FIRST QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2021/2022 (JULY - SEPTEMBER 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
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
Mbps Megabits per second
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
TEAMS The East African Marine SystemLTE Long Term Evolution
UMTS Universal Mobile Telecommunication 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 published 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) in line with international standards. The Manual is available on CA website https://ca.go.ke/wp-content/uploads/2020/03/ICT-Indicators-Manual-2019-.pdf

SUMMARY OF CORE COMMUNICATION INDICATORS

The Sector Statistics Report for the First Quarter of the 2021/22Financial Year provides an overview of the performance and trends in the ICT sector for the period 1st July to 30th September 2021 in the following categories:

- Mobile Services
- Fixed Services
- Registered Domain Names
- National Cyber Security Landscape
- Broadcasting Services
- Courier Services
- Frequency Spectrum Management

	Jul-Sept 2021 Q1	Apr-Jun 2021 Q4	Quarterly Variation (%)
MOBILE SERVICES			
Subscription to Mobile Services			
Total Mobile (SIM) Subscriptions	64,897,016	64,402,022	0.8
Mobile Data Subscriptions	44,878,405	46,002,220	-2.4
Mobile Broadband Subscriptions	26,899,597	26,757,648	0.5

	Jul-Sept 2021 **Q1**	Apr-Jun 2021 **Q4**	Quarterly Variation (%)
Machine to Machine Subscriptions	988,184	909,145	8.7
Mobile Money Subscriptions	34,586,848	34,664,707	-0.2
Mobile Money Transfer Services			
Number of Registered Mobile Money Agents	289,095	283,357	2.0
Value of C2B Transfers in KES	1,196,391,334,211	988,018,815,400	21.1
Value of B2C Transfers in KES	817,677,356,335	721,923,115,562	13.3
Value of B2B Transfers in KES	1,960,759,312,250	1,708,523,490,893	14.8
Value of G2C Transfers in KES	1,885,367,083	2,671,076,965	-29.4
Value of C2G Transfers in KES	12,331,336,677	11,576,180,527	6.5
Number of P2P Transfers	912,039,926	838,263,623	8.8
Value of P2P Transfers in KES	1,081,900,345,466	1,010,533,046,147	7.1
Total value of Deposits in KES	1,181,270,848,413	1,018,040,156,765	16.0
Domestic Mobile Traffic			
Mobile Voice Traffic (Minutes)			
On-Net Voice Traffic	17,927,846,457	17,056,254,041	5.1
Off-Net Voice Traffic	2,432,184,882	2,439,327,547	-0.3
Mobile Network to Fixed Network	17,580,552	16,142,890	8.9
Mobile SMS Traffic			
SMS On-Net	8,757,490,864	11,567,936,342	-24.3
SMS Off-Net	942,037,904	1,204,048,162	-21.8
International Mobile Traffic			
Mobile Voice Traffic (Minutes)			
International	118,387,308	116,895,729	1.3

	Jul-Sept 2021 Q1	Apr-Jun 2021 Q4	Quarterly Variation (%)
Incoming Mobile Voice Traffic			
International Outgoing Mobile Voice Traffic	125,205,854	135,883,932	-7.9
Mobile SMS Traffic			
International Incoming SMS	8,342,976	10,898,195	-23.4
International Outgoing SMS	5,149,482	8,330,580	-38.2
Roaming Traffic			
Out-bound Roaming Traffic			
Out-bound Roaming Incoming Voice Traffic (Minutes)	110,545,970	101,521,611	8.9
Out-bound Roaming Outgoing Voice Traffic (Minutes)	12,186,553	13,143,701	-7.3
Out-bound Roaming Incoming SMS	38,105,963	31,645,048	20.4
Out-bound Roaming Outgoing SMS	16,512,750	16,269,889	1.5
Data Volumes (MB)	42,851,348	35,472,644	20.8
In-bound Roaming Traffic			
In-bound Roaming Incoming Voice Traffic (Minutes)	38,474,939	39,547,964	-2.7
In-bound Roaming Outgoing Voice Traffic (Minutes)	3,324,193	2,696,103	23.3
In-bound Roaming Incoming SMS	27,494,894	23,723,065	15.9
In-bound Roaming Outgoing SMS	1,583,318	1,434,964	10.3
Data Volumes (MB)	35,761,153	24,353,119	46.8

	Jul-Sept 2021 Q1	Apr-Jun 2021 Q4	Quarterly Variation (%)
FIXED SERVICES			
Fixed Voice Subscriptions			
Fixed Line Subscriptions	14,068	14,691	-4.2
Fixed Wireless Subscriptions	1,187	1,144	3.8
Fixed VoIP Subscriptions	44,876	42,162	6.4
Domestic Fixed Voice Traffic			
Fixed line-Fixed line	132,933	128,595	3.4
Fixed Wireless-Fixed Wireless	285,129	264,958	7.6
Fixed to Mobile	5,334,783	5,041,891	5.8
International Fixed Voice Traffic			
Incoming Fixed Voice Traffic	3,739,757	4,346,644	-14.0
Outgoing Fixed Voice Traffic	1,382,510	1,243,646	11.2
Outgoing Fixed VOIP	602,079	677,728	-11.2
International Internet Bandwidth			
Total Available International Bandwidth (Gbps)	10,258.68	10,217.46	0.4
Total Used International Bandwidth (Gbps)	4,787.17	4,575.16	4.6
NATIONAL CYBER THREAT LANDSCAPE			
Total Cyber Threats Detected	143,040,599	38,776,699	268.9
Total Cyber Threat Advisories	73,578	25,969	183.3
Total Investigation Category	247	529	-53.3

	Jul-Sept 2021	Apr-Jun 2021	Quarterly Variation (%)
	Q1	**Q4**	
BROADCASTING SERVICES			
Commercial FTA TV Stations on Air	130	130	0.0
Commercial FM Radio Stations on Air	131	131	0.0
Total Broadcasting Subscriptions	5,793,392	5,675,549	2.1
COURIER SERVICES			
Number of Letters (Up to 350 gms) Posted Locally	246,509	305,998	-19.4
Total Courier Items Sent Locally	957,950	940,134	1.9
International Incoming Letters (Up to 350 gms)	83,132	98,074	-15.2
International Outgoing Letters (Up to 350 gms)	344,835	355,491	-3.0
Total Population in Kenya (Millions)*	**48.7**	**48.7**	**0.0**

*2021 Economic Survey. ** 2019 Kenya Population and Housing Census

1 MOBILE SERVICES

1.1 Subscription to Mobile Services

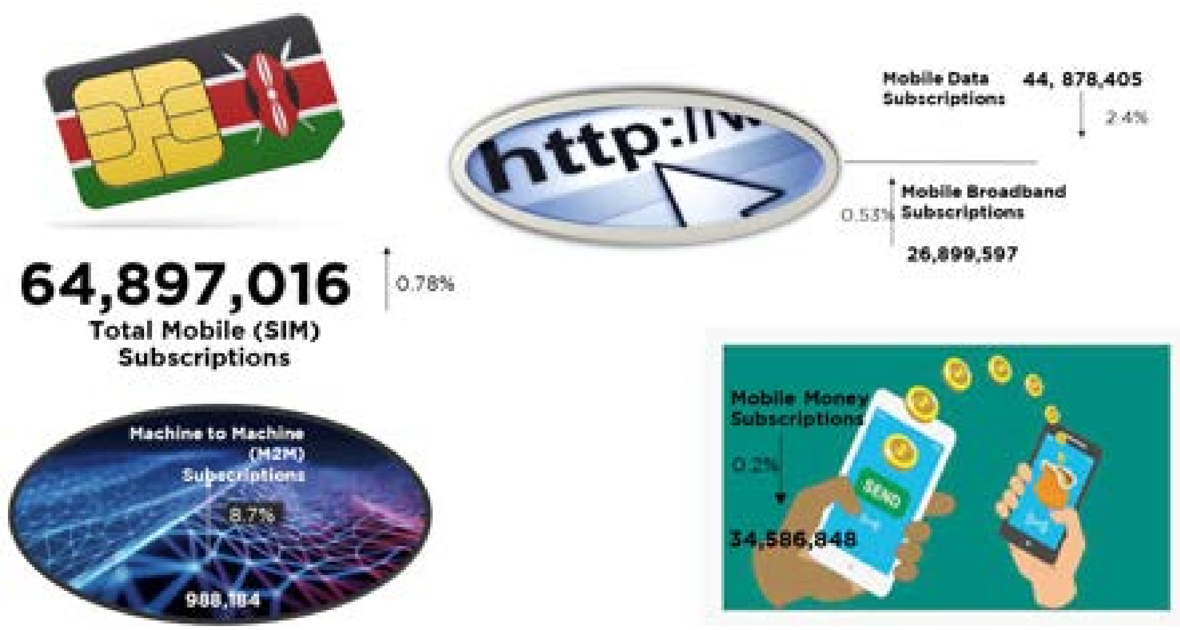


Figure 1: Mobile Services Subscriptions

As at 30th September 2021, the number of active mobile subscriptions (SIM Cards) stood at 64.9 million, marking a percentage increase of 0.78% down from 3.9% increase recorded as at 30th June 2021. The slow uptake of subscriptions is as a result of decommissioning of the USSD customer acquisition channel and absolute adoption of the App channel for SIM registration in line with the Authority's SIM registration guidelines. Further, Machine-to-Machine (M2M)[1] subscriptions increased by 8.7% to stand at 988,184.

The COVID-19 pandemic has resulted in significant changes in consumer behavior in terms of conducting day-to-day activities and handling cash, with most Kenyans turning to the use of mobile money as a safer mode of transaction. Most consumers decreased their spending and increased their borrowing especially on mobile loan platforms such as Fuliza. As at the end

[1] **Machine to Machine mobile-network subscriptions (M2M subscriptions)** refers 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 should be included. Mobile dongles and tablet subscriptions should be excluded. Only active subscriptions are counted

of the period under review, the number of active[2] mobile money subscriptions dropped by 0.2% to stand at 34.59 million subscriptions. This is attributed to the increase in the number of mobile loan defaulters whose SIM cards remained inactive during the reference period.

Infrastructure improvements underpinned by availability of cheap smartphones and digitization of crucial government services has driven increased access to and use of Internet services in the country in the recent years. The COVID-19 pandemic also boosted the uptake for ICT services with the Internet playing a key role in online service delivery. However, in Q1 of the Financial Year 2021/22, the number of active SIM cards subscribed to mobile data/Internet services declined by 2.4% to record 44.88 million subscriptions from 46.0 million subscriptions recorded during the preceding quarter. The number of mobile data subscriptions reported by Safaricom PLC declined by a similar margin due to the conclusion of the various data promotions aimed at attracting new customers during the previous quarter. Nevertheless, mobile broadband[3] subscriptions gained by 0.53% to stand at 26.90 million, which implies that there was increased demand and uptake of higher Internet speeds by a majority of the subscribed mobile data/Internet users.

1.1.1 Mobile (SIM) Subscriptions by Contract Type

The breakdown on mobile (SIM) subscriptions per operator by contract type is as illustrated in Figure2 below.

[2] **Active Mobile Money Subscriptions** refers to the total number of mobile money customer accounts that have used the service to make any transactions that involve the movement of value (such as to cash-in, cash-out, bill payments, airtime top-ups, etc.) at least once in the last three months. Only those accounts that were used to make transactions that involve the movement of value within 90 days before the reference period should be counted as active. Transactions that do not involve the movement of value, such as balance enquiry and password resets, amongst others, do not qualify a customer account as active. Subscribers who perform over the counter transactions but have not been registered should not be counted. Mobile insurance service and mobile banking accounts should not be counted as registered mobile money accounts, as they are different services.

[3] **Broadband** refers to data/internet speeds equal to and/or above 2Mbps. Mobile broadband considers UMTS and LTE

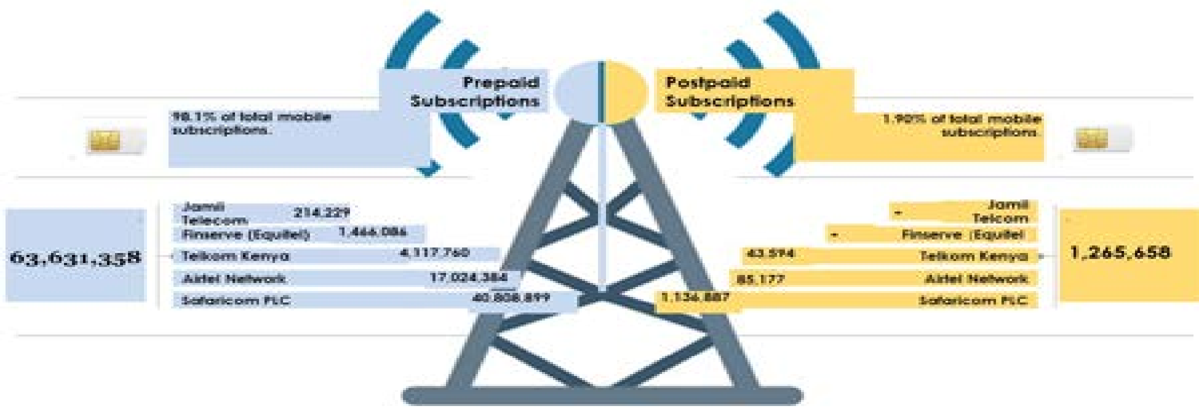


Figure 2: Mobile Subscriptions per Operator by Contract Type

1.1.2 Market Shares in Subscriptions for Mobile Services

As at the end of September 2021, Safaricom PLC recorded the highest market shares in mobile (SIM) subscriptions, mobile money, mobile data and mobile broadband subscriptions, whereas Jamii Telecommunication and Finserve Africa recorded the least market shares in total subscriptions and mobile broadband subscriptions respectively.

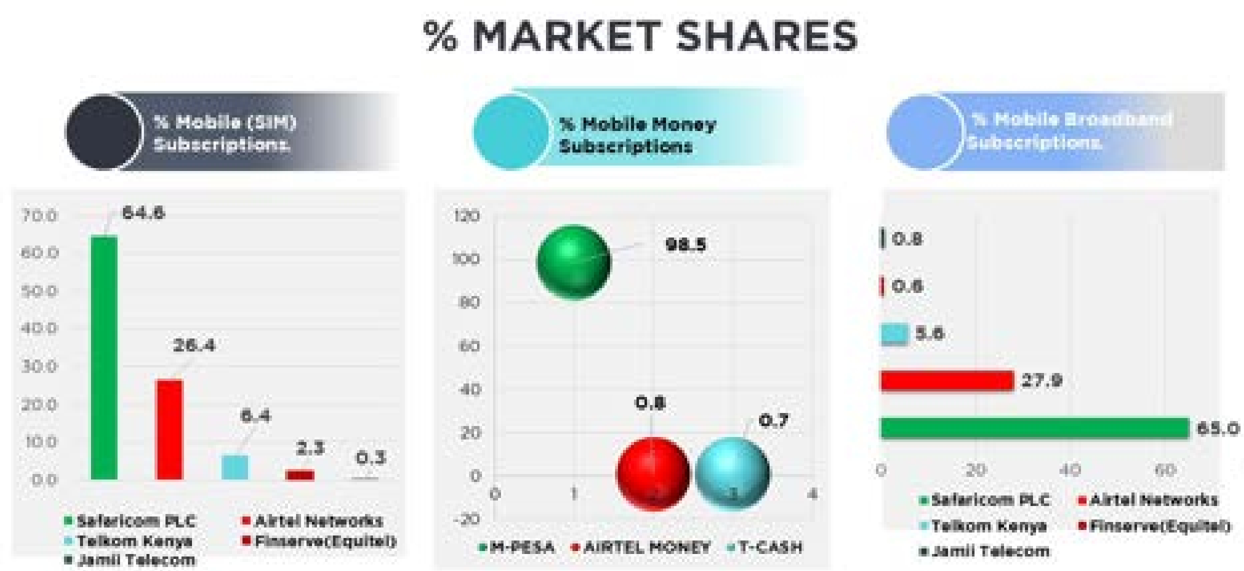


Figure 3: % Market Shares in Subscriptions for Mobile Service

1.2 Penetration of Mobile Services

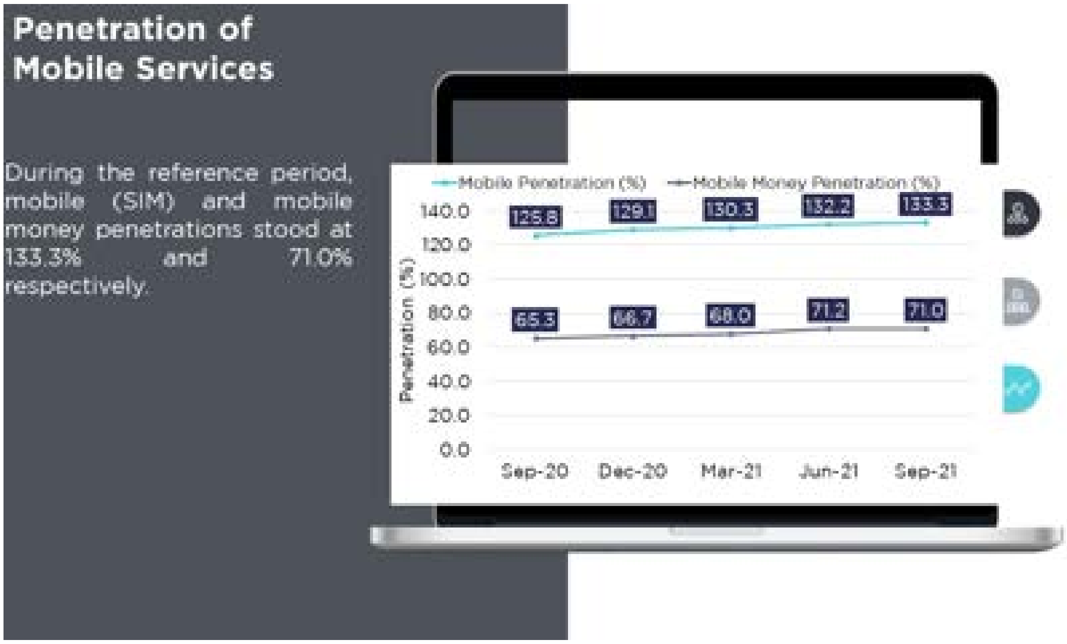


Figure 4: Penetration of Mobile Services

1.3 Mobile Phone Devices

As at 30th September 2021, the number of mobile phone devices accessing mobile networks stood at 59.0 million, out of which 33.0 million were feature phones and 26.0 million smartphones. The penetration[4] levels of feature phones and smartphones stood at 67.9% and 53.4% respectively.

[4] **Penetration levels** for the respective categories of mobile phone devices is computed by expressing the number of devices as a percentage of the total national population (48.7 million as per 2021 Economic Survey) and therefore the total penetration cannot be equated to 100%

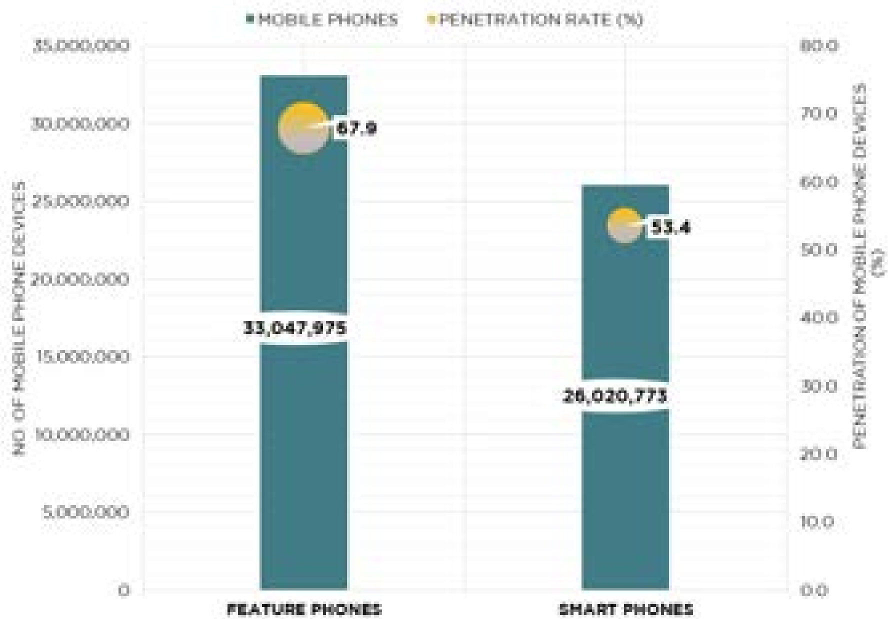


Figure 5: Mobile Phone Devices

1.4 Mobile Broadband Subscriptions by Technology

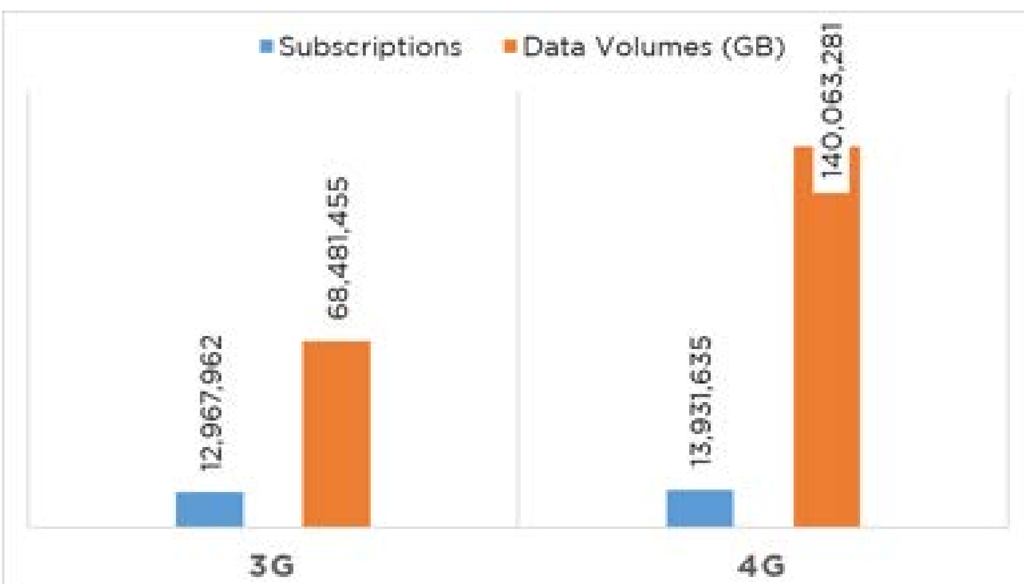


Figure 6: Mobile Broadband Subscriptions by Technology

1.5 Mobile Money Transfer Services

The COVID-19 pandemic has encouraged more consumers to adopt mobile money in purchasing essential goods and services. Consequently, there has been a general uptick in merchant payments and deposits, and the period under review was no exception. However, the value of Government to Citizens (s) transfers dropped by 29.4% due to reduction in COVID-19 fund disbursements by the Government.

Mobile Money Brand/Indicator	Jul-Sep 21	Apr-Jun 21	Quarterly Variation (%)
Agents	289,095	283,357	2.0
Value of C2B Transfers in KES	1,196,391,334,211	988,018,815,400	21.1
Value of B2C Transfers in KES	817,677,356,335	721,923,115,562	13.3
Value of B2B Transfers in KES	1,960,759,312,250	1,708,523,490,893	14.8
Value of G2C Transfers in KES	1,885,367,083	2,671,076,965	-29.4
Value of C2GTransfers in KES	12,331,336,677	11,576,180,527	6.5
Volume of P2P Transfers	912,039,926	838,263,623	8.8
Value of P2PTransfers in Kshs.	1,081,900,345,466	1,010,533,046,147	7.1
Total value of Deposits in Kshs	1,181,270,848,413	1,018,040,156,765	16.0

Figure 7:Mobile Money Transfer Services

The values in mobile money transfers per operator is as indicated in Table 1.

Table 1: Mobile Money Transfer Services per Operator

Mobile Money Brand/Indicator	*M-Pesa*	*Airtel Money*	*T-Kash*	*Total*
Agents	257,840	22,197	9,058	**289,095**
Active Registered Mobile Money Subscriptions	34,059,951	277,143	249,754	**34,586,848**
Value of C2B Transfers in KES	1,195,116,507,286	1,227,534,204	47,292,721	**1,196,391,334,211**
Value of B2C Transfers in KES	817,276,021,943	315,370,784	85,963,608	**817,677,356,335**
Value of B2B Transfers in KES	1,960,759,312,250	-	-	**1,960,759,312,250**
Value of G2C Transfers in KES	1,885,367,083	-	-	**1,885,367,083**
Value of C2GTransfers in KES	12,317,295,286	13,998,806	42,585	**12,331,336,677**
Volume of P2P Transfers	911,300,298	302,581	437,047	**912,039,926**
Value of P2PTransfers in Kshs.	1,081,370,976,204	402,575,469	126,793,793	**1,081,900,345,466**
Total value of Deposits in Kshs	1,179,378,001,797	1,852,959,029	39,887,587	**1,181,270,848,413**

1.6 Mobile Number Portability

A total of 329 mobile numbers were ported during the reference period as illustrated in figure 8 below.

Figure 8: Mobile In-Port

1.7 Domestic Mobile Traffic

1.7.1 Mobile Voice Traffic (Minutes)

The trends in domestic voice traffic are as shown in figure 9.

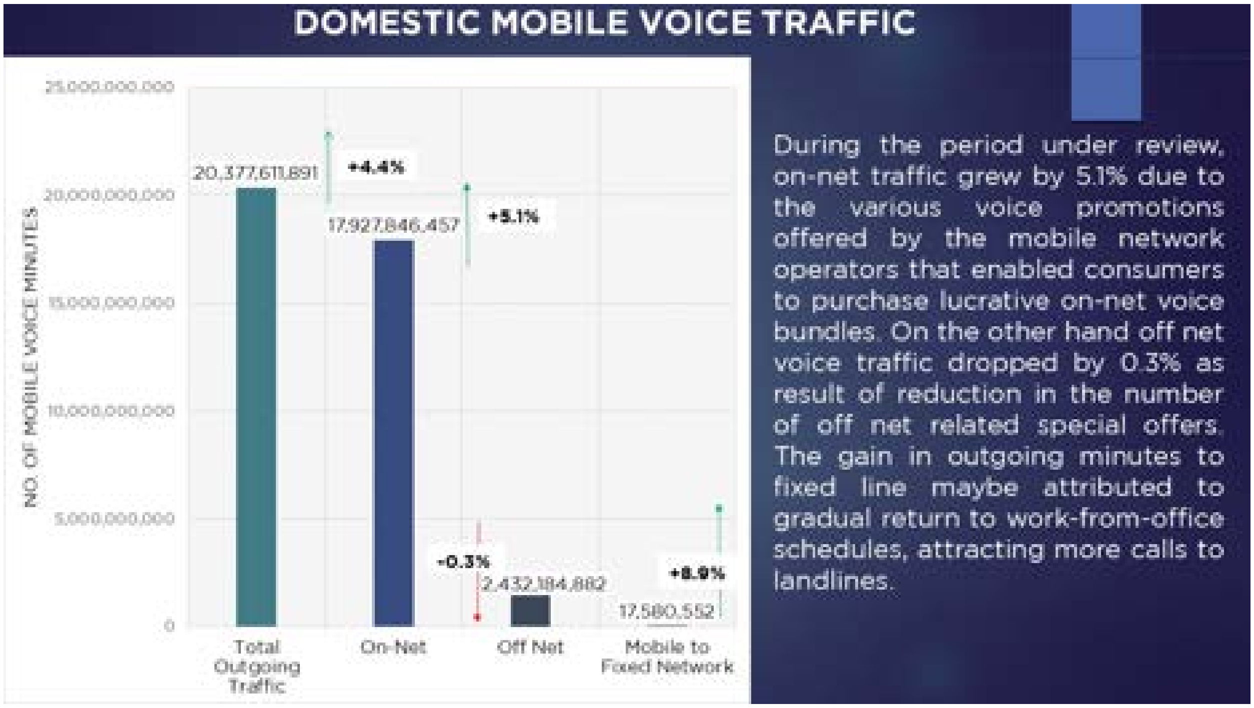


Figure 9: Mobile Voice Traffic

1.7.2 Mobile SMS Traffic

During the period July to September 2021, the number of on-net and off net messages declined by 24.3% and 21.8% respectively. The drop in domestic SMS traffic is attributed to lack of SMS promotions and special offers during the reference period as illustrated in figure 14 on tariffs and promotions coupled with the continued preference of OTT services over SMS.

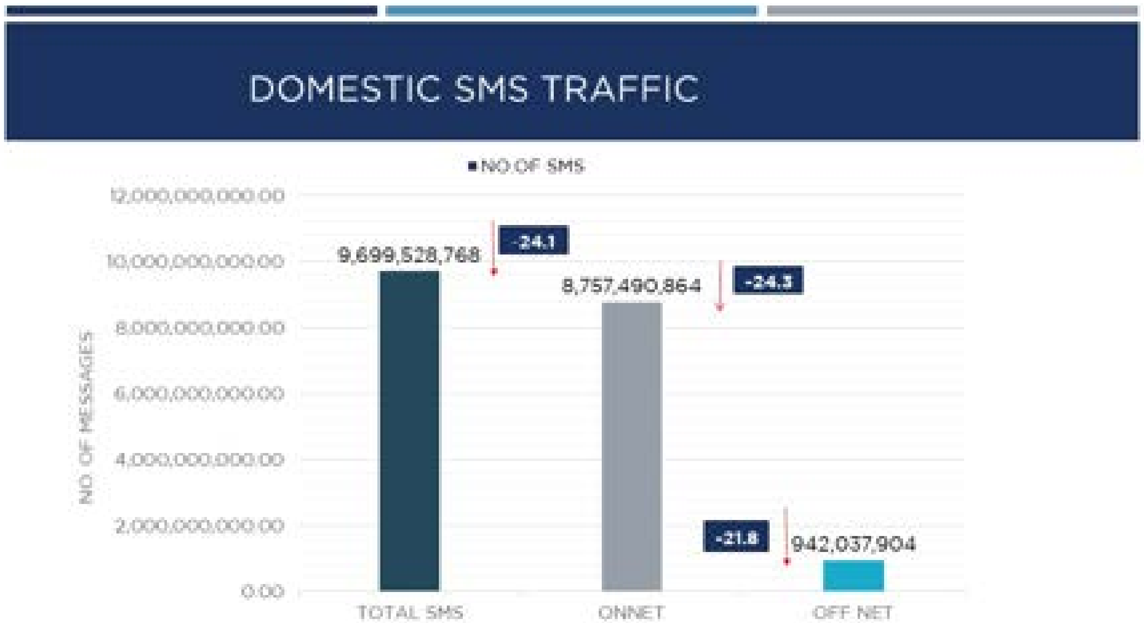


Figure 10: Domestic SMS Traffic

1.7.3 Voice and SMS Traffic per Operator

The trends in domestic voice and SMS traffic per operator are as shown in Table 2.

Table 2: Voice and SMS Traffic per Operator

Service	Category	Safaricom PLC	Airtel Networks	Telkom Kenya	Equitel	Jamii Telecommunication	Total
VOICE	***On-net***	13,305,411,255	4,436,453,103	183,569,214	2,382,560	30,325	17,927,846,457
	Off-net	729,859,024	1,484,480,850	197,763,801	18,719,754	1,361,453	2,432,184,882
	Total	**14,035,270,279**	**5,920,933,953**	**381,333,015**	**21,102,314**	**1,391,778**	20,360,031,339
SMS	***On-net***	8,247,852,493	501,991,456	5,818,571	1,822,575	5,769	8,757,490,864
	Off-net	407,875,135	484,725,943	43,677,684	5,655,464	103,678	942,037,904
	Total	**8,655,727,628**	**986,717,399**	**49,496,255**	**7,478,039**	**109,447**	9,699,528,768

1.7.4 Minutes of Use per Call per Operator

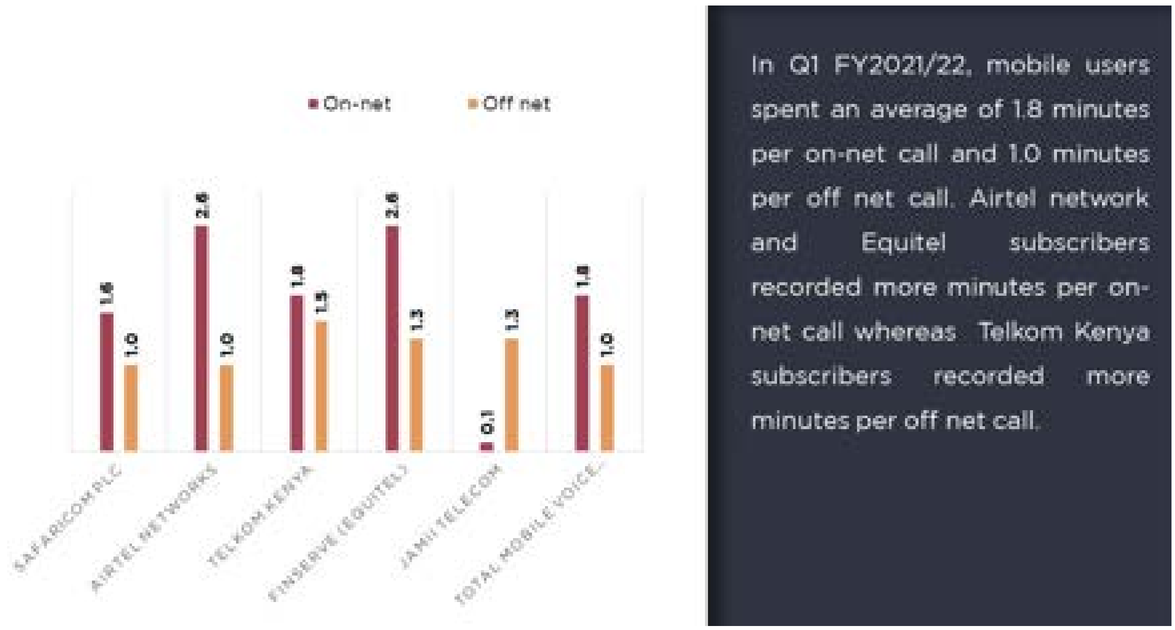


Figure 11: Minutes of Use per Call per Operator

1.7.5 Market Shares in Domestic Mobile Traffic

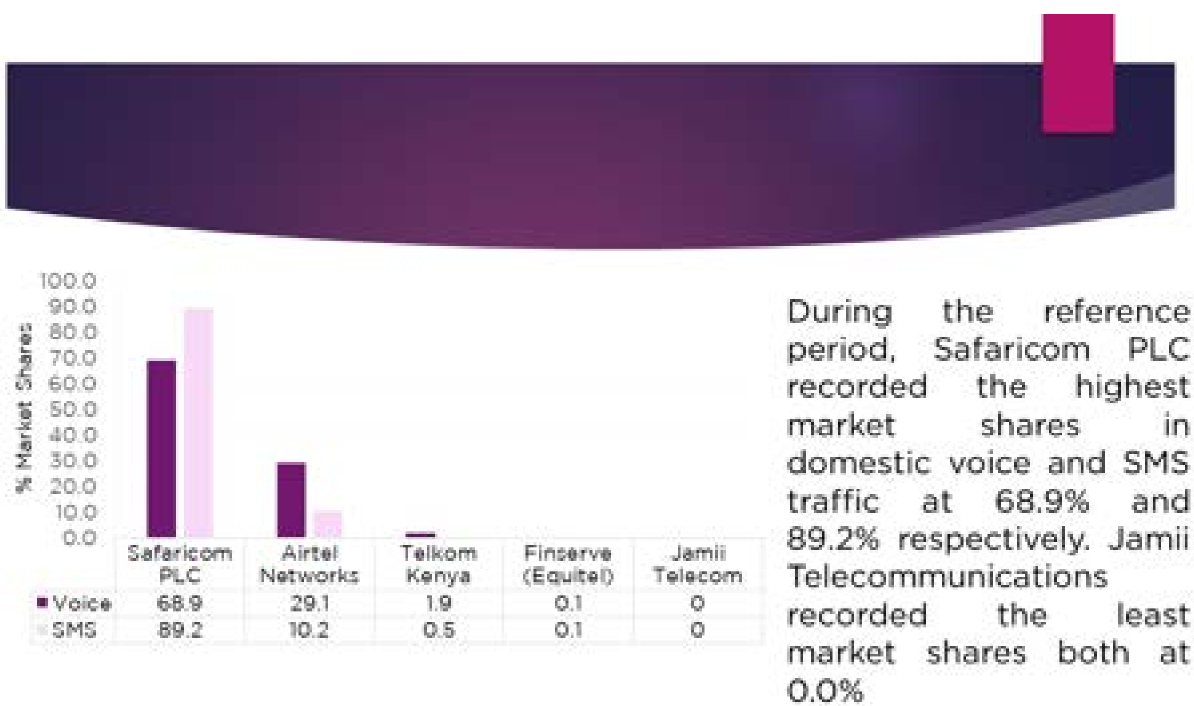


Figure 12: Market Shares in Domestic Mobile Traffic

1.7.6 Minutes/Month/Subscription vs SMS/Month/Subscription

The number of minutes of use per month per subscription increased from 101.0 reported last quarter to 104.7 minutes during the reference period. In contrast, the volume of messages sent per month per subscription dropped from 66.1 to 49.8 messages as illustrated in figure 13.

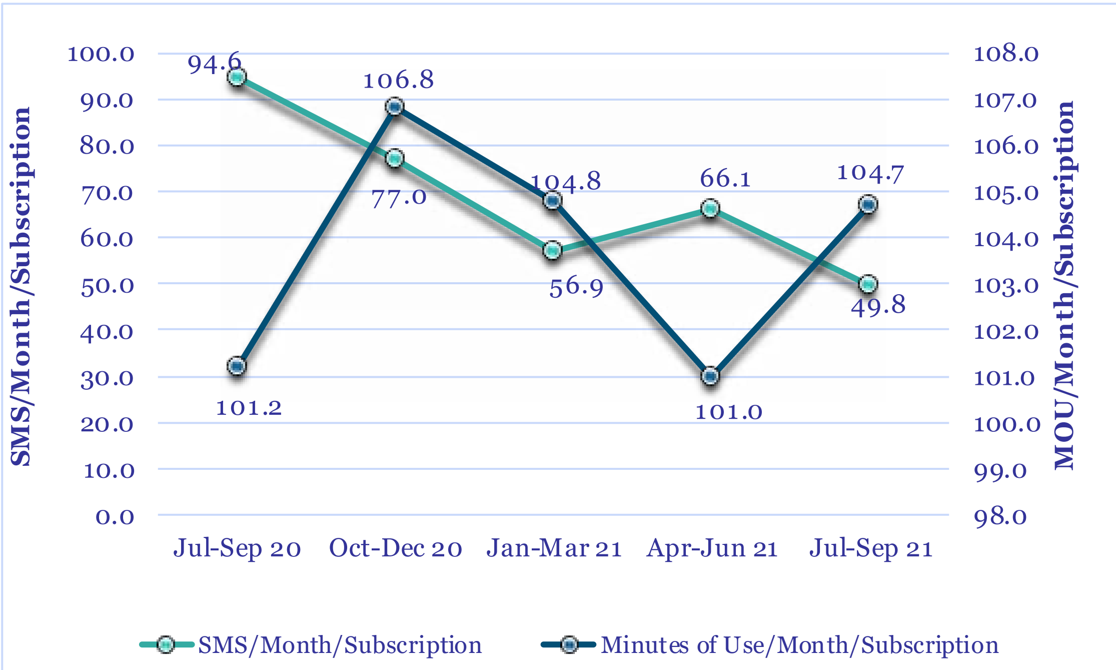


Figure 13: Minutes vs SMS/Month/Subscription

1.8 International Mobile Traffic

The first quarter of the FY 2021/22 recorded a general decline in international mobile traffic especially outgoing traffic due to the increase in calling rates for international outgoing calls following the implementation of the Finance Act 2021 that resulted in the increase of excise duty from the initial 15.0% to 20.0%.

Table 3: International Mobile Traffic

Traffic	*Region*	*Jul-Sept 21*	*Apr-Jun 21*	*Quarterly Variation (%)*
International Incoming Mobile Voice Minutes	*EAC*	69,618,395	65,559,480	6.2
	Others	48,768,913	51,336,249	-5.0
	Total	118,387,308	116,895,729	1.3
International Outgoing Mobile Voice Minutes	*EAC*	68,837,337	71,297,157	-3.5
	Others	56,368,517	64,586,775	-12.7
	Total	125,205,854	135,883,932	-7.9
International Incoming Mobile SMS		8,342,976	10,898,195	-23.4
International Outgoing Mobile SMS		5,149,482	8,330,580	-38.2

1.9 Roaming Traffic

The trends in outbound and inbound roaming traffic are as shown in Tables 4 and 5 below.

1.9.1 Out-bound Roaming Traffic

Table 4: Outbound Roaming Traffic

Country / Indicator	*Incoming Voice (Minutes)*	*Incoming SMS*	*Outgoing Voice (Minutes)*	*Outgoing SMS*	*Data Volumes (MB)*
Uganda	97,427,344	4,009,886	4,603,411	3,528,533	21,051,385
Tanzania	354,482	10,895,921	482,805	1,591,861	3,038,215
Rwanda	5,737,557	335	413,206	275,559	902,023
Burundi	6,215	326,372	2,081	21,904	7,859
S. Sudan	5,729,937	554,041	1,217,751	1,024,295	106,057
EAC Total	**109,255,535**	**15,786,555**	**6,719,254**	**6,442,152**	**25,105,539**
Others	1,290,435	22,319,408	5,467,299	10,070,598	17,745,809
Total	**110,545,970**	**38,105,963**	**12,186,553**	**16,512,750**	**42,851,348**

1.9.2 In-bound Roaming Traffic

Table 5: Inbound Roaming Traffic

Country / Indicator	*Incoming Voice (Minutes)*	*Incoming SMS*	*Outgoing Voice (Minutes)*	*Outgoing SMS*	*Data Volumes (MB)*
Uganda	24,568,854	4,125,515	945,480	290,111	539,069
Tanzania	88,841	9,026,113	106,142	100,690	145,279
Rwanda	7,968,216	1,202,313	178,673	20,419	426,972
Burundi	1,089	15,391	2,018	3,049	453
S. Sudan	4,780,058	480,866	77,357	171,881	321,070
EAC Total	**37,407,058**	**14,850,198**	**1,309,670**	**586,150**	**1,432,843**
Others	1,067,881	12,644,696	2,014,523	997,168	34,328,310
Total	**38,474,939**	**27,494,894**	**3,324,193**	**1,583,318**	**35,761,153**

1.10 Tariffs and Promotions

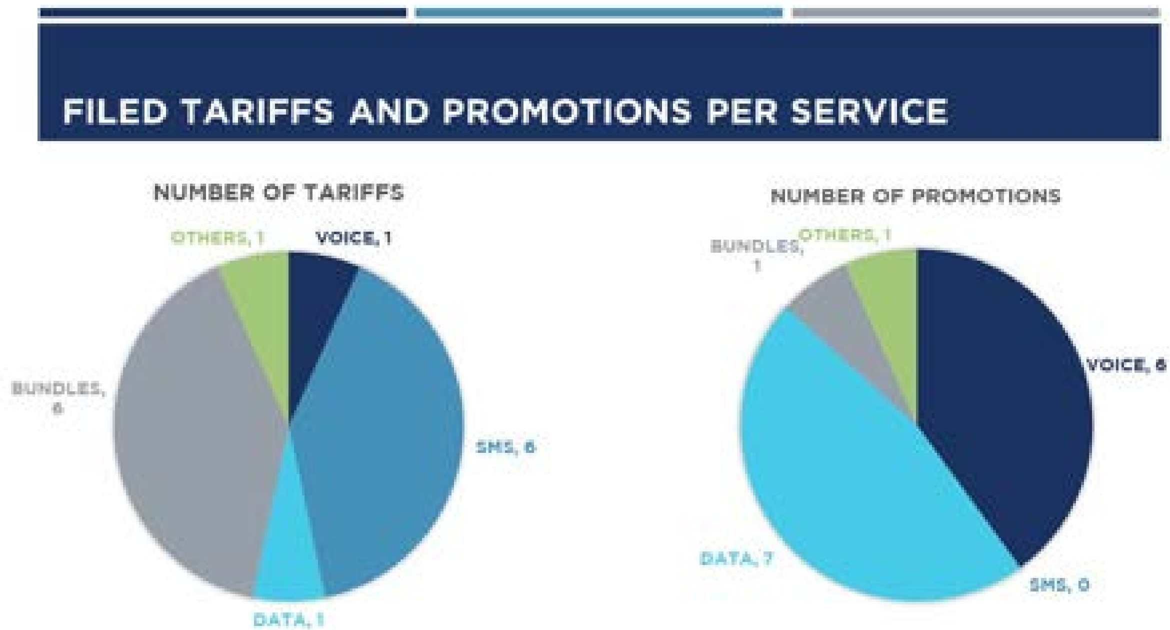


Figure 14: Tariffs and Promotions

2 FIXED SERVICES

2.1 Fixed Voice Subscriptions

During the reference period, fixed line subscriptions maintained a downward trend whereas fixed wireless and fixed VoIP subscriptions increased by 3.8% and 6.4% respectively. The growth is due to working from office schedules following the decline in COVID-19 infection rate.

Table 6: Fixed Voice Subscriptions

Subscriptions	*Sept-21*	*Jun-21*	*Quarterly Variation (%)*
Fixed Line	14,068	14,691	-4.2
Fixed Wireless	1,187	1,144	3.8
Fixed VoIP	44,876	42,162	6.4

2.2 Domestic Fixed Voice Traffic

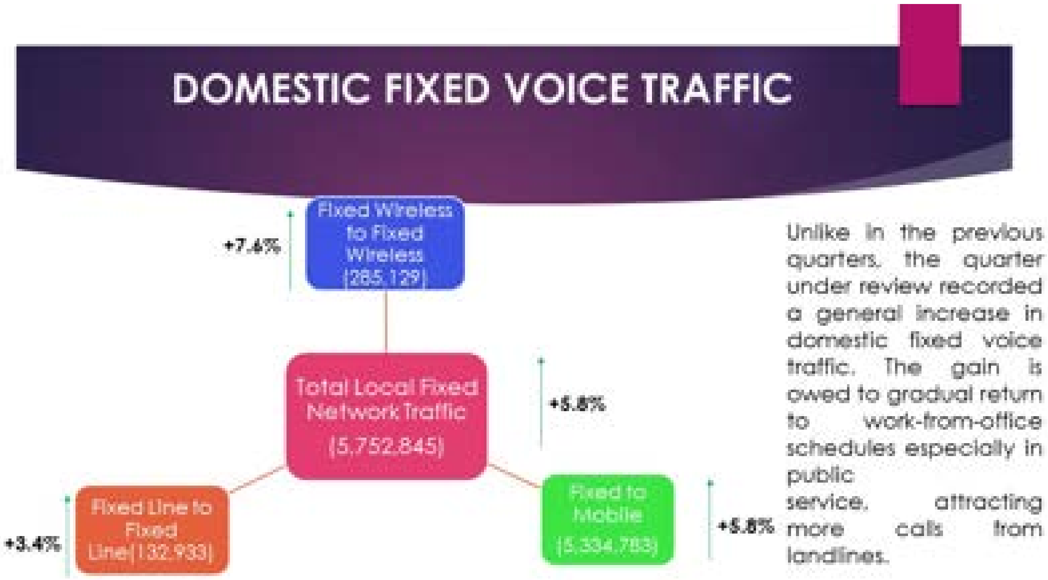


Figure 15: Domestic Fixed Traffic

2.3 International Fixed Voice Traffic

International incoming fixed voice traffic maintained a downward trend during the quarter to record 3.7 million minutes from 4.3 million recorded during the previous period. This is due to continued remote working and online conduction of business especially in foreign countries with an aim of curbing the spread of COVID 19. However, international outgoing fixed voice traffic picked up during the quarter to record a growth of 11.2%. The gain is owed to gradual return to work-from-office schedules especially in public service, attracting more calls from landlines.

Figure 16: International Fixed Traffic

2.4 Fixed Data and Broadband Services

During the period under review, the highest numbers of data subscriptions were on data speeds between 2Mbps and 10 whereas data speeds equal to or greater than 100Mbps recorded the least number of subscriptions.

Table 7: Fixed Data and Broadband Subscriptions

Technology /Speeds	***<256K bps***	***=>256Kbps < 2Mbps***	***=>2 Mbps <10 Mbps***	***=>10Mbps <30 Mbps***	***=>30 Mbps <100Mbps***	***=>100 Mbps***	***Totals***
Cable Modem	0	0	102,560	61,493	19,188	610	183,851
Copper (DSL)	27	31	738	63	40	0	899
FTTH/O	0	4,722	201,474	143,236	107,963	3,276	460,671
Fixed Wireless	9,951	7,978	101,008	1,908	267	98	121,210
Satellite	34	416	647	128	0	0	1,225
Other Fixed	0	84	285	159	67	50	645
Totals	**10,012**	**13,231**	**406,712**	**206,987**	**127,525**	**4,034**	**768,501**

2.5 Fixed Data Subscriptions by Operator

Table 8: Fixed Data/Internet Subscriptions by Operator

Name of service Provider	***Data/Internet Subscriptions***	***% Market share***
Safaricom PLC	284,420	37.0
Wananchi Group (Kenya) Ltd*	224,124	29.2
Jamii Telecommunications Ltd	145,337	18.9
Poa Internet Kenya Ltd	69,906	9.1
Liquid Telecommunications Kenya Limited	15,458	2.0
Mawingu Networks Ltd	11,557	1.5
Dimension Data Solutions East Africa Limited	9,960	1.3
Telkom Kenya Ltd	3,870	0.5
Fibrelink Limited	541	0.1
Other Fixed Service providers	3,328	0.4

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

2.6 International Internet Bandwidth

Table 9: International Internet Bandwidth in Mbps

Indicator/ Operator	*Jul-Sept 21*		*Apr-June 21*		*Quarterly Variation (%)*
Total Available (Lit/Equip) Bandwidth Capacity (Mbps)	**10,258.68**		**10,217.46**		**0.4**
Undersea Bandwidth Capacity (Mbps)	***SEACOM***	3,920.000	3,920.000		0.0
	TEAMS	1,618.000	1,618.000		0.0
	EASSY	4,080.000	4,120.000		-1.0
	Lion 2	635.350	554.125		14.7
Satellite Bandwidth Capacity (Mbps)	**5.33**		**5.33**		**0.0**
Total Utilized Bandwidth Capacity (Mbps)					
Undersea Bandwidth Capacity (Mbps)	***Sold In Kenya***	***Sold to other Countries***	***Sold In Kenya***	***Sold to other Countries***	
	2,927.79	1,856.82	2,814.78	1,757.82	4.6
Satellite Internet Capacity (Mbps)	2.56		2.56		0.0

3 REGISTERED DOMAIN NAMES

As at the end of the reference period, the number of .ke domains stood at 90,805 .co.ke domain recorded the highest number of users at 94.6% of the total whereas .mobi.ke domain recorded the least number of users at 0.0% of the total domains.

SUB-DOMAIN	USER	DOMAINS	% USERS
CO.KE	Companies	85,932	94.6
OR.KE	Non-Profit-Making Organizations	1,891	2.1
AC.KE	Institutions of Higher Education	1,005	1.1
SC.KE	Lower and Middle Level Institutions	976	1.1
NE.KE	Personal Websites and E-mail	49	0.1
ME.KE	Personal Websites and E-mail	161	0.2
MOBI.KE	Mobile Content	39	0.0
INFO.KE	Information	146	0.2
GO.KE	Government Institutions	606	0.7
TOTAL		**90,805**	**100**

Figure 17: .KE Domains

4 NATIONAL CYBER THREAT LANDSCAPE

4.1 Cyber Threats Detected

The rise in cyber threat events detected was attributed to the significant increase in targeted attacks at critical systems and services; increased activity by ransomware groups; adoption of more sophisticated tools by cyber threat actors; increased targeted attacks at Internet of Things (IoT) devices; increased exploits of third-party mobile application vulnerabilities; increased targeted attacks at unsecured infrastructure; and increased adoption of botnet and Distributed Denial of Service (DDoS) attack techniques.

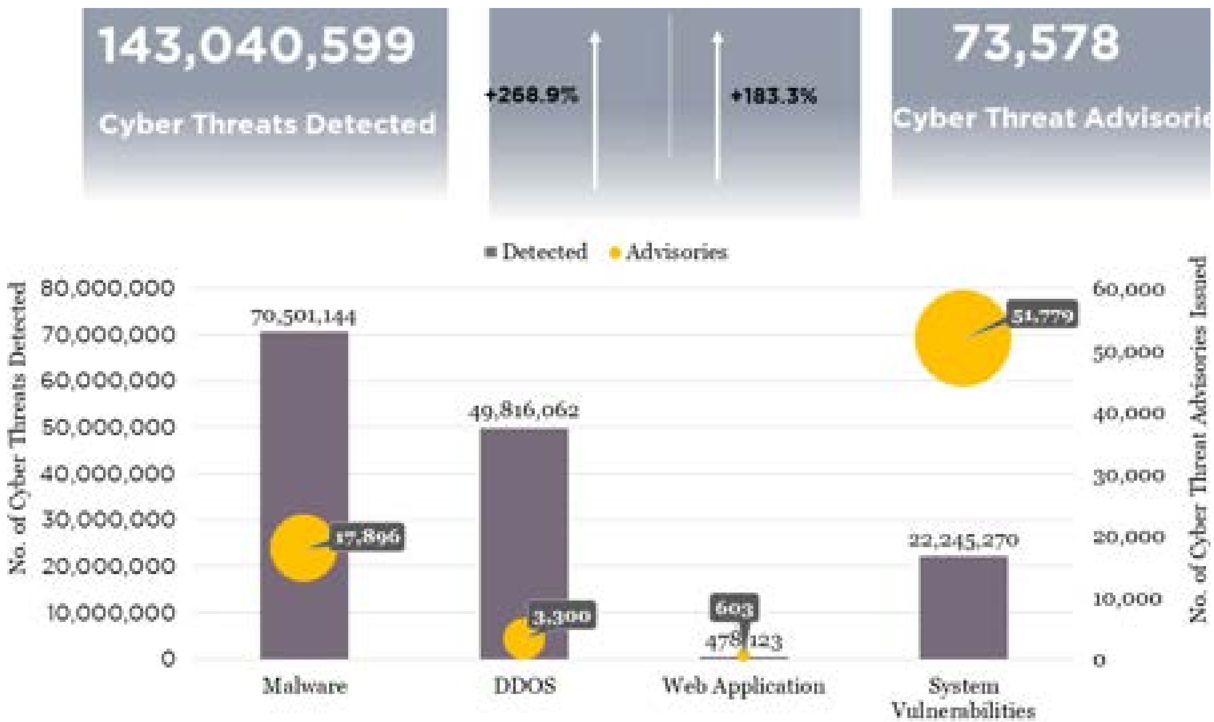


Figure 18: Cybersecurity Landscape

5 BROADCASTING SERVICES

The number of Television and FM Radio stations that were on air by 30th September 2021.

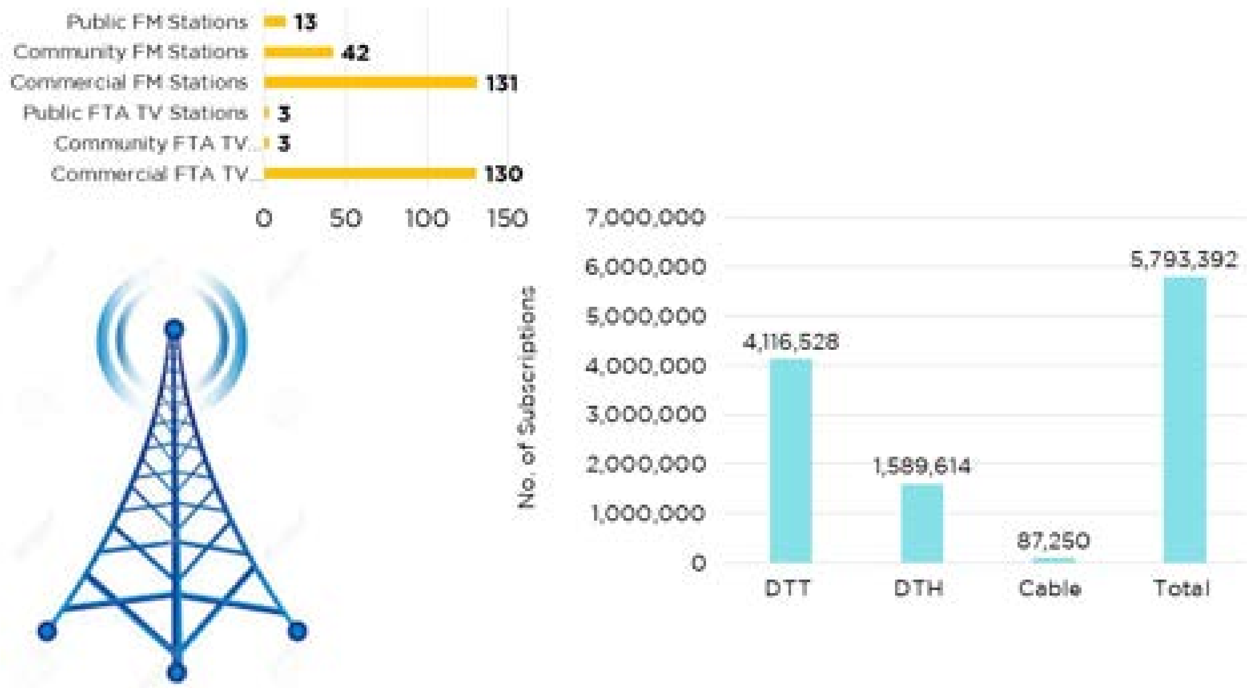
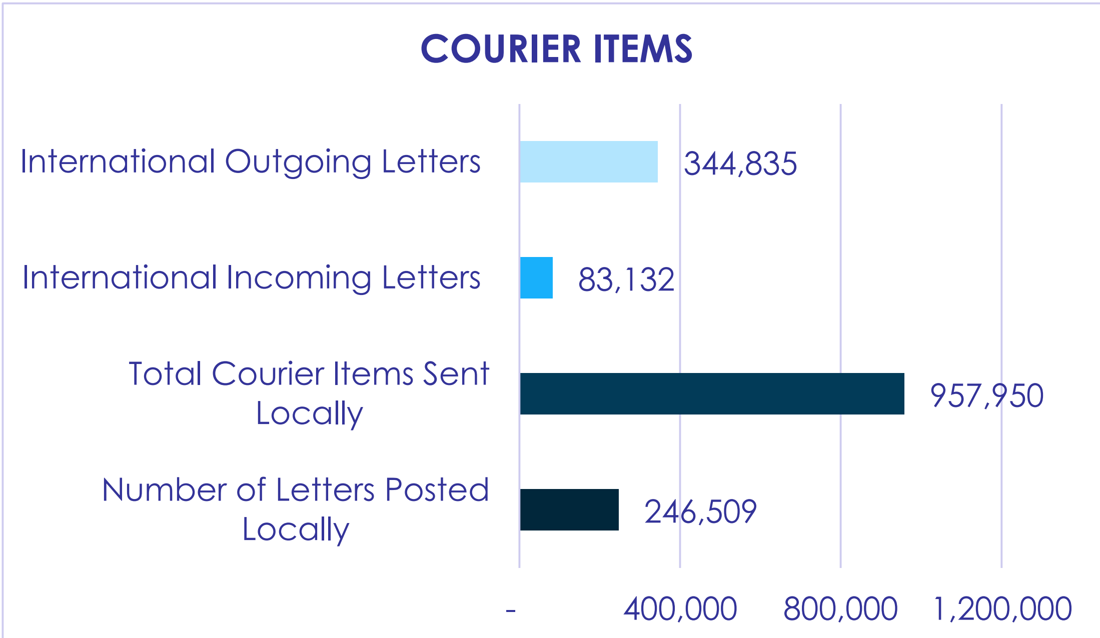


Figure 19: Broadcasting Services

6 COURIER SERVICES



Data excludes Postal Corporation of Kenya

Figure 20: Courier Services

7 FREQUENCY SPECTRUM MANAGEMENT

To facilitate uptake of radio communication services, the Authority assigned frequencies to various operators for deployment of 240 microwave links and processed the decommissioning of 364 fixed links during the period under review. In addition, the Authority assigned 12 FM sound broadcasting frequencies to broadcasters.

8 CONCLUSION

The ICT sector has remained resilient during the COVID-19 pandemic and has demonstrated its importance as a key enabler of business continuity in the country amid the pandemic. In spite of the disruption and challenges caused by the pandemic, there has been a widespread shift in the uptake of digital tools and services. More Kenyans have adopted mobile and Internet services out of necessity. Teleworking, online learning, e-commerce and the potential risk of handling cash pushed more consumers to opt for Internet services and digital payments as more reliable, efficient and safer modes of access to goods and services.

In order to revive the economy and quickly recover from the negative effects of COVID-19 pandemic, the government in collaboration with the relevant stakeholders will need to fast track Internet connectivity across the country, strengthen the existing ICT policies, legal and regulatory frameworks, and support the development of digital skills especially in rural Kenya.