FIRST QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2019/2020
(JULY - SEPTEMBER 2019)

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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 operator's/service providers' compliance returns.

LIST OF ACRONYMS

DDoS Distributed Denial-of-Service
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
Mbps Megabits per second
MMS Multimedia Services
MoU Minutes of Use
MVNO Mobile Virtual Network Operator
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 System

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PRELIMINARY NOTES

- *This report is based on data provided by the service providers in the communications 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.*

REPORT SUMMARY

The Sector Statistics Report for the First Quarter of the 2019/20 Financial Year provides an overview of the performance and trends of the ICT sector for the period 1st July to 30th September 2019, on the following service categories:

- Mobile Telephony Services
- Fixed Telephony Services
- Data/Internet Services
- Postal and Courier Services

SUMMARY OF KEY ICT INDICATORS

INDICATORS	Apr-Jun 2019	Jul- Sep 2019	% change Q4 to Q1
	Q4	Q1	
Mobile Subscriptions (Millions)	52.20	53.2	1.9
Fixed subscriptions	68,916	66,232	-3.9
VOICE TRAFFIC IN MINUTES			
Mobile On-Net Voice Traffic (Billions)	14.57	16.14	10.8
Mobile Off-Net Voice Traffic (Billions)	1.62	1.72	6.2
International Incoming Mobile Voice Traffic (Millions)	140.38	152.90	8.9
International Outgoing Mobile Voice Traffic (Millions)	108.04	109.03	0.9
Roaming-out (Own Subscribers) (Millions)	60.09	66.60	10.8
Roaming-in (Foreign Subscribers) (Millions)	52.57	61.88	17.7
Total Local Fixed Network traffic	568,924	593,724	4.4
Fixed VoIP Traffic	214,473	182,472	-14.9
MOBILE SMS TRAFFIC			
SMS On-Net (Billions)	16.25	16.35	0.6
SMS Off-Net (Billions)	0.83	0.83	0.0
Roaming-In SMS (Millions)	28.00	31.99	14.3
Roaming Out SMS (Millions)	43.00	45.23	5.2
International Incoming SMS (Millions)	10.80	10.59	-1.9
International Outgoing SMS (Millions)	9.32	12.59	35.1
MOBILE MONEY TRANSFER SERVICES			
Number of Active Registered Mobile Money Transfer	32.63	31.28	-4.1

Subscriptions (Millions)			
Number of Registered Mobile Money Agents	231,350	235,168	1.7
Number of Transactions-Sending and Withdrawal (Millions)	810.94	661.63	-18.4
Value of Transactions- Sending and Withdrawal (Ksh.) trillion	2.18	1.76	-19.3
Number of Mobile Commerce Transactions (Millions)	591.53	425.38	-28.1
Value of Mobile Commerce Transactions (Ksh.) (trillion)	1.95	1.63	-16.4
Value of Person-to Person Transfers (Ksh.) Billion	770.90	665.00	-13.7
DATA/INTERNET SERVICES			
Data/ Internet Subscriptions (Millions)	49.95	52.01	4.1
Broadband Subscriptions	22.2	25.2	13.5
Total Available International Bandwidth (Gbps)	4,707.00	5,374.02	14.2
Total Used International Bandwidth (Gbps)	1,341.30	1,508.61	12.5
POSTAL AND COURIER SERVICES			
Postal Outlets	623	623	0.0
Private Courier Outlets	1,027	1,027	0.0
Number of Letters (Up to 350 gms) Posted Locally (Millions)	9.80	9.62	-1.8
Total Courier Items Sent Locally	885,862	602,538	-32.0
International Incoming Letters (Up to 350 gms) (Millions)	2.72	2.17	-20.2
International Outgoing Letters (Up to 350 gms) (Millions)	1.31	0.92	-29.8
CYBER SECURITY			
Total Cyber Threats	26,604,202	25,211,269	-5.2
Total Cyber Reports	16,347	17,127	4.8
Total Population in Kenya (Millions)	**47.8***	**47.5****	**-0.6**

***Population as per the Economic Survey 2019**

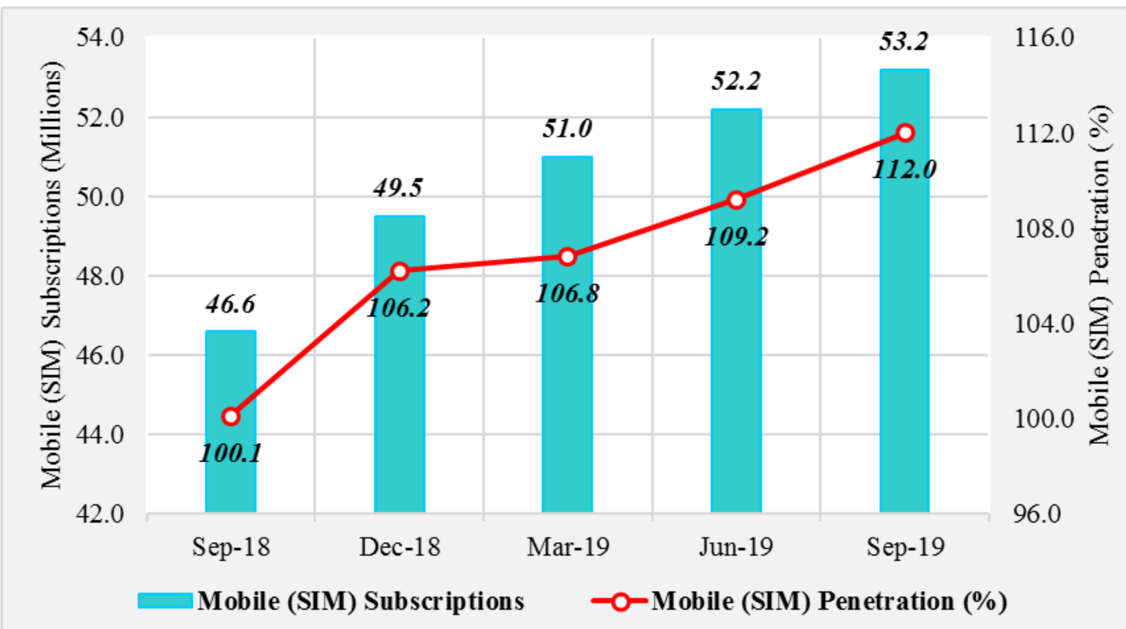
**** Revised Population as per the 2019 Kenya Population and Housing Census**

1 CELLULAR MOBILE SERVICES

1.1 Mobile Subscriptions

The number of active mobile subscriptions (SIM[1] Cards) in the country stood at 53.2 million as at 30th September 2019, up from 52.2 million subscriptions reported at the end of June 2019. This translated to mobile (SIM) penetration level of 112.0 percent. The high mobile SIM penetration is attributed to the increasing availability and access to mobile networks signal and a variety of convenient mobile services. Available data indicates that at least 2G and 3G covers 96 per cent and 93 per cent of the population respectively. The Authority is driving a number of initiatives to close access gaps including; voice infrastructure and school broadband connectivity projects under the Universal Service Fund (USF), enforcement of operator's license obligations and licensing of additional frequencies that support mobile services. SIM penetration in the country remains above 100 percent due to multiple SIM ownership among users of cellular services.

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

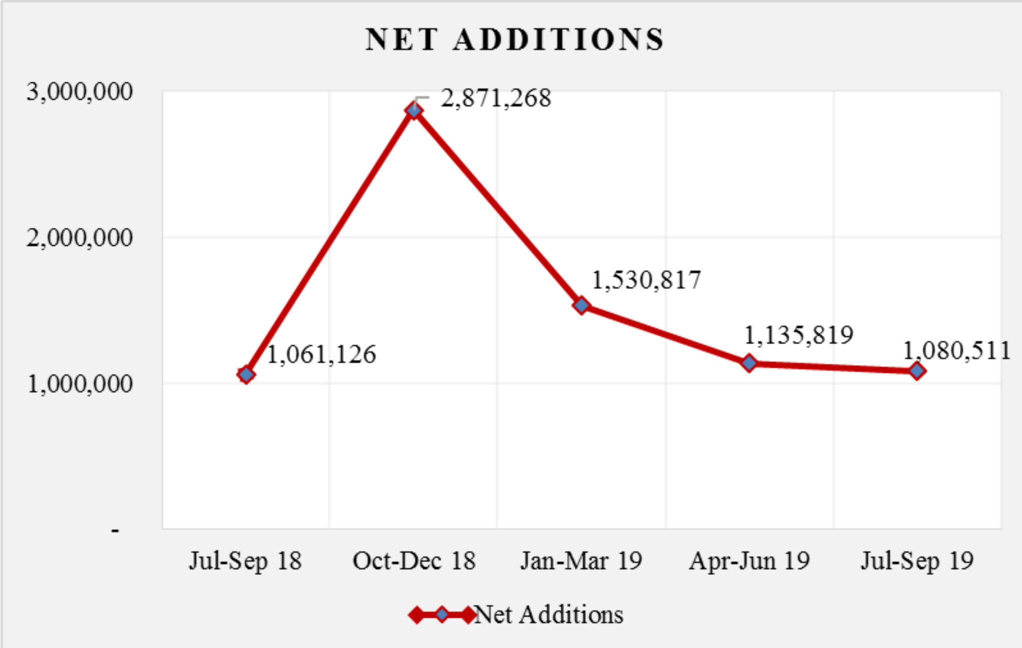


Source: CA, Operators' Returns

Figure 1: Mobile Subscriptions and Penetration

As witnessed during the last three quarters, net SIM additions declined to 1.08 million during the period under review from 1.1 million SIMs posted during the previous quarter. This could be an indication that the market is almost reaching saturation in terms of uptake of SIM cards.

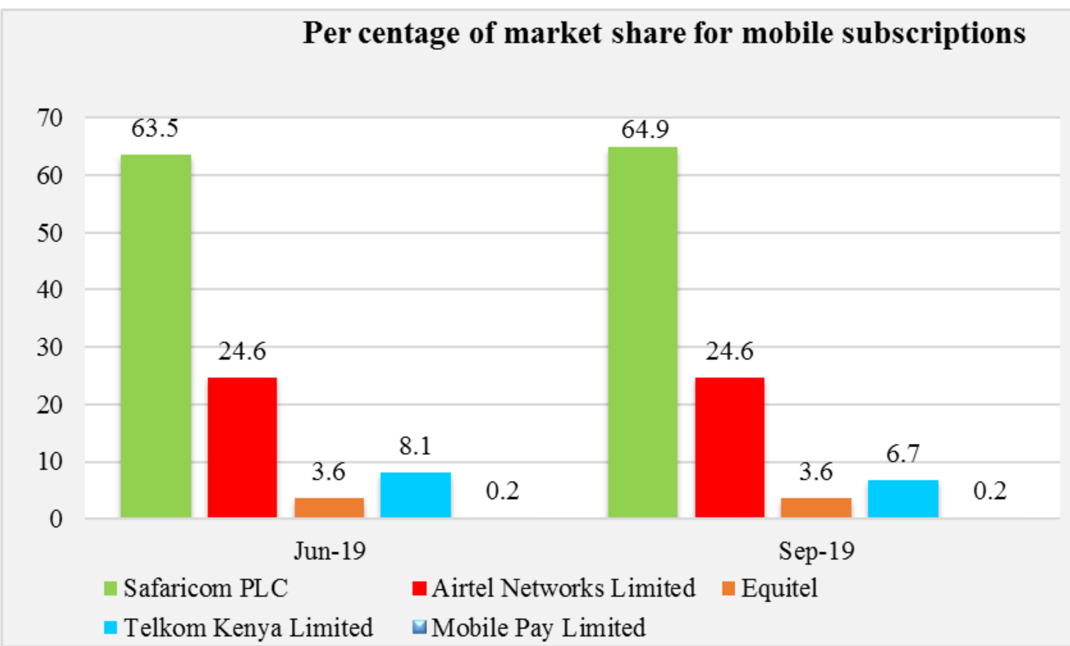
[1] Active Subscription (SIM Card) refers to any registered mobile SIM Card that has generated revenue within the last 3 months



Source: CA, Operators' Returns

Figure 2: Net Additions

During the period under review, mobile subscriptions market shares for Safaricom PLC rose by 1.4 percentage points to stand at 64.9 per cent, whereas that for Telkom Kenya Limited declined by the same margin to stand at 6.7 per cent. Further, the market shares for Airtel Networks Kenya Limited, Equitel and Mobile Pay Limited remained unchanged at 24.6 per cent, 3.6 per cent and 0.2 per cent, respectively.



Source: CA, Operators' Returns

Figure 3: Market Shares in Mobile Subscriptions per Operator

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

Table 1: Mobile Subscriptions per Operator by Contract Type

	Sep-19			***Jun-19***			***Quarterly Variation (%)***
Name of operator	**Pre-paid**	**Post-paid**	**Total**	**Pre-paid**	**Post-paid**	**Total**	
Total	**51,786,199**	**1,462,378**	**53,248,577**	**50,670,855**	**1,497,620**	**52,168,475**	**2.1**
Safaricom PLC	33,211,176	1,358,893	**34,570,069**	31,736,810	1,381,743	**33,118,553**	4.4
Airtel Networks Limited	13,034,554	88,038	**13,122,592**	12,733,967	103,058	**12,837,025**	2.2
Telkom Kenya Limited	3,543,796	15,447	**3,559,243**	4,222,813	12,819	**4,235,632**	-16
Equitel	1,901,848	-	**1,901,848**	1,882,440	-	**1,882,440**	1
*Mobile Pay Limited**	94,825	-	**94,825**	94,825	-	**94,825**	0

Source: CA, Operators' Returns *Provisional data

1.2 Mobile Money Services

The Authority in the July-September 2019 statistics has revised its data on mobile money services, with the exclusion of data on Equitel Money, which is a mobile banking service as opposed to a mobile wallet service offered by telecommunications service providers. This reconsideration has occasioned the decrease in the number of mobile money subscriptions, the number and value of transactions as well as indicators on mobile commerce transactions.

The number of active mobile money subscriptions and agents stood at 31.2 million and 235,168 respectively. A total of 661.6 million transactions (sending and withdrawals) valued at over KSh.1.7 trillion were made. In addition, there were 425.3 million mobile commerce transactions implying that KSh.1.6 trillion was spent to purchase goods and services online during the quarter. Person-to-Person Transfers were valued at KSh. 665.0 billion.

Table 2: Mobile Money Transfer Services

Jul -Sep 19

Name of Service	**Agents**	**Active Subscriptions**	**No. of transactions**	**Value of transactions (Kshs)**	**No. of mobile commerce transactions**	**Value of mobile commerce transactions (Ksh.)**	**P2P Transfers (Ksh.)**	**Deposits (Ksh).**
Total	**235,168**	**31,285,208**	**661,631,228**	**1,757,860,544,561**	**425,382,210**	**1,625,179,800,228**	**665,036,853,659**	**604,235,770,146**
M-Pesa	176,084	27,663,	655,949,	1,755,466,393,7	422,601,805	1,623,175,956,8	662,705,586,8	602,285,179,8

		763	211	42		57	96	26
Airtel Money	24,002	3,499,192	5,143,127	806,252,362	2,471,912	1,971,030,124	1,421,160,502	1,851,266,546
T-Kash	28,106	27,837	149,278	169,350,347	308,493	32,813,247	63,681,973	41,868,036
Tangaza	6,976	94,416	389,612	1,418,548,110	-	-	846,424,288	57,455,738

Source: CA, Operators' Returns, Equitel money service will no longer be reported under this category because it is a mobile banking service rather than a mobile wallet service.

1.3 Mobile Number Portability

Table 3 shows the trends in mobile number portability

Table 3: Mobile Number Portability

Period	*Jul-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Number of in-ports	279	274	1.8

Source: CA, Operators' Returns

1.4 Mobile Traffic and Usage Pattern

1.4.1 Local Voice Traffic

The total local voice traffic originating from mobile networks rose by 10.4 per cent during the quarter under review to 17.8 billion from 16.2 billion minutes registered during the previous quarter. The growth in total local voice traffic is attributed to the various promotions and special on-voice offers launched by the service providers during the period under review as indicated in Table 24. On-net mobile voice traffic stood at 16.1 billion minutes, up from 14.5 billion minutes registered in the previous quarter. On a similar trend, off-net mobile voice traffic increased to 1.7 billion from 1.6 billion minutes recorded during the previous quarter. Mobile to fixed network voice traffic increased by 7.9 per cent to post 15.8 million minutes, from 14.6 million minutes recorded in the previous quarter.

Table 4 shows a summary of local mobile voice traffic.

Table 4: Local Mobile Voice Traffic in Minutes

Mobile Traffic	*Jul-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Total Outgoing Traffic	**17,887,754,648**	**16,202,407,490**	**10.4**
Own Network – Own Network	16,147,547,536	14,569,786,496	10.8
Own Network to Other Mobile Networks	1,724,422,376	1,617,963,065	6.6
Mobile Network to Fixed Network	15,812,636	14,657,929	7.9

Source: CA, Operators' Returns

1.4.2 Voice Traffic by Operator

The total mobile voice traffic originating from Safaricom PLC networks increased to 10.0 billion minutes during the quarter under review, from 9.1 billion minutes recorded in the previous quarter. In spite of this, its voice traffic market share dropped by 0.4 percentage points to stand at 56.4 percent.

Airtel Networks Kenya Limited outgoing mobile traffic rose to 7.2 billion minutes during the period under review, from 6.3 billion minutes registered in the preceding quarter. Consequently, its voice market share increased by 1.3 percentage points to register 40.3 per cent.

Telkom Kenya Limited registered a total of 552.8 million minutes originating from its mobile network down from 647.3 million minutes reported in the previous quarter. During the same period, its voice market share dropped by 0.9 per cent to stand at 3.1 per cent.

The total outgoing mobile voice traffic recorded by Equitel during the period under review increased to 33.7 million minutes, from 30.9 million minutes recorded in the previous quarter. Its voice market share remained unchanged at 0.2 per cent.

The traffic volumes per service provider and the respective market shares are shown in Table 5.

Table 5: Local Mobile Voice Traffic by Operator

Period	*Name of Operator/Indicator*	*Safaricom PLC*	*Airtel Networks Kenya Limited*	*Telkom Kenya Limited*	*Equitel*	*Mobile Pay Limited*	*Total*
Jul – Sep 19	On-net	9,575,631,209	6,230,116,858	336,936,653	4,859,545	3,271	16,147,547,536
	Off-net	509,174,237	970,441,315	215,909,212	28,869,802	27,810	1,724,422,376
	Total	**10,084,805,446**	**7,200,558,173**	**552,845,865**	**33,729,347**	**31,081**	**17,871,969,912**
	Market share (%)	56.4	40.3	3.1	0.2	0.0	
Apr-Jun 19	On-net	8,745,364,557	5,412,492,526	407,790,336	4,135,866	3,211	14,569,786,496
	Off-net	446,764,080	904,784,091	239,596,522	26,791,080	27,292	1,617,963,065
	Total	**9,192,128,637**	**6,317,276,617**	**647,386,858**	**30,926,946**	**30,503**	**16,187,749,561**
	Market share (%)	56.8	39.0	4.0	0.2	0.0	

Source: CA, Operators' Returns

1.4.3 Domestic Short Messaging Service (SMS) Traffic

During the period under review, a total of 17.1 billion messages were sent compared to 17.0 billion messages sent during the previous quarter. SMS traffic and the corresponding market shares per operator are as shown in Table 6.

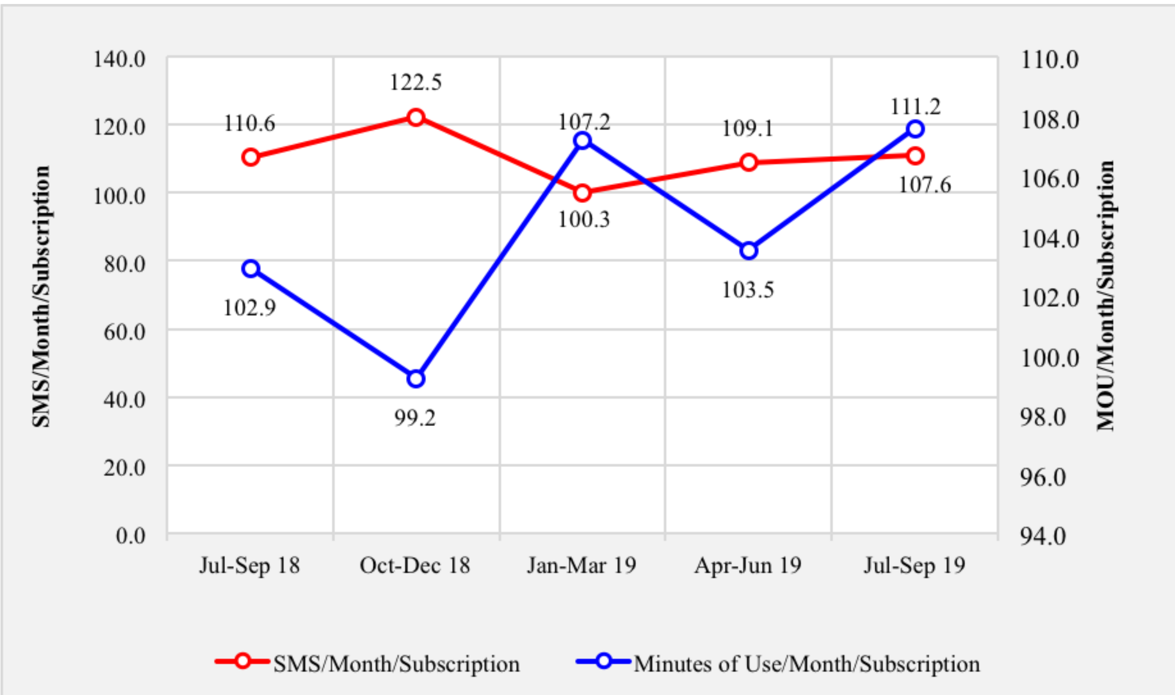
Table 6: Local Mobile SMS Traffic by Operator

Period	*Name of Operator/Indicator*	*Safaricom PLC*	*Airtel Networks Kenya Limited*	*Telkom Kenya Limited*	*Equitel*	*Mobile Pay Limited*	*Total*
Jul - Sep 19	On-net	15,968,436,626	363,830,758	16,656,809	2,556,209	2,503	16,351,482,905
	Off-net	424,935,622	301,784,521	107,604,550	5,358,237	21,163	839,704,093
	Total	**16,393,372,248**	**665,615,279**	**124,261,359**	**7,914,446**	**23,666**	**17,191,186,998**
	Market share (%)	95.4	3.9	0.7	0.0	0.0	

Apr-Jun 19	On-net	15,893,681,266	337,158,204	17,239,076	2,302,055	2,503	16,250,383,056
	Off-net	410,729,143	317,836,492	97,675,767	5,618,467	21,163	831,880,643
	Total	**16,304,410,409**	**654,994,696**	**114,914,843**	**7,920,522**	**23,666**	**17,082,263,699**
	Market share (%)	95.4	3.8	0.7	0.0	0.0	

Source: CA, Operators' Returns

SMS per Subscription per Month dropped to 107.6 during the quarter under review from 109.1 reported during the preceding quarter. On the other hand, Minutes of Use per Month per Subscription rose to 111.2 from 103.5 registered in the past quarter. The growth in minutes of use per subscription per month is attributed to the various promotions and special on voice offers launched by the service providers during the period under review as indicated in Table 24,



Source: CA, Operators' Returns

Figure 4: Voice vs. SMS Market Shares per Operator

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 during the quarter under review. Airtel Networks Limited subscribers recorded the highest duration of on-net minutes per call at 3.2 while for off-net Mobile Pay Limited was the highest at 2.1. This is attributed to the fact that operators are offering their subscribers lower calling rates or free calls within the network. Example, for sometime now, Airtel has been offering lucrative voice bundles for on-net calls where its customers are able to subscribe for KSh 10 for 24 hours, KSh. 50 for 7 days or KSh. 150 for a month.

Table 7 presents average Minutes of Use per Call per operator.

Table 7: Minutes of Use per Call per Operator

Jul- Sep 19		
Operator	**On-net**	**Off-net**
Total	**1.7**	**1.0**
Safaricom PLC	1.3	0.9
Airtel networks Limited	3.2	1.0
Telkom Kenya Limited	1.9	1.2
Equitel	1.3	1.1
Mobile Pay Limited	2.0	2.1

Source: CA, Operators' Returns

1.4.4 International Mobile Traffic

Table 8 provides the trends in international mobile traffic.

Table 8: International Mobile Traffic

Traffic	***Region***	***Jul -Sep 19***	***Apr-Jun 19***	***Quarterly Variation (%)***
International Incoming Mobile Voice Minutes	*EAC*	89,713,081	73,335,074	22.3
	Others	63,191,020	67,043,744	-5.7
	Total	**152,904,101**	**140,378,818**	**8.9**
International Outgoing Mobile Voice Minutes	*EAC*	54,494,003	49,585,487	9.9
	Others	54,537,550	58,455,860	-6.7
	Total	**109,031,553**	**108,041,347**	**0.9**
International Incoming Mobile SMS		10,592,200	10,803,878	-2.0
International Outgoing Mobile SMS		12,597,629	9,320,771	35.2

Source: CA, Operators' Returns

1.4.5 Roaming Traffic

As illustrated in Table 9, local subscribers roaming on foreign networks generated 66.6 million minutes of voice traffic, sent 45.2 million messages and consumed 15.5 million MB on data services. In-bound voice and SMS traffic stood at 61.8 million minutes and 31.9 million messages respectively. In addition, in-bound subscribers consumed 70.3 million MB on mobile data/Internet services. Notably, roaming traffic especially voice remained high within EAC countries that are under the One Network Area (ONA) umbrella because of the low calling rates.

Table 9: Roaming Traffic

Jul - Sep 2019						
Name of the Country	**Out-Bound (Own Subscribers Roaming on Foreign Networks)**			**In-Bound (Foreign Subscribers Roaming on Local Networks)**		
	Voice	***SMS***	***Data (MB)***	***Voice***	***SMS***	***Data (MB)***
Total	**66,608,602**	**45,232,019**	**15,517,888**	**61,880,074**	**31,996,895**	**70,346,558**
Uganda	50,040,325	7,474,892	5,768,708	43,735,348	4,434,308	836,798

Tanzania	1,216,977	10,315,693	2,484,040	327,357	12,077,957	578,223
Rwanda	2,535,656	444,801	635,212	9,973,616	909,630	203,444
Burundi	21,203	279,735	17,650	6,964	23,228	226
South Sudan	3,733,900	1,061,538	52,357	3,726,022	178,161	3,673
Others	9,060,541	25,655,360	6,559,921	4,110,767	14,373,611	68,724,194

Source: CA, Operators' Returns

2 FIXED TELEPHONE SERVICE

2.1 Fixed Network Subscriptions

Table 10 provides the distribution and trends of fixed network subscriptions.

Table 10: Fixed Network Subscriptions

Subscriptions	*Sep-19*	*Jun-19*	*Quarterly Variation (%)*
Fixed Line	21,019	21,708	-3.2
Fixed Wireless	1,049	1,073	-2.2
Fixed VoIP	44,164	46,135	-4.3

Source: CA, Operators' Returns

2.2 Fixed Network Traffic

The total local fixed network traffic increased by 4.4 per cent during the period under review to post 593,724 minutes, from 568,924 minutes reported in the previous quarter. On the contrary, fixed VoIP traffic dropped to 182,472 minutes, from 214,473 minutes recorded in the previous quarter.

Table 11: Local Fixed Network Traffic in Minutes

Local Fixed Network Traffic	*Jul-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Fixed-Fixed	271,802	250,487	8.5
Fixed Wireless-Fixed Wireless	321,922	318,437	1.1
Total Local Fixed Network Traffic	**593,724**	**568,924**	**4.4**
Fixed VoIP Traffic	182,472	214,473	-14.9

Source: CA, Operators' Returns

2.3 International Fixed Voice Traffic

Table 12 shows trends in international fixed voice network traffic.

Table 12: International Fixed Voice Network Traffic

International Fixed Network traffic	*Jul - Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
International Incoming Fixed Network Voice Traffic	6,412,589	6,677,432	-4.0
International Outgoing Fixed Network Voice Traffic	3,988,879	3,678,676	8.4
International Outgoing Fixed VoIP Traffic	383,099	476,269	-19.6

Source: CA, Operators' Returns

3 DATA/INTERNET SERVICES

3.1 Data and Broadband Services

The Internet market in Kenya has continued to exhibit positive growth over past years. Some of the factors contributing to this growth include increasing population coverage of 3G and 4G networks, availability of affordable smartphones and data plans, and increasing consumption of e-commerce, e-government, social media and other online content.

During the quarter under review, the total data/Internet subscriptions rose by 4.1 per cent to 52.0 million, from 49.9 million reported in the previous quarter. Mobile data subscriptions accounted for 99.3 of total data subscriptions.

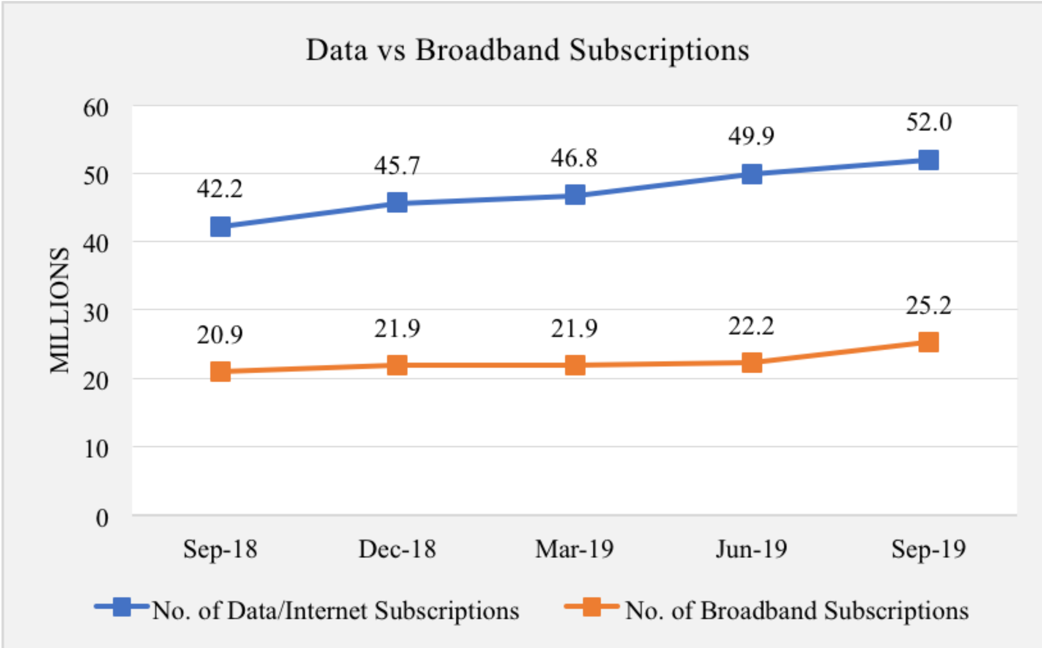
Table 13 provides a breakdown of data/internet subscriptions based on the type of technology.

Table 13: Data/Internet Subscriptions

Indicator/Period	***Sep-19***	***Jun-19***	***Quarterly Variation (%)***
Total Wireless Internet Subscriptions	**51,625,257**	**49,600,612**	4.1
Mobile Data Subscriptions	51,554,055	49,532,380	4.1
Terrestrial Wireless Data Subscribers	69,985	66,989	4.5
Satellite Data Subscribers	1,217	1,243	-2.1
Total Fixed (Wired) Internet Subscriptions	**383,638**	**353,693**	8.5
Fixed DSL Data Subscribers	1,004	1,014	-1.0
Fixed Fibre Optic Data Subscribers	241,158	213,199	13.1
Fixed Cable Modem Subscribers	134,536	132,072	1.9
Other Fixed Data Subscribers (e.g Radio)	6,940	7,408	-6.3
Total Data/Internet Subscriptions	**52,008,895**	**49,954,305**	4.1

Source: CA, Operators' Returns

As illustrated in Figure 5, the number of data/Internet subscriptions stood at 52.0 million during the period under review of which 48.5 percent (25.2 million subscriptions) of them were on broadband.



Source: CA, Operators' Returns

Figure 5: Data vs. Broadband Subscriptions

3.2 Fixed Broadband Subscriptions by Speed

Table 14 shows the breakdown of fixed broadband subscriptions by speed.

Table 14: Fixed Broadband Subscriptions by Speed

Broadband Speeds	*Sep-19*	*Jun-19*	*Quarterly Variation (%)*
<256Kbps	421	493	-14.6
>256Kbps ≤ 512Kbps	389	403	-3.5
>512Kbps ≤ 1Mbps	3,786	7,895	-52.0
>1Mbps ≤ 2Mbps	64,926	65,668	-1.1
>2Mbps	385,318	347,886	10.8

Source: CA, Operators' Returns

Table 15 shows Fixed Data Subscriptions per Service Provider.

Table 15: Fixed Data Subscriptions per Service Provider

Name of service Provider	*Number of subscriptions*	*Percentage Market share*
Safaricom PLC	154,603	34.0
Wananchi Group (Kenya) Ltd	151,548	33.3
Jamii Telecommunications Ltd	66,572	14.6
Poa Internet Kenya Ltd	39,533	8.7
Internet Solutions Kenya Ltd	15,744	3.5
Mawingu Networks Ltd	10,055	2.2
Liquid Telecommunications Kenya Limited	9,449	2.1
Telkom Kenya Ltd	4,744	1.0
Frontier Optical Networks Ltd	555	0.1
Other Fixed Service providers	2,037	0.4

Source: CA, Operators' Returns

3.3 International Bandwidth

During the quarter under review, the total International Internet bandwidth available in the country increased by 14.2 per cent to 5,374.02 Gbps from 4,707.0 Gbps recorded in the previous quarter. The growth was contributed by activation of the 2 × 100G links of EASSY cable in order to meet the ever increasing demand for bandwidth.

The total utilized bandwidth capacity increased by 12.5 per cent to 1,508.61 Gbps from 1,341.3 Gbps recorded in the previous quarter.

The trends on International Lit/Equip and Used Bandwidth are as shown in Table 16.

Table 16: International Internet Bandwidth (Gbps)

Indicator/ Operator		*Jul-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Total Available (Lit/Equip) Bandwidth Capacity		**5,374.02**	**4,707.00**	**14.2**
Undersea Bandwidth Capacity	***SEACOM***	2,840.00	2,840.00	0.0
	TEAMS	1,000.00	702.00	42.5
	EASSY	1,280.00	912.84	40.2
	Lion 2	248.30	247.04	0.5
Satellite Bandwidth Capacity		5.720	5.58	2.5
Utilized Bandwidth in Gbps				
Total Utilized Bandwidth Capacity		**1,508.61**	**1,341.30**	**12.5**
Undersea Bandwidth Capacity		1,503.4	1,336.20	12.5
Satellite Internet Capacity		5.2125	5.13	1.6

Source: CA, Operators' Returns

3.4 Registered Domain Names

The Table 17 illustrates the distribution of sub-domains in the country as at the end of September 2019.

Table 17: .KE Domains

SUB_DOMAIN		*Jul- Sep 19*		*Apr-Jun 19*	
	USE	**Domains**	**% of Users**	**Domains**	**% of Users**
CO.KE	Companies	88,024	94.65	82,721	94.21
OR.KE	Non-Profit-Making Organizations	1,894	2.04	1,908	2.17
AC.KE	Institutions of Higher Education	918	0.99	919	1.05
SC.KE	Lower and Middle Level Institutions	1,075	1.16	1,139	1.3
NE.KE	Personal Websites and E-mail	109	0.12	153	0.17

ME.KE	Personal Websites and E-mail	238	0.26	223	0.25
MOBI.KE	Mobile Content	44	0.05	43	0.05
INFO.KE	Information	138	0.15	163	0.19
GO.KE	Government Institutions	563	0.61	538	0.61
Total		**93,003**	**100**	**87,807**	**100**

Source: CA, Operators' Returns

4 NATIONAL CYBER THREAT LANDSCAPE

4.1 Cyber Threats Statistics

The National KE-CIRT/CC has deployed various cyber threat detection systems towards enhancing Kenya's national cyber security readiness and resilience. During the period July - September 2019, the National KE-CIRT/CC detected 25.2-million cyber threat events as compared to 26.6 million cyber threat events detected in the period April – June 2019. This was a 5.2 percent decrease attributed to a huge reduction in DDoS/Botnet attacks as a result of proactive action taken, as demonstrated by increased number of cyber threat advisories issued during the quarter.

Table 18: Cyber Threats Detected

Cyber Threat	*Jul-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Totals	**25,211,269**	**26,604,202**	**-5.2**
Malware	20,540,231	21,137,458	-2.8
DDOS/Botnet	573,421	2,353,460	-75.6
Web Application Attacks	4,069,671	3,084,687	31.9
System vulnerabilities	27,946	28,597	-2.3

Source: National KE-CIRT/CC

As the trusted national point of contact on cyber security matters, the National KE-CIRT/CC analyzed the cyber threat events and issued cyber threat advisories to the affected critical information infrastructure service providers. During the quarter under review, the National KE-CIRT/CC issued 17,127 advisories, which is a 4.8 percent increase from the 16,347 advisories sent out in the previous period of April - June 2019.

Table 19: Cyber Threats Advisories

Cyber Threat Advisories	*Jul-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Totals	**17,127**	**16,347**	**4.8**
Malware	2,160	1,586	36.2
Botnet	318	88	261.4
Web Application Attacks	291	387	-24.8
System Vulnerabilities	13,897	13,754	1.0
Others	461	532	-13.3

Source: National KE-CIRT/CC

5 POSTAL AND COURIER TRAFFIC

The postal and courier traffic recorded a general decline during the period under review. The number of letters posted locally dropped marginally by 1.8 per cent to 9.6 million letters, from 9.7 million letters registered during the previous quarter. On a similar trend, total courier items sent locally stood at 602,538 from 885,862 recorded in the previous quarter.

The volume of international incoming letters declined by 20.2 per cent to 2.1 million, from 2.7 million reported in the previous quarter. Letters sent to other countries dropped to 919,275 from 1.3 million letters registered in the previous quarter.

Table 20: Postal and Courier Traffic

Postal and Courier Traffic	*July-Sep 19*	*Apr-Jun 19*	*Quarterly Variation (%)*
Number of Letters Sent (Up to 350 gms) Posted Locally	9,620,929	9,797,709	-1.8
Total Courier Items Sent locally	602,538	885,862	-32.0
International Incoming Letters (Up to 350 gms)	2,173,899	2,724,435	-20.2
International Outgoing Letters (Up to 350 gms)	919,275	1,307,964	-29.8

Source: CA, Operators' Returns

6 TARIFFS, PROMOTIONS AND SPECIAL OFFERS

During the period under review, the Authority received a total of 17 applications; 5 tariffs and 12 promotions & special offers. A detailed distribution of the applications for tariffs and promotions & special offers is illustrated in Tables 21 and 22 respectively.

Table 21: Tariffs

Period/Indicator	***Type of Tariff***							
	Voice	**SMS**	**Data**	**Airtime**	**Bundle**	**Mobile Money**	**Other2**	**Total**
Jul - Sep 19	0	1	1	0	3	0	0	5
Apr-Jun 19	0	0	3	0	2	0	0	5

Source: CA, filed promotions and special offers

Table 22: Promotions and Special Offers

Period/Indicator	***Type of Promotion and Special Offer***								
	Voice	**SMS**	**Data**	**Bundle**	**Airtime**	**Lucky Draw**[3]	**Mobile Money**	**Other**	**Total**
Jul – Sep 19	3	0	7	0	0	0	2	0	12
Apr-Jun 19	1	0	5	4	2	0	0	0	12

Source: CA, filed promotions and special offers

[2] Other" refers to promotions that cannot be clearly attributed to any particular service or bundle of services, neither can they be attributed to a lucky draw

[3]Lucky draw is a game of chance where the operator has no control over the specific user to receive a reward set out.

7 CONCLUSION

The Telecommunications industry has transformed intensely over the past years in response to evolving technology, which has challenged the service providers to develop products and services to meet the changing consumer needs. This has been exhibited through aggressive customer acquisition, enhanced products such as bundle-up data, and improved infrastructure, which have seen the mobile SIM subscription base increase remarkably.

The sector thus presents huge opportunities for driving the digital economy as envisaged in Kenya's Digital Economy Blueprint. With a substantial portion of the population yet to access broadband services (4G), there are immense opportunities for the development of innovative solutions and services, including e-commerce. These will in effect fuel increased demand for data bandwidth as more Kenyans continue to consume online content.