SECOND QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2018/2019 (OCTOBER - DECEMBER 2018)

Direct any queries on the report to:
Director/Competition, Tariffs and Market Analysis
Tel:+254-703 042000, +254 -713 172000
Email: info@ca.go.ke
Website: www.ca.go.ke

***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.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

ADN	African Digital Network Limited
B2B	Business to Business
B2C	Business to Customer
C2B	Customer to Business
C2G	Citizen to Government
DoS	Denial-of-Service
DTT	Digital Terrestrial Television
EASSy	Eastern Africa Submarine Cable Systems
FY	Financial Year
Gbps	Gigabits per second
ICTs	Information Communication Technologies
KW	Kilowatts
KE-CIRT/CC	National Kenya Computer Incident Response Team/Coordination Centre
LION2	Lower Indian Ocean Network
Mbps	Megabits per second
MMS	Multimedia Service
MoU	Minutes of Use
MVNO	Mobile Virtual Network Operator
NCC	National Cybersecurity Centre
OTT	Over-The-Top
P2P	Person to Person
PSTN	Public Switched Telephone Network
SEACOM	Sea Sub-Marine Communications Limited
SIM	Subscriber Identification Module
SMS	Short Messaging Service
TEAMS	The East African Marine System
USF	Universal Service Fund
VSAT	Very Small Aperture Terminal

PRELIMINARY NOTES

- *This report is based on data provided by 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 Second Quarter Sector Statistics report provides an overview of the performance and trends of the communications sector for the period 1st October 2018 to 31st December 2018 on the following service categories:

- Mobile Telephony Services
- Fixed Telephony Services
- Data/Internet Services
- Broadcasting Services
- Cyber Security Landscape
- Postal and Courier Services

SUMMARY OF KEY COMMUNICATIONS INDICATORS

INDICATORS	*Jul - Sep 2018*	*Oct - Dec 2018*	% change Q1 to Q2
	Q1	Q2	
Mobile Subscriptions (Millions)	46.630	49.501	6.2
Fixed subscriptions	68,662	65,644	-4.4
VOICE TRAFFIC IN MINUTES			
Mobile On-Net Voice Traffic (Billions)	12.697	12.956	2.0
Mobile Off-Net Voice Traffic (Billions)	1.677	1.759	4.9
International Incoming Mobile Voice Traffic (Millions)	126.884	140.988	11.1
International Outgoing Mobile Voice Traffic (Millions)	98.279	108.452	10.4
Roaming-out (Own Subscribers) (Millions)	51.935	52.737	1.5
Roaming-in (Foreign Subscribers) (Millions)	45.656	43.477	-4.8
Total Local Fixed network traffic	583,540	538,489	-7.7
Fixed VoIP Traffic	173,012	127,915	-26.1
MOBILE SMS TRAFFIC			
SMS On-Net (Billions)	14.497	17.051	17.6
SMS Off-Net (Millions)	974.569	1,140.865	17.1
International Incoming SMS (Millions)	11.681	11.176	-4.3
International Outgoing SMS (Millions)	8.624	9.124	5.8
MOBILE MONEY TRANSFER SERVICES			
Number of Active Registered Mobile Money Transfer Subscriptions (Millions)	29.785	31.627	6.2
Number of Registered Mobile Money Agents	218,495	223,931	2.5
Number of Transactions-Sending and Withdrawal (Millions)	730.211	787.843	7.9
Value of Transactions- Sending and Withdrawal (Ksh.) trillion	2.027	2.119	4.5
Number of Mobile Commerce Transactions (Millions)	526.991	586.981	11.4
Value of Mobile Commerce Transactions (Ksh.) (trillion)	1.552	1.804	16.2
DATA/INTERNET SERVICES			
Data/ Internet Subscriptions (Millions)	42.204	45.705	8.3
Total Available International Bandwidth (Gbps)	4,623.30	4,605.57	-0.4
Total Used International Bandwidth (Gbps)	977.04	1,142.32	16.9
BROADCASTING SERVICES			
Number of free-to-air TV channels	68	75	10.3
Number of Radio FM stations	173	173	0.0
Digital Terrestrial Television Signal Population Coverage (%)	86	86	0.0
POSTAL AND COURIER SERVICES			

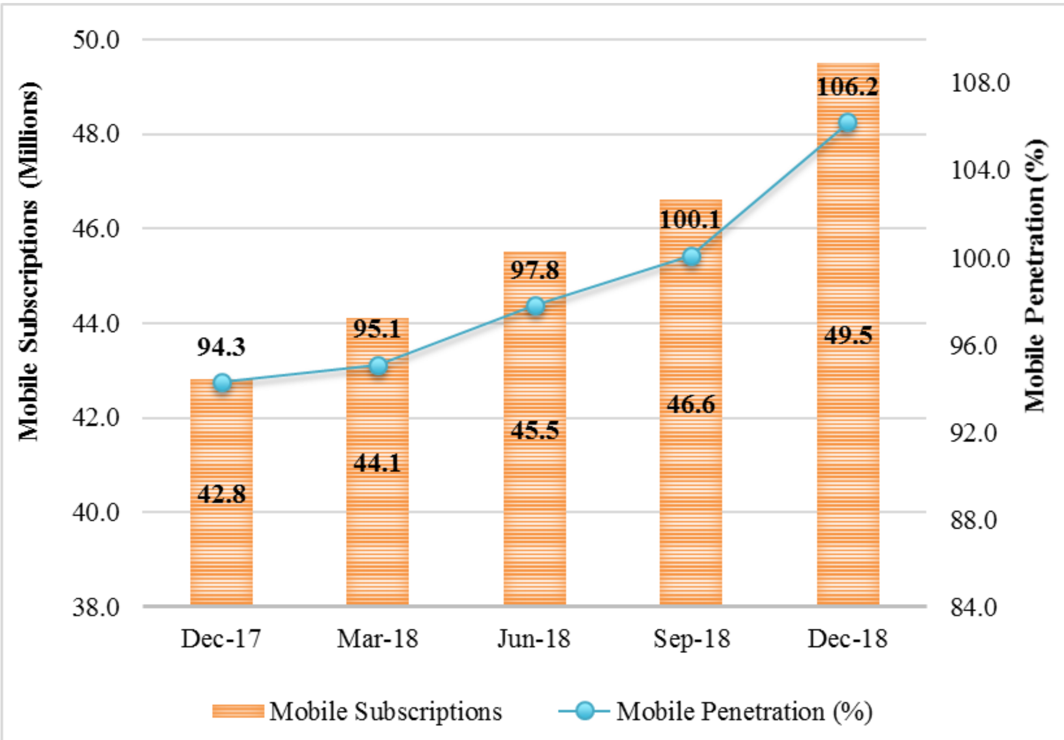
Postal Outlets	623	623	0.0
Private Courier Outlets	1,027	1,027	0.0
Number of Letters (Up to 350 gms) Posted Locally (Millions)	11.855	14.201	19.8
Total Courier Items Sent Locally (Millions)	1.161	1.0531	-9.3
International Incoming Letters (Up to 350 gms) (Millions)	2.112	2.049	-3.0
International Outgoing Letters (Up to 350 gms)	986,600	986,019	-0.1
CYBER SECURITY			
Total Cyber Threats	3,823,966	10,221,191	167.3
Total Cyber Reports	6,282	12,138	93.2
Total Population in Kenya (Millions)*	**46.6**	**46.6**	**0.0**

Source: Economic Survey 2018

1 CELLULAR MOBILE SERVICES

1.1 Mobile Subscriptions

During the quarter under review, the number of active mobile subscriptions[1] in the county grew by 6.2 per cent from the previous quarter to stand at 49.5 million. This translated to a mobile penetration level of 106.2 per cent. The penetration level of more than 100 per cent is attributed to the multiple SIM cards ownership in the country. Further, the Kenya Integrated Household Budget Survey (KIHBS) report published by the Kenya National Bureau of Statistics (KNBS) in 2018 indicated that at least 30 per cent of Kenyans owned more than one SIM card. Figure 1 illustrates the trends in mobile subscriptions and penetration levels.

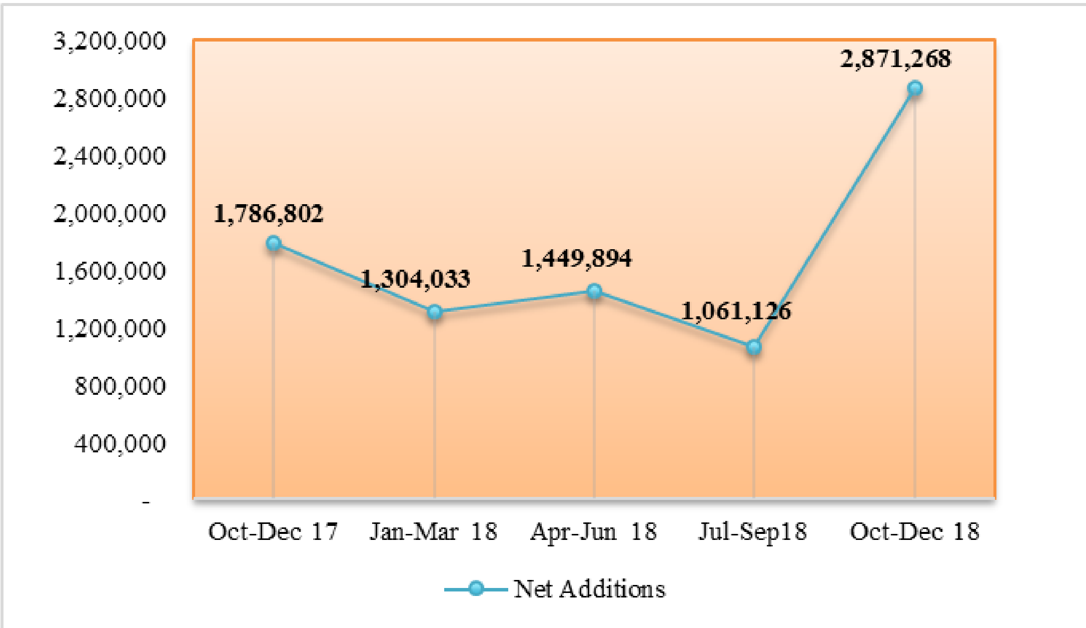


Source: CA, Operators' Returns

Figure 1: Mobile Subscriptions and Penetration levels

[1] **Active Mobile cellular telephone subscriptions** refer to subscriptions of portable telephones to a public mobile telephone service using cellular technology, which provides access to the Public Switched Telephone Network (PSTN). This includes analogue and digital cellular systems, including IMT-2000 (Third Generation, 3G, 4G). Both postpaid and prepaid subscriptions are included. Active subscriptions are those accounts that have been used during the past three (3) months. Inactive subscriptions, that is, prepaid cards where a call has not been made or received within the last 3 months, are excluded. *Mobile services subscriptions are always more than users since one subscriber can own multiple SIM cards* (ITU Manual on Telecommunication Indicators).

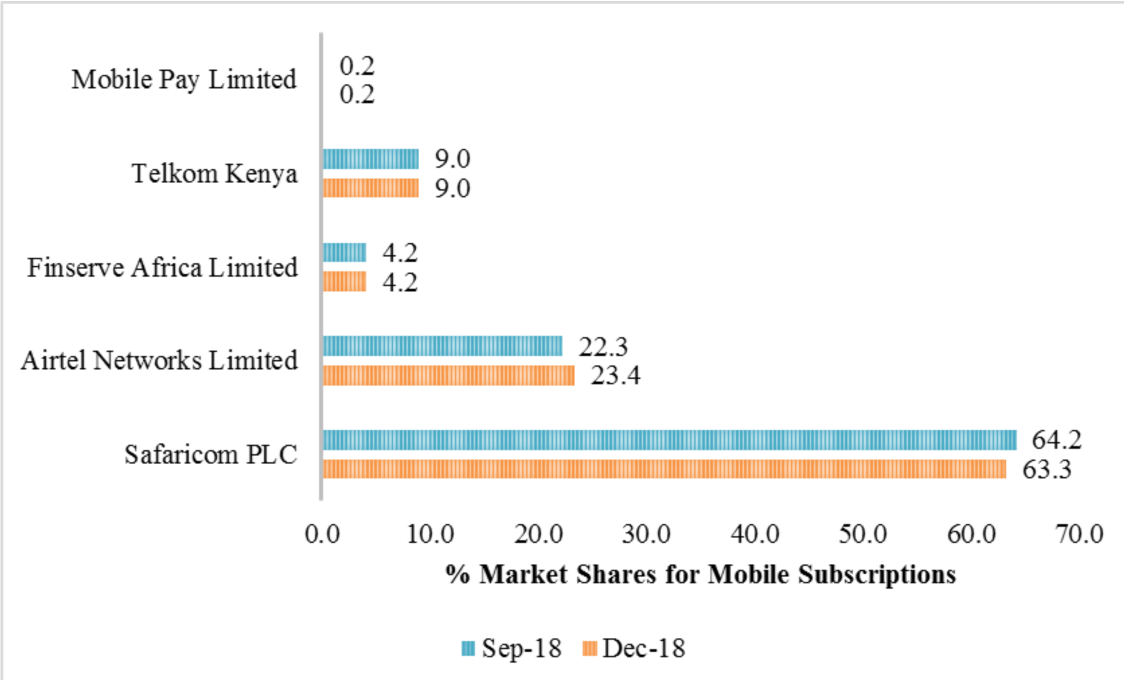
There were over 2.8 million net additions in mobile subscriptions in the quarter as shown in Figure 2. The substantial increase could be attributed to Safaricom PLC running a campaign dubbed *Safaricom @ 18 promotion* to its customers during the period under review.



Source: CA, Operators' Returns

Figure 2:Net Additions

During the quarter under review Safaricom PLC market share for mobile subscriptions dropped by 0.9 per centage points to stand at 63.3 per cent. On the other hand, Airtel Networks Limited gained 1.1 per centage points to record a market share of 23.4 per cent. The market shares for Telkom Kenya Limited, Finserve Africa Limited and Mobile Pay Limited were recorded at 9.0, 4.2 and 0.2 per cent respectively.



Source: CA, Operators' Returns

Figure 3: Per centage Market Share for Mobile Subscriptions per Operator

Table 1 gives the breakdown for Mobile Subscriptions per Operator based on contract type.

Table 1: Mobile Subscriptions per Operator by Contract Type

Name of operator	*Dec-18*			*Sep-18*			*Quarterly variation (%)*
	Pre-paid	*Post-paid*	*Total*	*Pre-paid*	*Post-paid*	*Total*	
Safaricom PLC	30,180,940	1,139,639	31,320,579	28,850,444	1,093,197	29,943,641	4.6
Airtel Networks Limited	11,475,746	88,221	11,563,967	10,316,812	96,920	10,413,732	11.0
Telkom Kenya Limited	4,435,307	12,638	4,447,945	4,176,803	11,714	4,188,517	6.2
Finserve Africa Limited	2,075,676	-	2,075,676	1,992,150	_	1,992,150	4.2
Mobile Pay Limited	93,263	-	93,263	92,122	-	92,122	1.2
Total	**48,260,932**	**1,240,498**	**49,501,430**	**45,428,331**	**1,201,831**	**46,630,162**	**6.2**

Source: CA, Operators' Returns

1.2 Mobile Money Services

During the quarter under review, the number of total active mobile money subscriptions and agents stood at 31.6 million and 223,931 respectively. A total of 787.8 million transactions (P2P and withdrawals) valued at 2.1 trillion Kenyan shillings were made.

There were 586.9 million mobile commerce transactions registered which were valued at KSh.1.8 trillion while the value of person-to-person (P2P) transfers amounted to KSh.731.9 billion.

Table 2 shows the trends in mobile money transfer and mobile commerce services.

Table 2: Mobile Money Transfer Service

Service /Indicator	*October - December 18*						
	Agents	***Active Subscriptions***	***No. of Transactions***	***Value of Transactions (Kshs)***	***No. of M-Commerce Transactions***	***Value of M-Commerce Transactions (Ksh.)***	***P2P Transfers (Ksh.)***
M-Pesa	168,620	25,570,165	616,876,047	1,649,729,513,242	476,841,712	1,352,832,181,914	606,924,431,213
Airtel Money	23,659	3,773,090	4,010,579	906,690,266	3,096,631	1,994,726,050	1,163,719,284
Equitel Money	-	2,075,676	166,388,296	467,223,285,354	106,060,589	449,272,815,404	122,965,573,252
T-Kash	24,744	114,807	207,214	364,526,801	982,272	110,244,772	80,114,775
Mobile Pay	6,908	93,263	361,233	1,388,443,219	-	-	789,472,713
Total	**223,931**	**31,627,001**	**787,843,369**	**2,119,612,458,882**	**586,981,204**	**1,804,209,968,140**	**731,923,311,237**

Source: CA, Operators' Returns

1.3 Mobile Number Portability

The number of mobile in-ports registered during the period under review dropped to 382 from 566 in-ports reported during the previous quarter.

Table 3 shows the number of mobile in-ports.

Table 3:Mobile Number Portability

Period	***Oct - Dec 18***	***Jul - Sep 18***	***Quarterly Variation (%)***
Number of in-ports	382	566	-32.5

Source: CA, Operators' Returns

1.4 Mobile Traffic and Usage Pattern

1.4.1 Local Voice Traffic

During the quarter under review mobile voice traffic originating and terminating on the same network grew by 2.0 per cent to register 12.9 billion minutes from 12.6 billion minutes reported in the previous quarter. Similarly, mobile voice traffic terminating to other mobile networks increased to 1.7 billion minutes from 1.6 billion minutes registered last quarter.

Mobile voice traffic terminating to fixed networks dropped by 2.6 per cent to record 13.9 million minutes during the period under review.

Table 4 shows a summary of local mobile voice traffic.

Table 4:Local Mobile Voice Traffic (Minutes)

Mobile Traffic	*Oct - Dec 18*	*Jul - Sep 18*	*Quarterly Variation (%)*
By Traffic originating (outgoing traffic)			
Own Network –Own Network	12,956,018,729	12,697,279,269	2.0
Own Network to Other Mobile Networks	1,759,368,421	1,677,821,037	4.9
Mobile Network to Fixed Network	13,994,491	14,372,379	-2.6
Total Traffic Origination (Outgoing)	**14,729,381,641**	**14,389,472,685**	**2.4**

Source: CA, Operators' Returns

1.4.2 Voice Traffic by Operator

The total mobile voice traffic recorded by Safaricom PLC during the second quarter increased to 9.5 billion minutes from 8.9 billion minutes reported in the first quarter. Consequently, its voice market share rose by 2.1 per centage points to 64.3 per cent. The increase is attributed to *Safaricom @ 18 promotion* offered by the operator to its customers during the quarter. The promotion enabled the Safaricom subscribers to make calls for as low as one shilling per minute for 18 minutes for both on-net and off net.

Airtel Networks Limited reported a drop of 5.6 per cent in total mobile voice traffic from 4.7 billion minutes to 4.5 billion minutes during the period under review. As a result, its mobile voice market share declined by 2.6 per centage points to 30.7 per cent

The total local mobile voice traffic for Telkom Kenya Limited increased to 706.5 million minutes from 619.3 million minutes reported in the first quarter. This increase could be attributed to *"Telkom Free Zones campaign"* promotion, which allowed its pre-paid customers to enjoy free on-net calls in some targeted regions across the county.

The total outgoing local mobile voice traffic recorded by Finserve Africa Limited declined during the review period to post 35.2 million minutes from 38.2 million minutes registered in the preceding quarter.

Mobile Pay Limited registered a total of 29,961 minutes during the quarter compared to 29,482 minutes recorded in the previous quarter.

The traffic volumes per service provider and their 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*	*Finserve Africa Limited*	*Mobile Pay Limited*	*Total*
Oct - Dec 18	*On-net*	8,921,525,809	3,580,991,014	449,167,055	4,331,697	3,154	12,956,018,729
	Off-net	533,458,215	937,593,318	257,377,368	30,912,713	26,807	1,759,368,421
	Total	**9,454,984,024**	**4,518,584,332**	**706,544,423**	**35,244,410**	**29,961**	**14,715,387,150**
	Market share (%)	64.3	30.7	4.8	0.2	0.0	
Jul - Sep 18	*On-net*	8,493,514,431	3,805,788,276	393,620,676	4,352,788	3,098	12,697,279,269
	Off-net	438,628,546	979,537,254	225,739,746	33,889,107	26,384	1,677,821,037
	Total	**8,932,142,977**	**4,785,325,530**	**619,360,422**	**38,241,895**	**29,482**	**14,375,100,306**
	Market share (%)	62.1	33.3	4.3	0.3	0.0	

Source: CA, Operators' Returns

1.4.3 Domestic Short Messaging Service (SMS) Traffic

The number of SMS sent during the period ending December 2018 rose by 17.6 per cent to post 18.1 billion from 15.4 billion messages recorded during the period ending in September 2018. The increase is attributed to the busy festive season and the national examination period during which friends and relatives exchanged messages of goodwill.

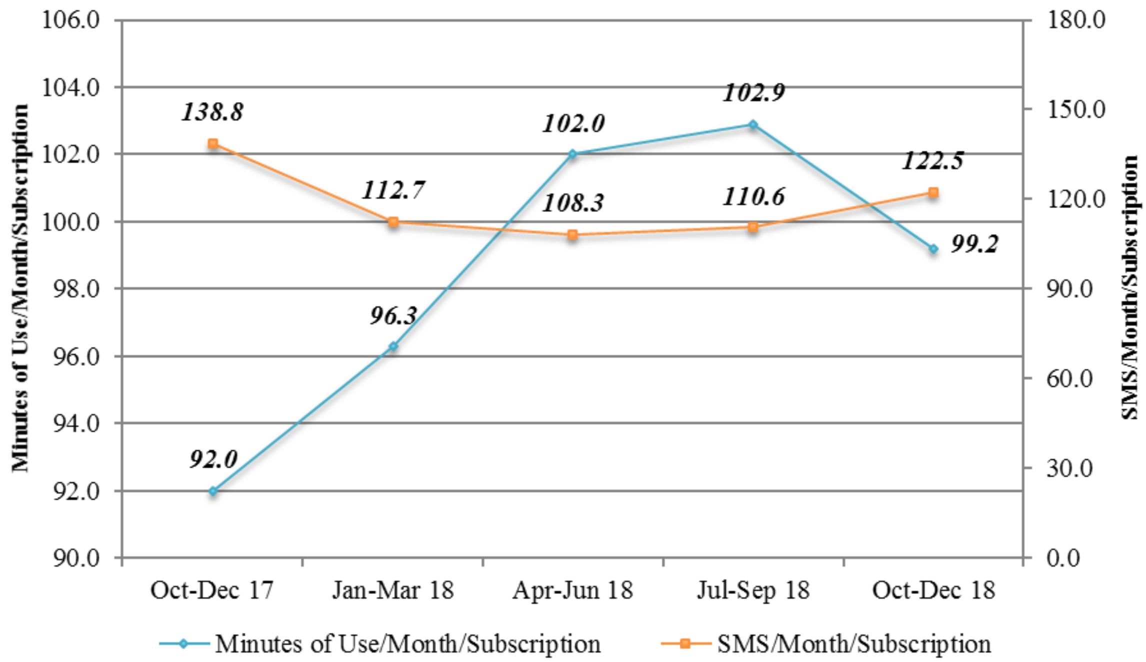
SMS traffic and the corresponding market share per operator is shown in Table 6.

Table 6:Short Messaging Service per Operator

Period	*Name of Operator/Indicator*	*Safaricom PLC*	*Airtel Networks Kenya Limited*	*Telkom Kenya Limited*	*Finserve Africa Limited*	*Mobile Pay Limited*	**Total**
Oct - Dec 18	*On-net*	16,654,154,484	370,168,861	24,906,626	1,907,064	2,411	17,051,139,446
	Off-net	456,657,612	574,105,426	103,491,991	6,590,498	20,404	1,140,865,931
	Total	**17,110,812,096**	**944,274,287**	**128,398,617**	**8,497,562**	**22,815**	**18,192,005,377**
	Market share (%)	94.1	5.2	0.7	0.0	0.0	
Jul - Sep 18	*On-net*	14,184,157,244	295,029,526	16,288,835	1,889,677	2,368	14,497,367,650
	Off-net	355,049,920	545,894,016	66,654,608	6,951,264	20,041	974,569,849
	Total	**14,539,207,164**	**840,923,542**	**82,943,443**	**8,840,941**	**22,409**	**15,471,937,499**
	Market share (%)	94.0	5.4	0.5	0.1	0.0	

Source: CA, Operators' Returns

During the quarter under review, the minutes of use per month per subscription stood at 99.2 down from 102.9 registered during the previous quarter. On the other hand, SMS per month per subscription rose to 122.5 from 110.6 recorded during the first quarter as illustrated in Figure 4.

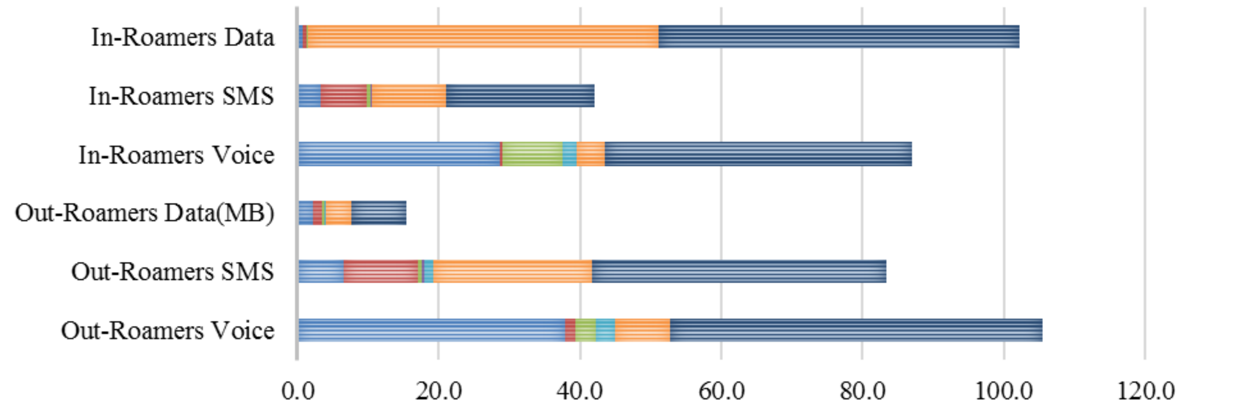


Source: CA, Operators' Returns

Figure 4:Minutes of Use /Month/Subscription and SMS/Month/Subscription

1.4.4 Roaming Traffic

During the review period, the out roamers called for 52.7 million minutes, sent 41.7 million messages and consumed 7.7 million MB for Internet services as illustrated in Figure 6. On the other hand, the visiting subscribers roaming on Kenya's network generated 43.4 million minutes of voice traffic, sent 21.0 million messages and used 51.1 million MB on data services.



	Out-Roamers Voice	Out-Roamers SMS	Out-Roamers Data(MB)	In-Roamers Voice	In-Roamers SMS	In-Roamers Data
Uganda	37,981,232	6,531,995	2,145,821	28,755,747	3,245,686	821,864
Tanzania	1,390,193	10,609,127	1,275,608	359,551	6,533,609	532,505
Rwanda	2,911,862	539,959	428,606	8,398,416	690,376	169,795
Burundi	17,988	285,057	24,730	7,869	18,633	171
S.Sudan	2,748,024	1,301,258	90,125	2,087,739	108,186	310
Other Countries	7,688,531	22,458,958	3,764,613	3,868,020	10,449,625	49,599,145
Total	52,737,830	41,726,354	7,729,502	43,477,342	21,046,115	51,123,790

Source: CA, Operators' Returns

Figure 5: International Roaming Traffic

1.4.5 International Mobile Traffic

The trend in international voice and SMS traffic for both EAC and non-EAC countries is as outlined in Table 7.

Table 7:International Mobile Traffic

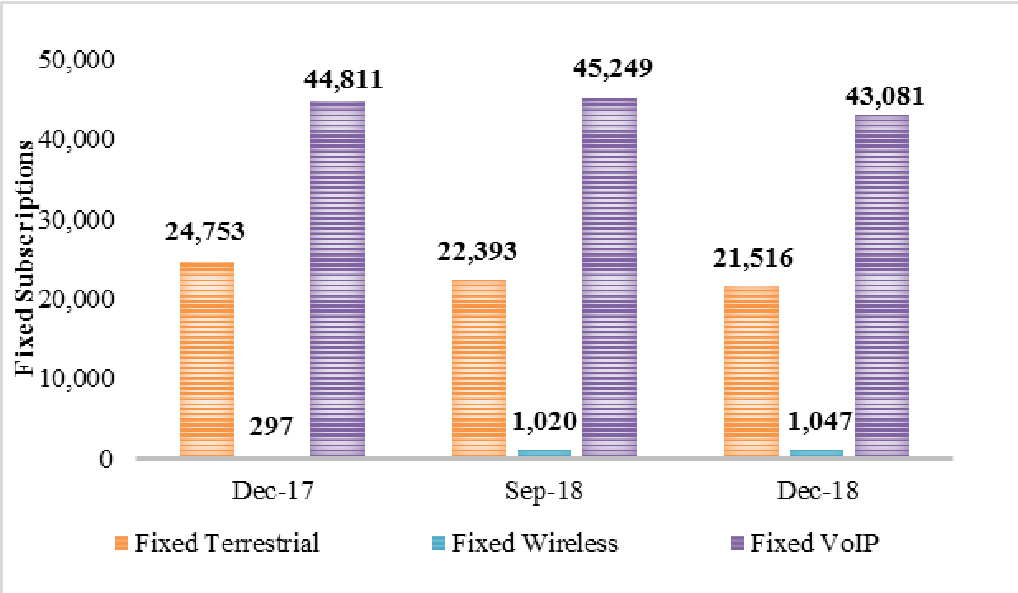
Traffic	***Region***	***Oct - Dec 18***	***Jul-Sep 18***	***Quarterly Variation (%)***
International Incoming Mobile Voice Minutes	*EAC*	74,841,143	63,004,319	18.8
	Others	66,147,022	63,879,898	3.5
	Total	**140,988,165**	**126,884,217**	11.1
International Outgoing Mobile Voice Minutes	*EAC*	54,403,619	45,220,760	20.3
	Others	54,048,720	53,058,533	1.9
	Total	**108,452,339**	**98,279,293**	10.4
International Incoming Mobile SMS		11,176,653	11,681,139	-4.3
International Outgoing Mobile SMS		9,124,361	8,624,890	5.8

Source: CA, Operators' Returns

2 FIXED TELEPHONE SERVICE

2.1 Fixed Network Subscriptions

As at 31st December 2018, the number of Fixed wireline, Wireless and fixed VoIP subscriptions stood at 21,516, 1,047 and 43, 081 respectively as illustrated in Figure 6.



Source: CA, Operators' Returns

Figure 6: Fixed Network Subscriptions

2.2 Fixed Network Traffic

The low usage of fixed network voice services continued to be experienced during the period under review. The total local fixed network voice traffic dropped by 11.9 per cent to post 666,404 minutes from 756,552 minutes reported during the previous quarter as shown in Table 8.

Table 8:Local Fixed Network Traffic in Minutes

Local Fixed Network traffic	***Oct-Dec 18***	***Jul-Sep 18***	***Quarterly Variation (%)***
Fixed-fixed	252,000	275,678	-8.6
Fixed wireless-fixed wireless	286,489	307,862	-6.9
Fixed VoIP Traffic	127,915	173,012	-26.1
Total Local Fixed network traffic	**666,404**	**756,552**	**-11.9**

Source: CA, Operators' Returns

2.3 International Fixed Voice Traffic

Table 9 presents the trends in International fixed voice traffic.

Table 9:International Fixed Voice Network Traffic

International Fixed Network traffic	*Oct-Dec 18*	*Jul-Sep 18*	*Quarterly Variation (%)*
International Incoming Fixed Network Voice traffic	7,123,167	7,034,266	1.3
International Outgoing Fixed Network Voice traffic	3,930,185	3,577,195	9.9
International Outgoing Fixed Network VoIP traffic	514,232	857,697	-40.0

Source: CA, Operators' Returns

3 DATA/INTERNET AND BROADBAND SERVICES

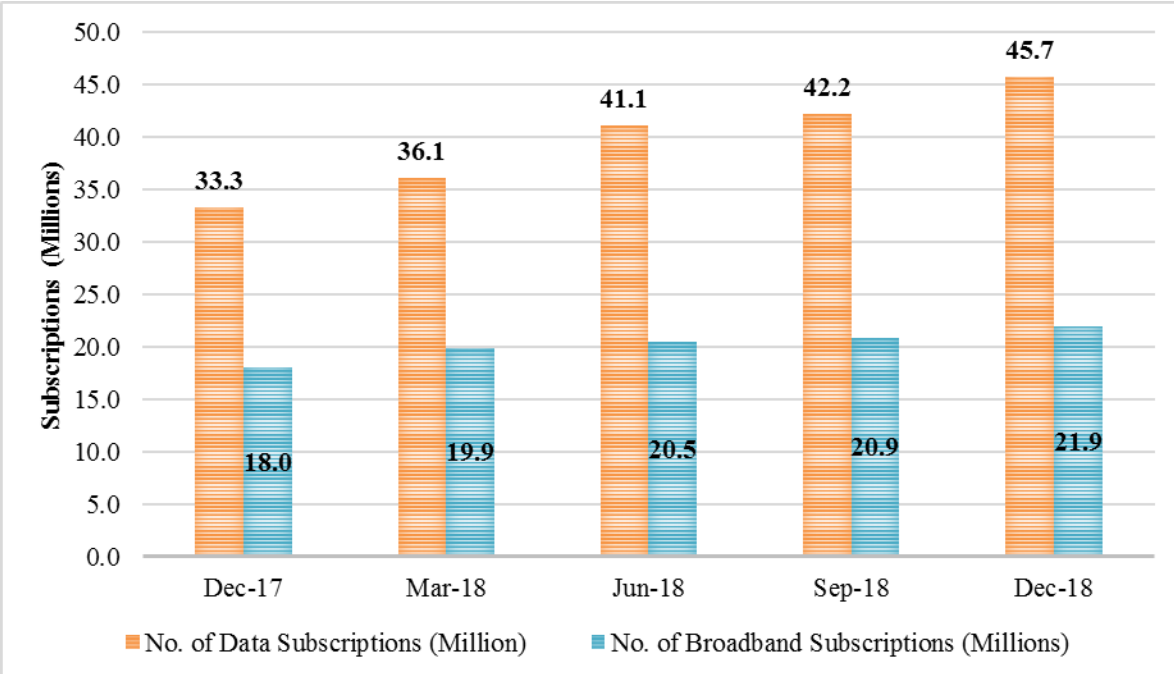
3.1 Data and Broadband[2] Subscriptions/Subscribers

The data/Internet market in the country remained vibrant during the period under review. As at 31st December 2018, the total number of active data/Internet subscriptions[3] stood at 45.7 million of which 47.9 per cent were on broadband.

Figure 7 illustrates the trend in total number of data and broadband subscriptions.

[2] Broadband-Internet speeds equal to or greater than 256 Kbps

[3] Subscribers should be distinguished from users. Subscribers are entities (e.g. businesses, individuals) that subscribe to an Internet access service. Users are entities that use those services. In the case of fixed Internet services such as fibre, wireless, satellite, users are always more numerous than subscribers, because one subscription can service several users. The difference is likely to be even greater where public access to the Internet is common. However, it is the opposite for mobile Internet services, subscriptions are always more than users since one subscriber can own multiple SIM cards.



Source: CA, Operators' Returns. The information on Internet and broadband Penetration has not been included in this report because the Authority is in the process of reviewing the methodology for estimating Internet Users in line with current market developments and international best practice.

Figure 7: Total Data/Internet Subscriptions

The number of Internet subscriptions by technology is as indicated in Table 10.

Table 10:Data/Internet Subscriptions

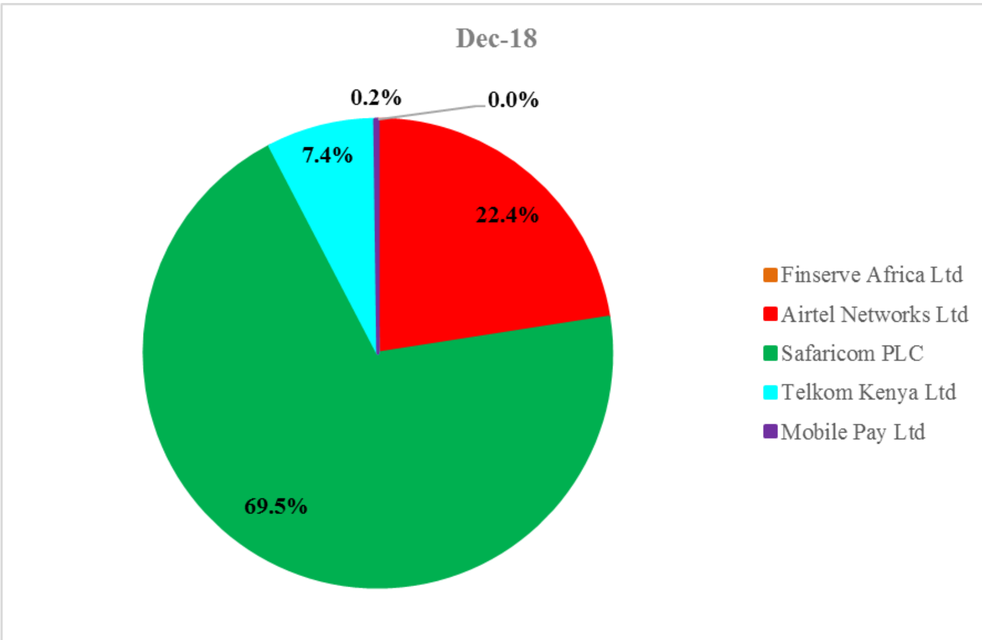
Internet/Data Subscriptions	***Oct-Dec 18***	***Jul-Sep 18***	***Quarterly Variation (%)***
Mobile Data Subscriptions	45,333,942	41,854,706	8.3
Terrestrial Wireless Data Subscribers	58,864	59,380	-0.9
Satellite Data Subscribers	1,547	1,391	11.2
Fixed DSL Data Subscribers	976	1,181	-17.4
Fixed Fibre Optic Data Subscribers	175,824	156,932	12.0
Fixed Cable Modem Subscribers	126,808	123,487	2.7
Other Fixed Data Subscribers (e.g Radio)	7,479	7,426	0.7
Total Internet Subscriptions	**45,705,440**	**42,204,503**	**8.3**

Source: CA, Operators' Returns.

Safaricom PLC registered the highest market share for mobile data subscriptions at 69.5 per cent whereas Airtel Network Limited reported 22.4 per cent market share. Further, Telkom Kenya

Limited, Finserve Africa Limited and Mobile Pay Limited reported market shares of 7.4, 0.4 and 0.2 per cent respectively.

The trends in market shares for mobile data per operator are shown in Figure 7.



Source: CA, Operators' Returns.

Figure 8: Mobile Data Subscriptions

Table 11 presents the subscriptions and market shares for fixed data/Internet service providers. Wananchi Companies registered the highest market share of 38.0 per cent followed by Safaricom PLC and Jamii Telecommunications Limited at 29.6 per cent and 13.8 per cent respectively.

Table 11: Fixed Data Subscribers per Service Provider

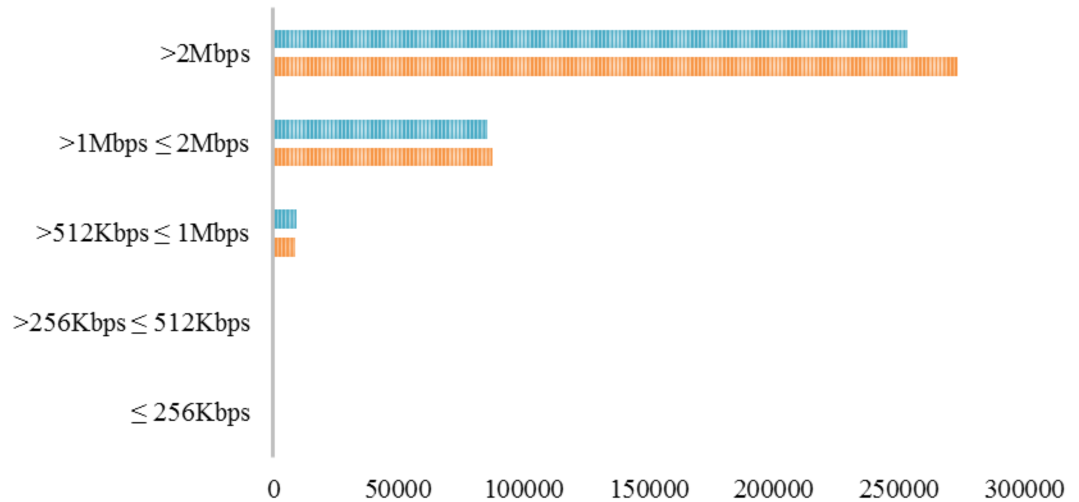
Oct-Dec 18		
Name of Service Provider	***No. of Subscriptions***	***Market Share (%)***
Wananchi Companies (Kenya) Ltd*	141,021	38.0
Safaricom PLC	109,925	29.6
Jamii Telecommunications Ltd	51,082	13.8
Poa Internet Kenya Ltd (formerly Argon Telecom Services Ltd)	27,939	7.5
Internet Solutions Kenya Ltd	15,307	4.1
Mawingu Networks Ltd	10,880	2.9
Liquid Telecommunications Kenya Limited	8,330	2.2
Telkom Kenya Ltd	3,717	1.0
Mobile Telephone Networks Business Kenya Ltd	623	0.2
Frontier Optical Networks Ltd	530	0.1

Other Fixed Service Providers	2,144	0.6

Source: CA, Operators' Returns. **** Data includes Wananchi Telecom, Wananchi Group, Simbanet Ltd and ISAT Africa Kenya Limited***

3.1.1 Fixed Broadband Subscriptions by Speed

It is evident from figure 9 that consumers of data services in the country prefer higher data speeds.



	≤ 256Kbps	>256Kbps ≤ 512Kbps	>512Kbps ≤ 1Mbps	>1Mbps ≤ 2Mbps	>2Mbps
Jul-Sep 18	712	526	9,451	85,607	253,501
Oct-Dec 18	570	505	8,905	87,772	273,746

Source: CA, Operators' Returns.

Figure 9:Fixed Broadband Subscriptions by Speed

3.2 International Bandwidth

The total international Internet bandwidth available (Lit/equip capacity) in the country stood at 4,605.57 Gbps during the period under review.

The trend in international available Internet bandwidth is as shown in table 12.

Table 12:International Internet Available Bandwidth (Gbps)

International Connectivity Bandwidth	*Oct-Dec 18*	*Jul-Sep 18*	*Quarterly Variation (%)*
SEACOM	2,840.0	2,840.0	0.0
TEAMS	702.0	702.00	0.0
EASSY	853.027	882.144	-3.3
Lion 2	204.826	193.44	5.9
Satellite Internet Bandwidth	5.72	5.72	0.0
Total International Internet Bandwidth (Gbps)	4,605.57	4,623.30	-0.4

Source: CA, Operators' Returns.

The total amount of International Internet Bandwidth utilized in the country during the period under review increased by 16.9 per cent to record 1,142.32 Gbps which accounted for 24.8 Per cent of the total Lit capacity.

The trend on International Used Bandwidth is as shown in table 13.

Table 13: International Internet Used Bandwidth (Gbps)

International Leased (Used) Bandwidth	*Oct-Dec 18*	*Jul-Sep 18*	*Quarterly Variation (%)*
International Undersea Internet Used Bandwidth (Gbps)	1,137.1	971.8	17.0
International Satellite Internet Used Bandwidth	5.22	5.2421	-0.4
Total International Internet Used Bandwidth (Gbps)	1,142.32	977.0421	16.9

Source: CA, Operators' Returns.

3.3 Registered Domain Names

The total number of .KE domains increased by 7.7 per cent during the quarter to 83,646 from 77,671 registered in the previous quarter.

The distribution of domains names per category is illustrated in Table 14.

Table 14:Number of Domain Names

		Dec-18		***Sep-18***	
Sub-domain	**Use**	**No. of Domains**	**(%)**	**No. of Domains**	**(%)**
CO.KE	***Companies***	77,820	93.03	71,842	92.50
GO.KE	***Government Entities***	502	0.60	461	0.59
OR.KE	***Non Profit Making Organizations***	1,976	2.35	1,925	2.48

AC.KE	***Institutions of Higher Education***	891	1.07	851	1.10
SC.KE	***Lower and Middle Level Institutions***	1,212	1.44	1,190	1.53
NE.KE	***Personal Websites and E-mail***	277	0.33	412	0.53
ME.KE	***Personal Websites and E-mail***	345	0.41	349	0.45
MOBI.KE	***Mobile Content***	180	0.25	179	0.23
INFO.KE	***Information***	443	0.52	462	0.59
Total		**83,646**	**100.00**	**77,671**	**100.00**

Source: Kenya Network Information Centre (KeNIC)

4 BROADCASTING

4.1 Broadcasting Signal Distribution Services

During the period under review, the total number of Free to Air TV Stations increased by 10.3 Per cent to reach 75 stations from 68 stations recorded last quarter. Similarly, digital TV subscriptions rose by 14.9 per cent to 5.7 million. Cable TV recorded a subscriber base of 169,698 marking a growth of 9.2 per cent while direct to Home Satellite and digital Terrestrial Television (STBs) recorded 1.1 million and 4.5 million subscriptions respectively.

Table 15 illustrates the trends in broadcasting and media services.

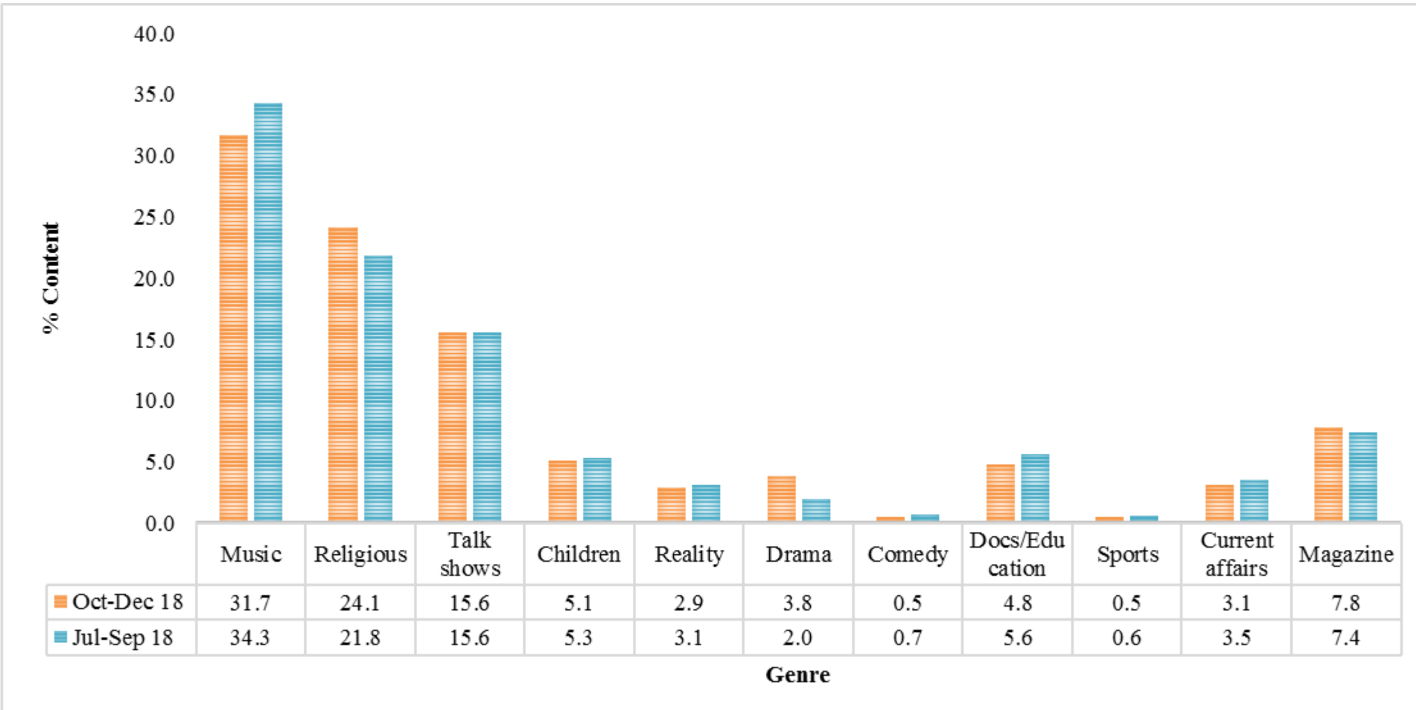
Table 15: Broadcasting and Media services

	Oct-Dec 18	***Jul-Sep 18***	***Quarterly Variation (%)***
DIGITAL TV SIGNAL DISTRIBUTORS			
Broadcast Signal Distributors (Common Carrier)	2	2	0.0
Self-Provisioning Broadcast Signal Distributors	3	3	0.0
Total Digital TV Signal Distributors	**5**	**5**	**0.0**
Commercial FTA TV Stations	74	67	10.5
Community FTA TV Stations	1	1	0.0
Total FTA TV Stations	**75**	**68**	**10.3**
Digital Terrestrial Television Signal Population Coverage (%)	86.0	86.0	0.0
DIGITAL TV SUBSCRIPTIONS			
Cable TV	169,698	155,453	9.2
Direct to Home Satellite	1,110,563	1,036,552	7.1
Digital Terrestrial Televisions (STBs)	4,512,690	3,848,423	17.3
Total Digital TV Subscriptions	**5,792,951**	**5,040,428**	**14.9**
Radio Stations			
Commercial FTA Radio	131	131	0.0
Community FTA Radio	42	42	0.0
Total Radio stations	**173**	**173**	**0.0**

Source: CA, Operators' Returns

4.2 Local Content Quota Genre Performance

Figure 10 illustrates the performance of the various genres of local content between October and December 2018.



	Music	Religious	Talk shows	Children	Reality	Drama	Comedy	Docs/Edu cation	Sports	Current affairs	Magazine
Oct-Dec 18	31.7	24.1	15.6	5.1	2.9	3.8	0.5	4.8	0.5	3.1	7.8
Jul-Sep 18	34.3	21.8	15.6	5.3	3.1	2.0	0.7	5.6	0.6	3.5	7.4

Source: National KE-CIRT/CC

Figure 10: Performance of the Various Genre of Local Content

5 HIGHLIGHTS OF THE CYBER SECURITY LANDSCAPE

During the period under review, there was an increase in cyber threat activity globally. In particular, there was a rise in cases of malware and the sale of stolen data and credentials including personal data and credit card information.

The quarter saw an exponential increase in the number of malware attacks as well as the number of misconfigured systems. There was also an increase in the number of fake mobile applications hosted on popular online stores, which were used to deliver malware to mobile devices and defraud unsuspecting users.

5.1 Cyber Threats Statistics

During the quarter, there was an increase in the number of cyber threats targeted at Kenya's cyber space with over 10.2 million cyber events detected during the quarter as compared to 3.8 million in the previous quarter as illustrated in Table 16.

Table 16: Cyber Threats Detected

Cyber Threat Events	***Oct-Dec 18***	***Jul-Sep 18***
Malware	9,026,924	1,844,897
Web application attacks	737,289	1,064,971
Botnet/DDOS	453,371	911,298
System Misconfiguration	3,449	2,548
Online Abuse	158	252*

Source: National KE-CIRT/CC *Revised data

The cyber threat events detected varied from Denial-of-Service (DOS) attacks which hampered the availability of computer services; online abuse which included online fraud, hate speech, incitement to violence and fake news; online impersonation via social media accounts and domain names; web application attacks which included website defacement and illegal access to online applications; Malware attacks which mainly included phishing attacks; and attacks perpetrated through the exploitation of misconfigured systems.

During this period under review, 12,197 cyber threat advisories were issued to the affected organizations marking 91 per cent increase from the advisories sent out to affected institutions in previous quarter.

Table 17: Cyber Threat Advisories

Cyber Threat Advisories	***Oct-Dec 18***	***Jul-Sep 18***
Malware	2,365	1,478
Web application attacks	271	828
Botnet/DDOS	243	159
System Misconfiguration	9,101	3,565
Online Abuse	158	252*

Source: National KE-CIRT/CC *Revised data

6 POSTAL AND COURIER SERVICES

6.1 Postal and Courier Traffic

The number of letters posted locally recorded a growth of 19.8 per cent to register 14.2 million letters during quarter under review. On the other hand, total courier items sent locally declined by 9.3 per cent to stand at 1.0 million items during the period.

The postal and courier traffic is as shown in Table 18.

Table 18:Postal and Courier Traffic

Post and Courier Traffic	*Oct - Dec 18*	*Jul-Sep 18*	*Quarterly Variation (%)*
Number of Letters (Up to 350 gms) Posted Locally	14,201,835	11,855,451	19.8
Total Courier Items Sent locally	1,053,108	1,161,006	-9.3
International Incoming Letters (Up to 350 gms)	2,049,024	2,112,953	-3.0
International Outgoing Letters (Up to 350 gms)	986,019	986,600	-0.1

Source: CA, Operators' Returns.

7 TARIFFS, PROMOTIONS AND SPECIAL OFFERS

The Authority received 5 applications for tariffs and 14 promotions & special offers during the period under review. The total number of tariffs application declined by 37.5 per cent whereas promotion & special offers rose by 27.3 per cent during the period under review when compared to the preceding quarter. Tables 19 and 20 illustrate trends in tariffs and promotions & special offers.

Table 19:Tariffs

Period	*Type of Tariff*							
	Voice	*SMS*	*Data*	*Airtime*	*Bundle*	*Mobile Money*	*Other2*	*Total*
Oct-Dec 18	0	1	1	0	3	0	0	5
Jul-Sep 18	1	0	3	1	3	0	0	8

Source: CA, filed promotions and special offers

Table 20:Promotions and Special Offers

Period	*Type of Promotion and Special Offer*								
	Voice	*SMS*	*Data*	*Bundle*	*Airtime*	*Lucky Draw4*	*Mobile Money*	*Other5*	*Total*
Oct-Dec 18	4	0	5	1	2	1	0	1	14
Jul-Sep 18	2	0	6	2	1	0	0	0	11

Source: CA, filed promotions and special offers

8 CONCLUSION

The Kenyan mobile market has experienced significant growth over the years but it is yet to reach its saturation point. The quarter under review was marked by significant growth in the uptake of mobile services with voice and SMS traffic recording significant increases. This was expected considering that the National Examinations and the busy festive season fall under this quarter. Based on trends for the previous years, there is a high likelihood that there will be reduced activity in the mobile sub-sector during quarter three.

The data/Internet market in the country remained vibrant during the quarter under review and mobile phones continued to be the most available and preferred medium of accessing the Internet. Further, the various service providers launched a number of promotions and special offers which boosted Internet usage during this period. Unlike the mobile voice and SMS services that are expected to record slight decline in the next quarter, the data/internet sub-sector is expected to continue exhibiting remarkable growth even after the lapse of festivities. This is attributed to the fact that demand for data services in Kenya is driven by increased demand for accessing; government services online, e-commerce services and enhanced interest in social media platforms and high definition video streaming.

The technological evolution in the communications sector in the recent past has greatly affected the performance of the postal and courier sub-sector. However, the Postal Corporation of Kenya (PCK) has continued to re-invent itself by advancing from the traditional telegrams and mail delivery systems to more technology inspired services. E-commerce, logistics and fin-tech (financial services) have become the new frontier for postal sector. Further, PCK has come up with innovations that ride on ICT platform such as *M-post,* Posta mobile wallet, *Tunza Nyumba na Posta*, EMS2Go and *M-Njiwa,* among others. These developments coupled with the recent collaboration between Posta, and Jersey Post and Amazon are expected to boost the postal market in the coming quarters.

---

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

[5]"Other" refers to promotions that cannot be clearly attributed to any clear category of services.