA TV respectively. During this period, the number of FM radio stations also remained at 131 for Commercial FM radio, 13 for Public FM radio and 42 for Community FM radio stations.

As at 31st March 2021, new subscriptions for broadcasting services had grown by 2.5 percent to post a total of 5,537,355 subscribers from 5,153,532 subscriptions reported in the last quarter. This consists of 4,001,566 subscribers on DTT platform, 1,453,438 subscribers on DTH platform and 82,351 subscribers on the cable TV platform.

9 CONCLUSION

The telecommunications sector remains intrinsic to the country's economic growth, with data infrastructure becoming an essential enabler for other sectors. On 26th March 2021, Safaricom PLC launched 5G trials with 15 sites and unveiled plans to increase the number to over 150 in nine towns across the country. The 5G technologies will offer superior speeds, latency, connections, remote coverage and efficient energy consumption. The consumption of high-speed data is expected to grow with changes in technologies as well as availability of various apps and social media platforms.