SECOND QUARTER SECTOR STATISTICS REPORT FOR THE FINANCIAL YEAR 2016/2017 (OCTOBER-DECEMBER 2016)

Direct any enquiries 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

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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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EASSy	Eastern Africa Submarine Cable Systems
LION2	Lower Indian Ocean Network
GSM	Global Systems for Mobile Communications
Mbps	Megabits per second
MMS	Multimedia Service
MoU	Minutes of Use
SEACOM	Sea Sub-Marine Communications Limited
SIM	Subscriber Identification Module
SMS	Short Messaging Service
TEAMS	The East African Marine System
VSAT	Very Small Aperture Terminal
FY	Financial Year
OTT	Over-The-Top
TV	Television
DTT	Digital Terrestrial Television
FTA	Free to Air
STB	Set Top Boxes
FM	Frequency Modulation
MB	Megabytes

I. PRELIMINARY NOTES

- *This report is based on data provided by service providers as per their license conditions.*
- *The information provided in this report is subject to alteration in case of any revisions or updates from the service providers.*

II. REPORT SUMMARY

The ICT Sector Quarterly Statistics Report for the Second Quarter of the Financial Year 2016/2017 provides an overview of the ICT sector performance and development trends in the following service categories:

- Mobile Telephony Service
- Fixed Telephony Service
- Internet/Data Service
- Registered Domains
- Broadcasting Service
- Postal and Courier Service and;
- Tariffs, Promotions and Special Offers

As at the end of Q2 of FY 2016/17, the number of mobile subscriptions experienced a nominal growth of 1.0 per cent to reach 38.9 million up from 38.5 million registered during the previous quarter. Subsequently, mobile penetration level recorded a growth of 0.9 per centage points to stand at 88.2 per cent during the quarter up from 87.3 per cent posted during the previous quarter.

The quarter under review registered an increase of 385,260 new mobile subscriptions compared to a decline of 1.1 million subscriptions recorded in the previous quarter.

The total number of mobile money subscriptions was recorded at 31.9 million subscriptions while mobile money agents were recorded at 161,583 during the quarter under review. The volume of transactions made was recorded at 456.6 million with over Ksh.1 trillion being transferred among users. During the quarter mobile commerce posted a total of 262.6 million transactions valued at Ksh. 586.4 million. Person to person transfers made during the quarter amounted to Ksh. 515.9 billion.

Mobile number portability registered a decline in the number of in-ports to stand at 153 down from 404 in-ports recorded during the last quarter.

Total traffic originating from one mobile network to another recorded a growth of 0.9 per cent during the quarter under review to stand at 10.8 billion minutes up from 10.7 billion minutes posted during the previous quarter. On the contrary, the minutes of use per month per subscription slightly fell to register 92.7 minutes during the quarter down from last quarter’s 92.8 minutes.

The number of Outgoing SMS traffic recorded a remarkable growth of 29.1 per cent during the quarter to reach 15.8 billion messages up from 12.2 billion messages sent during the preceding quarter. The overall increase in the number of SMS sent could be attributed to increased activities during the quarter under review.

During the quarter under review, 36.8 million minutes of total roaming-out voice traffic volume was registered with roaming within EAC countries contributing 32.1 million minutes, while non-EAC countries contributed 4.6 million minutes. Roaming-in voice traffic recorded a total of 30.5 million minutes with in- roamers from EAC countries contributing 25.2 million minutes whereas for non EAC posted 5.2 million minutes.

International Incoming mobile voice traffic posted 147.1 million minutes up from 132.0 million minutes registered in the preceding quarter representing an increase of 11.5 per cent during the quarter under review. Traffic received from EAC countries contributed 44.5 million minutes. Conversely, International outgoing mobile traffic was recorded at 116.7 million minutes during the period under review down from 117.5 million minutes posted in the previous quarter representing a decline of 0.7 per cent.

The volume of International Incoming mobile SMS has continued on a downward trajectory with the quarter under review recording a drop of 4.2 per cent to stand at 9.2 million messages down from 9.6 million messages recorded in the previous quarter. Similarly, International outgoing messages fell by 16.7 per cent to post 9.0 million messages during the quarter.

The fixed telephone market has continued to record a downward trend recording 72,801 subscriptions during the quarter under review down from 80,288 subscriptions posted in the previous period, representing a 9.3 per cent drop. Fixed terrestrial lines declined to post 72,427 subscriptions down from 79,918 connections recorded in the previous quarter. On the hand, fixed wireless experienced a slight increase during the quarter to stand at 374 subscriptions.

The Internet/data segment recorded a growth of 3.9 per cent to reach 26.6 million subscriptions up from 25.6 million subscriptions posted during the last quarter. Mobile data subscriptions rose by 3.9 per cent and continued to account for the majority of the subscriptions standing at 26.5 million subscriptions. Terrestrial wireless data subscriptions grew by 87.7 per cent to post 29,724 subscriptions. Fixed fibre optic and fixed cable modem subscriptions grew by 8.3 and 2.8 per cent respectively. Consequently, the number of estimated internet users recorded a growth of 4.3 per cent to stand at 39.6 million users compared to 37.7 million users recorded during the preceding quarter. Internet penetration stood at 89.7 per cent up from 85.3 per cent during the previous quarter.

The number of broadband subscriptions continues to demonstrate an upward trend with the period under review recording at 12.7 million subscriptions up from 11.9 million subscriptions registered during the preceding quarter. Subsequently, broadband penetration level stood at 28.7 per cent during the quarter under review.

During the period under review, the international Internet bandwidth available in the country (Equipped/Lit) remained unchanged at 2.0 million Mbps. In terms of the Used capacity, there was a growth of 2.5 per cent during the quarter to stand at 860,300 Mbps up from last quarter's 839,300 Mbps. The used capacity represented 42.4 per cent of the total available bandwidth in the country.

In broadcasting sub sector, the number of free to-air TV channels on the digital terrestrial platform at the end of the period under review stood at 66 while number of pay TV service providers on the Digital Terrestrial Television (DTT) remained at 2: GoTV and StarTimes. The digital broadcasting signal covers 66 per cent of the Kenyan population

In the postal and courier segment, the volume of letters posted experienced a drop of 7.7 per cent to register 15.8 million letters while the number of parcels sent grew by 26.8 per cent to post 1.6 million items during the period under review. The volume of letters received grew by 8.9 per cent to stand at 2.2 million up from 2.1 million witnessed in the previous quarter. On the other hand, international outgoing letters declined during the quarter to stand at 1.9 million letters.

During the quarter under review, a total of 31 applications for promotions, special offers and tariffs received from telecommunication service providers which were then reviewed and approved by the Authority.

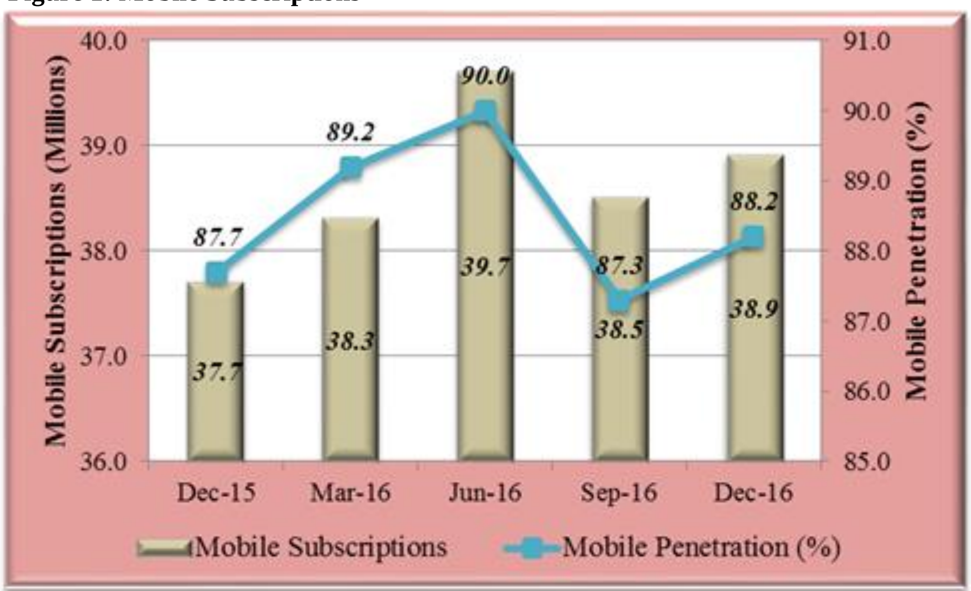
1  CELLULAR MOBILE SERVICES

1.1 Mobile Subscriptions

At the end of the period under review, the mobile service sub-sector registered a positive growth to post 38.9 million active mobile subscriptions up from 38.5 million subscriptions recorded during the previous quarter. This represents a slight growth of 1.0 per cent during the quarter. When compared to the same period of the previous financial year, there is an increase of 1.2 million subscriptions. Subsequently, mobile penetration level grew by 0.9 per centage points during the period under review to stand at 88.2 per cent up from 87.3 per cent recorded last quarter.

The trends in mobile subscriptions and penetration levels are illustrated in Figure 1.

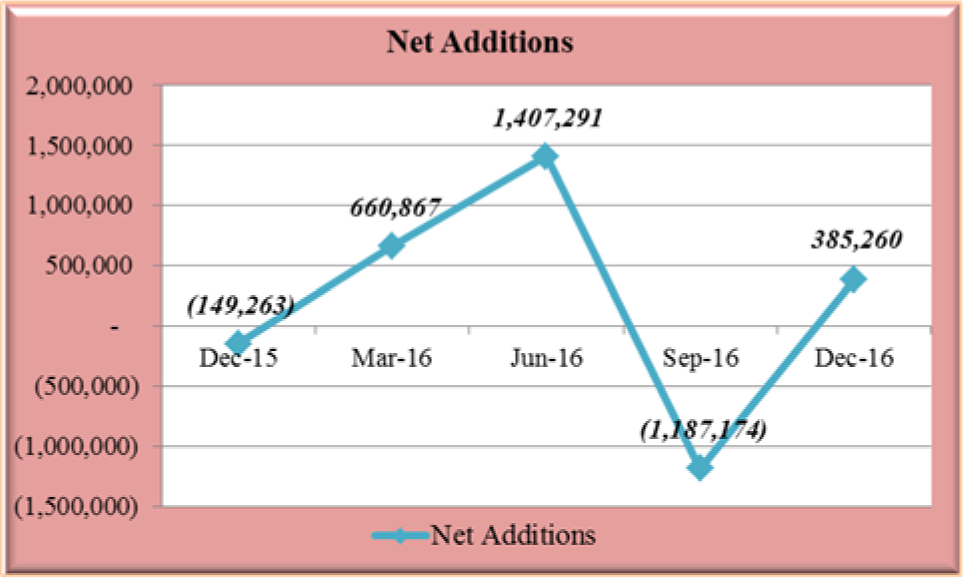
Figure 1: Mobile Subscriptions



Source: CA, Operators' Returns,

As shown in Figure 2, the net additions in mobile subscriptions during the quarter registered an increase of 385,260 subscriptions compared to a decline of 1.1 million subscriptions posted in the last quarter.

Figure 2 : Net additions in Mobile Subscriptions



Source: CA, Operators' Returns

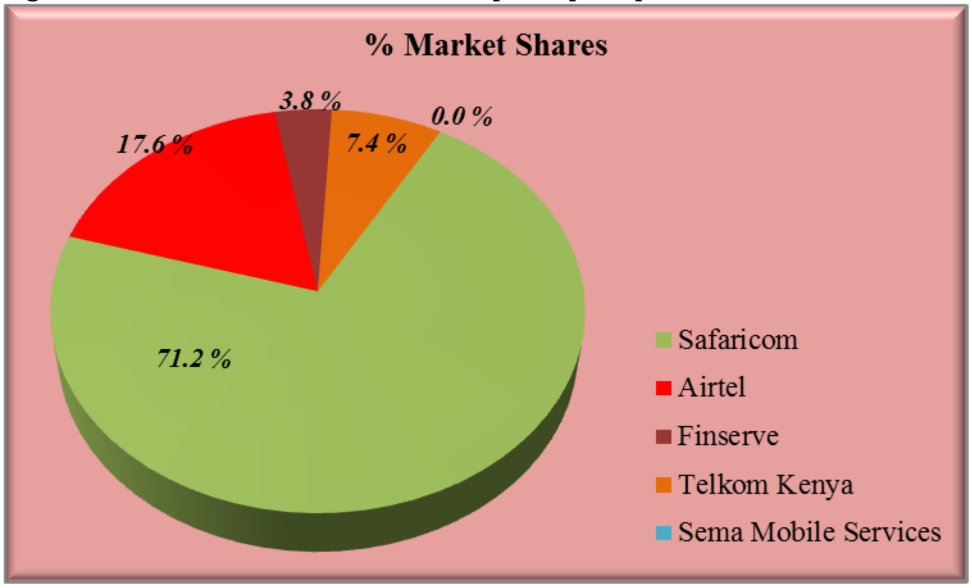
Safaricom Limited recorded the highest number of mobile subscriptions as at 31st December 2016. It gained 2.2 per centage points of the market share to stand at 71.2 per cent up from 69.0 per cent posted last quarter.

Airtel Networks Limited nominally gained 0.1 per centage point market share to record 17.6 per cent during the period under review up from 17.5 per cent market share recorded in the previous quarter. On the contrary, Telkom Kenya Limited lost 0.2 per centage points to reach 7.4 per cent market share from last quarter's performance of 7.6 per cent.

Finserve Africa Limited lost 2.1 per centage points of market share during the quarter under review to stand at 3.8 per cent. This was mainly attributed to the revision of data by the service provider during the quarter under review. The market share for Sema Mobile Services remained below 0.0 per cent.

Market share for mobile subscriptions per operator are as shown in Figure 3.

Figure 3: Market Share for Mobile Subscriptions per Operator



Source: CA, Operators' Returns.

During the quarter under review, 96.4 per cent of the mobile subscriptions were pre-paid compared to 96.5 per cent recorded in the last quarter while the number of post-paid stood at 3.6 per cent subscriptions.

Safaricom Limited total number of subscriptions grew by 4.2 per cent to stand at 27.7 million subscriptions up from 26.6 million subscriptions registered during the previous quarter. It gained by 4.1 per cent and 7.0 per cent pre-paid and post-paid mobile subscriptions respectively.

Likewise, Airtel Networks Limited experienced an increase in the number of pre-paid subscriptions by 1.4 per cent to stand at 6.7 million subscriptions up from 6.6 million subscriptions posted during the last quarter. However, its post-paid subscriptions declined by 6.6 per cent to record 137,664 subscriptions down from 147,359 subscriptions reported in the preceding quarter. Its total mobile subscriptions stood at 6.8 million which marked an increase of 1.2 per cent from the previous quarter.

Telkom Kenya Limited experienced a marginal decline in the number of pre-paid subscriptions by 0.3 per cent to post 2.88 million subscriptions down from 2.89 million subscriptions recorded in the previous quarter. However, post-paid mobile subscriptions grew by 5.3 per cent to stand at 8,871 up from 8,424 subscriptions recorded in the previous quarter. The total subscriptions were registered at 2.8 million down from 2.9 million subscriptions reported during the previous quarter.

Finserve Africa Limited registered a total of 1.4 million mobile subscriptions down from 2.2 million subscriptions posted in the previous quarter translating to a decline of 34.5 per cent. This was as a result of revision of data by the operator.

Sema Mobile Services stood at 270 subscriptions during the quarter under review up from 266 subscriptions recorded in the previous quarter.

The number of pre-paid and post-paid subscriptions by operator is as indicated in Table 1.

Table 1 : Mobile Subscription per operator

Name of operator	*Dec-16*			*Sep-16*			*Quarterly variation (%)*
	Pre-paid	*Post-paid*	*Total*	*Pre-paid*	*Post-paid*	*Total*	
Safaricom Limited	26,471,893	1,266,834	27,738,727	25,426,598	1,184,484	26,611,082	4.2
Airtel Networks Limited	6,711,829	137,664	6,849,493	6,620,306	147,359	6,767,665	1.2
Finserve Africa Limited	1,496,153	-	1,496,153	2,283,946	-	2,283,946	-34.5
Telkom Kenya Limited	2,888,674	8,871	2,897,545	2,925,545	8,424	2,933,969	-1.2
Sema Mobile Serrvices	270	-	270	266	-	266	1.5
Total	**37,568,819**	**1,413,369**	**38,982,188**	**37,256,661**	**1,340,267**	**38,596,928**	1.0

Source: CA, Operators' Returns.

1.2 Mobile Money Transfer

During the quarter under review, the number of mobile money subscriptions was recorded at 31.9 million subscriptions while the number of active mobile money transfer agents stood at 161,583. The volume of transactions (deposits and withdrawals) on this platform was registered at 456.6 million with 1.1 trillion Kenya Shillings transferred during the period. Mobile commerce recorded a total of 262.6 million transactions with 586.4 billion Kenya Shillings used to pay for goods and services. The person-to-person transfers amounted to 515.9 billion Kenya Shillings during the period.

The trends in mobile money transfer services are as shown in Table 2.

Table 2 : Mobile Money Transfer Service

Service	*Dec-16*						
	Agents	*Subscriptions*	*Number of transactions*	*Value of transactions (Kshs)*	*Mobile commerce transactions*	*Value of mobile commerce (Kshs)*	*Person to Person transfers (Kshs)*
M-pesa	124,084	21,574,006	356,786,745	892,878,930,121	222,092,539	408,641,371,835	423,693,636,524
Airtel Money	18,354	6,711,829	9,359,291	6,579,991,618	9,359,291	6,579,991,618	2,614,634,646
Orange Money	800	194,322	31,000	80,029,000	232,014	232,014	4,456,990
Equitel Money	-	1,240,503	89,653,681	251,578,380,142	30,910,631	171,173,634,732	89,592,804,266
Mobikash*	16,749	1,772,696	815,881	127,032,829	6,430	9,227,168	22,876,608
Tangaza*	1,596	503,556	-	-	-	-	-
Total	**161,583**	**31,996,912**	**456,646,598**	**1,151,244,363,710**	**262,600,905**	**586,404,457,367**	**515,928,409,034**

Source: CA, Operators' Returns, *Provisional data.

1.3 Mobile Number Portability

As indicated in Table 3, the number of in-ports stood at 153 down from 404 in-ports recorded in the previous quarter which represents a fall of 62.1 per cent during the period under review.

Table 3 : Mobile Number Portability

Period	*Oct -Dec 16*	*Jun-Sep 16*	*Quarterly Variation (%)*	*Oct -Dec 15*	*Jun-Sep 15*	*Quarterly Variation (%)*
Number of in-ports	153	404	-62.1	234	461	-49.2

Source: CA, Operators' Returns.

1.4 Mobile Traffic and Usage Pattern

1.4.1 Voice Traffic

There was a modest quarterly increase in the number of voice minutes originating from the mobile networks by 0.9 per cent. Total outgoing mobile traffic was registered at 10.8 billion minutes during the quarter under review up from 10.7 billion minutes posted in the previous quarter. When compared to the same period of the previous year, a growth of 5.6 per cent was recorded.

The nominal growth in total traffic was partially contributed by on-net traffic that rose by 0.8 per cent up from 9.4 billion minutes recorded during the previous quarter to 9.5 billion minutes posted during the quarter under review.

Similarly, traffic to other mobile networks increased by 1.9 per cent to stand at 1.3 billion minutes during the quarter under review up from 1.2 billion minutes recorded during the previous quarter.

Mobile to fixed traffic increased by 3.4 per cent during the quarter to record 16.3 million minutes up from 15.6 million minutes posted during the previous quarter. However, when compared to the same period of the previous year a decline of 19.3 per cent was registered. The general increase in the mobile voice traffic could mainly be attributed to a busy festive season during the period where many people were communicating to wish their family and friends happy festive season.

Table 4 shows a summary of local mobile voice traffic.

Table 4: Local Mobile Voice Traffic in Minutes

Mobile Traffic	*Oct-Dec 16*	*Jul-Sep 16*	*Quarterly Variation (%)*	*Oct-Dec 15*	*Jul-Sep 15*	*Quarterly Variation (%)*
			By Traffic originating (outgoing traffic)			
Own Network – Own Network	9,522,341,685	9,446,208,083	0.8	8,982,304,017	9,644,089,586	-6.9
Own Networkto Other Mobile Networks	1,321,393,435	1,296,192,704	1.9	1,272,404,250	1,212,873,879	4.9
Mobile Network to Fixed Network	16,362,117	15,666,971	4.4	15,968,998	19,847,086	-19.5
Total Traffic Origination (Outgoing)	10,860,097,237	10,758,067,758	0.9	10,270,677,265	10,876,810,551	-5.6
			By Traffic terminating (incoming traffic)			
Own Network – Own Network	9,522,341,685	9,446,208,083	0.8	8,982,304,017	9,644,089,586	-6.9
Other Mobile Networks to Own Network	1,258,551,962	1,257,363,469	0.1	1,295,667,381	1,128,846,645	14.8
Fixed Network to Mobile Network	10,313,024	10,428,463	-1.1	9,141,859	22,677,742	-59.7
Total traffic termination (Incoming)	10,791,206,671	10,714,000,015	0.7	10,287,113,257	10,784,305,834	-4.6

Source: CA, Operators' Returns.

The total traffic terminated on local mobile networks experienced a growth of 0.7 per cent to register 10.79 billion minutes during the quarter up from 10.71 billion minutes recorded during the last quarter. Conversely, there was a decrease of 4.6 per cent when related to the same period of the previous year.

There was a nominal decline in fixed to mobile traffic by 1.1 per cent during the quarter under review to post 10.3 million minutes down from 10.4 million minutes recorded during the previous quarter. Similarly, a decline of 59.7 per cent was observed when compared to the same period of the financial previous year.

1.4.2 Voice Traffic by Operator

Safaricom Limited local mobile voice traffic gained 4.3 per centage points in market share to register 80.6 per cent market share up from last quarter's 76.3 per cent. Similarly, its total traffic volume increased to 8.7 billion minutes up from 8.1 billion minutes registered during the previous quarter. On-net and off-net traffic volumes stood at 8.3 billion and 398 million minutes respectively during the period under review. The increase of its local traffic volumes could be attributed to "Home is Where the heart is" campaign carried out by the operator over the Christmas season where customers were awarded bonus airtime and bundles.

Airtel Networks Limited's mobile voice traffic declined by a slight margin of 1.1 per cent during the quarter under review to post a total of 1.46 billion minutes down from 1.48 billion minutes reported during the last quarter. Similarly its' voice traffic market share also declined by 0.3 per centage points to stand at 13.5 per cent down from 13.8 per cent recorded during the previous quarter.

Telkom Kenya Limited's total mobile voice traffic declined substantially to stand at 590 million minutes during the period under review down from 1.0 billion minutes posted during the previous period. On-net and off-net traffic stood at 409 million and 181 million minutes respectively. Consequently, its market share fell to 5.4 per cent in the quarter under review down from 9.4 per cent posted in the previous quarter. The fall in volume of voice traffic is mainly attributed to a review of tariff bundles which was available to Telkom Kenya's prepaid mobile customers in quarter 1 FY 2016/17.

Similarly, Finserve Africa Limited lost its mobile voice market share to post a total of 46.5 million minutes down from 49.5 million minutes registered in the previous quarter. Subsequently, the market share fell by 0.1 per centage points to stand at 0.4 per cent during the period under review. The traffic to other mobile networks stood at 42.5 million minutes whereas on-net traffic registered 4.0 million minutes.

Sema Mobile Services recorded 42,205 minutes during the quarter under review up from 32,649 minutes posted in the previous quarter representing a growth of 36.2 per cent however its market share still remained below 0.0 per cent.

The traffic volumes for each of the mobile operators and MVNOs and the respective market shares are shown in Table 5.

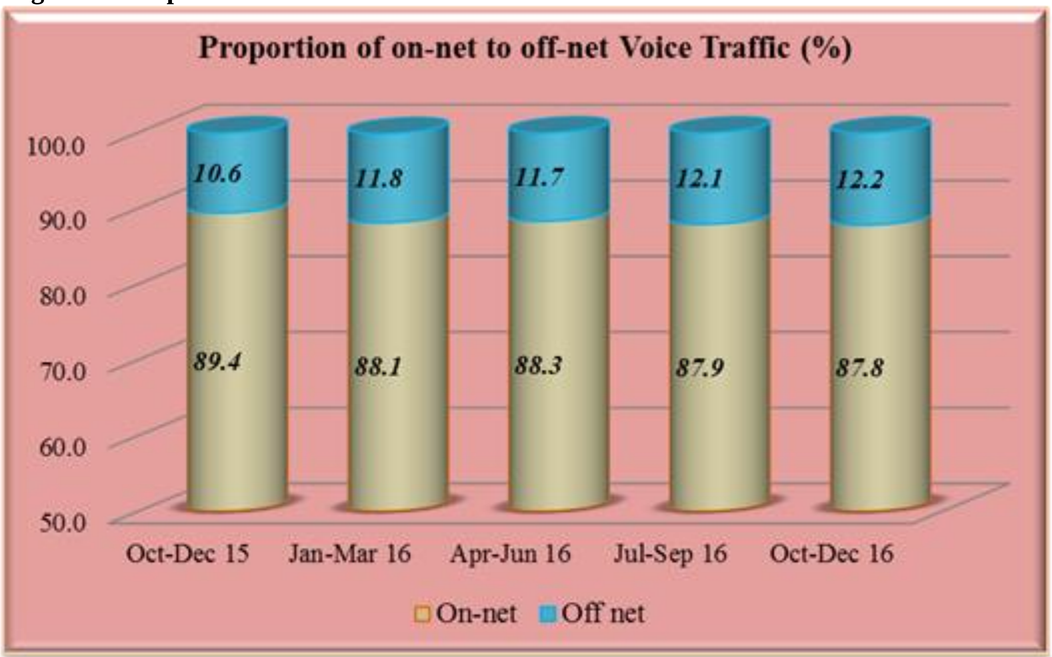
Table 5 : Local Mobile Voice Traffic by Operator

Period	*Name of Operator/Indicator*	*Safaricom Limited*	*Airtel Networks Limited*	*Telkom Kenya Limited*	*Finserve Africa Limited*	*Sema Mobile Services*	*Total*
Oct-Dec 16	*On-net*	8,343,311,000	765,210,000	409,803,391	4,013,903	3,391	9,522,341,685
	Off-net	398,022,273	699,698,004	181,107,643	42,526,701	38,814	1,321,393,435
	Total	**8,741,333,273**	**1,464,908,004**	**590,911,034**	**46,540,604**	**42,205**	**10,843,735,120**
	Market share (%)	80.6	13.5	5.4	0.4	0.0	
Jul-Sep 16	*On-net*	7,839,803,000	781,774,000	820,452,345	4,177,067	1,672	9,446,208,083
	Off-net	357,880,380	699,304,069	193,653,867	45,323,410	30,978	1,296,192,704
	Total	**8,197,683,380**	**1,481,078,069**	**1,014,106,212**	**49,500,477**	**32,649**	**10,742,400,787**
	Market share (%)	76.3	13.8	9.4	0.5	0.0	
Oct-Dec 15	*On-net*	7,072,014,744	1,032,108,000	874,207,880	3,973,393	-	8,982,304,017
	Off-net	321,673,815	691,188,232	231,221,695	30,508,294	-	1,274,592,036
	Total	**7,393,688,559**	**1,723,296,232**	**1,105,429,575**	**34,481,687**	**-**	**10,256,896,053**
	Market Share(%)	72.1	16.8	10.8	0.3	-	
Jul-Sep 15	*On-net*	7,924,904,054	1,129,950,000	586,007,664	3,227,868	-	9,644,089,586
	Off-net	322,808,398	630,047,600	238,001,612	22,016,269	-	1,212,873,879
	Total	**8,247,712,452**	**1,759,997,600**	**824,009,276**	**25,244,137**	**-**	**10,856,963,465**
	Market Share(%)	76.0	16.2	7.6	0.2	-	

Source: CA, Operators' Returns.

The proportion of on-net and off-net traffic has remained within similar margin over a period of time. During the quarter under review, the proportion of on-net traffic was recorded at 87.8 per cent down from the last quarter of 87.9 per cent.

Figure 4 : Proportion of On-net and Off-net Voice Traffic

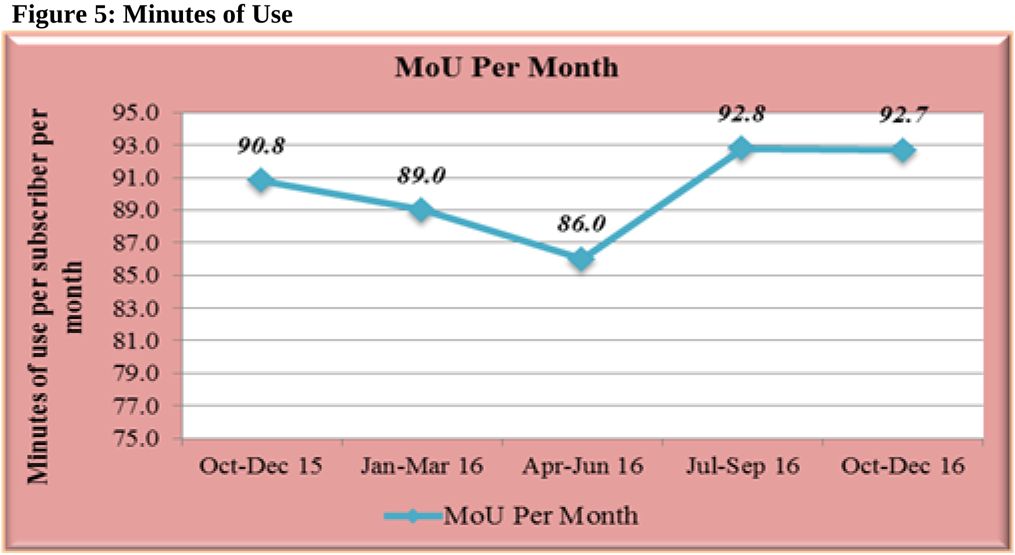


Source: CA, Operators' Returns.

1.4.3 Minutes of Use

As shown in Figure 5, the minutes of use per month for each subscriber during the quarter slightly fell to 92.7 minutes down from 92.8 minutes posted in the previous quarter, when Compared to the same the same period of the previous year, 1.9 per cent growth was realized.

Figure 5: Minutes of Use



Source: CA, Operators' Returns.

1.4.4 Short Messaging Service

The number of Short Messaging Service (SMS) sent during the quarter increased significantly by 29.1 per cent to register 15.8 billion messages up from 12.2 billion messages sent during the last quarter. As has been the norm, the trends of on-net and off-net local mobile SMS traffic remain similar with on-net SMS posting the highest volume as compared to off net SMS. The overall increase in the number of SMS sent could be attributed to increased activities during the quarter under review.

The number of SMS sent from Safaricom Limited network increased by a sizeable margin to record 15.0 billion messages up from 11.5 billion messages posted during the previous quarter. Its SMS market share was registered at 95.1 per cent during the quarter compared to last quarter's share of 94.4 per cent, representing an increase of 0.7 per centage points during the quarter.

Airtel Networks Limited Outgoing SMS traffic volume recorded an increase from 617.8 million messages sent during the last quarter to 693.3 million messages during the quarter under review. However, its the market share for SMS declined to 4.4 per cent down from 5.0 per cent recorded during the last quarter.

Telkom Kenya Limited recorded 75.0 million outgoing messages up from 63.0 million messages recorded during the last quarter translating to a growth of 19.1 per cent with its market share remaining at 0.5 per cent.

Finserve Africa Limited experienced an increase of 1.8 per cent to registered 9.5 million messages during the quarter under review up from 9.4 million messages posted in the previous period. The market share for SMS remained at 0.1 per cent.

Sema Mobile Services registered 15,745 messages up from 9,224 messages recorded in the last quarter with its market share recording below 0.0 per cent.

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

Table 6 : Short Messaging Service per Operator

Period	*Name of Operator/Indicator*	*Safaricom Limited*	*AirtelNetworks Limited*	*Telkom Kenya Limited*	*Finserve Africa Limited*	*Sema Mobile Services*	*Total SMS*
Oct-Dec 16	*On-net*	14,891,334,324	346,466,628	25,253,090	1,108,527	1,319	15,264,163,888
	Off-net	188,113,470	346,925,711	49,824,968	8,488,753	14,426	593,367,328
	Total	**15,079,447,794**	**693,392,339**	**75,078,058**	**9,597,280**	**15,745**	**15,857,531,216**
	Market Share (%)	95.1	4.4	0.5	0.1	0.0	
Jul-Sep 16	*On-net*	11,449,058,006	302,099,018	23,192,141	1,179,771	1,176	11,775,530,112
	Off-net	145,010,256	315,791,686	39,827,489	8,251,850	8,048	508,889,329
	Total	**11,594,068,262**	**617,890,704**	**63,019,630**	**9,431,621**	**9,224**	**12,284,419,441**
	Market Share (%)	94.4	5.0	0.5	0.1	0.0	
Oct-Dec 15	*On-net*	7,213,664,959	388,183,540	32,496,877	960,153	-	7,635,305,529
	Off-net	146,222,663	281,255,546	49,124,085	6,996,477	-	483,598,771
	Total	**7,359,887,622**	**669,439,086**	**81,620,962**	**7,956,630**	**-**	**8,118,904,300**
	Market Share (%)	90.7	8.2	1.0	0.1	-	
Jul-Sep 15	*On-net*	6,189,714,008	375,059,234	29,043,390	379,390	-	6,594,196,022
	Off-net	119,432,729	236,967,500	83,708,096	4,245,852	-	444,354,177
	Total	**6,309,146,737**	**612,026,734**	**112,751,486**	**4,625,242**	**-**	**7,038,550,199**
	Market Share (%)	89.6	8.7	1.6	0.1	-	

Source: CA, Operators' Returns.

1.4.5 Roaming Traffic

During the period under review, Roaming-out[1] (Own Subscribers) voice traffic was posted at 36.8 million minutes with roaming within the East African Community (EAC) countries posting 32.1 million minutes while roaming to other countries was posted at 4.6 million minutes. The total number of roaming out messages stood at 12.6 million with those sent within the EAC countries registering 7.0 million messages. Total roaming out data stood at 4.9 million MB during the quarter under review with countries other than those in the EAC consumed 2.4 million MB.

Roaming- in[2] (Foreign Subscribers) voice traffic recorded a total of 30.5 million minutes during the period under review with EAC countries posting at 25.2 million minutes and other countries recording at 5.2 million minutes. Similarly, the total number of roaming out messages was registered at 17.4 million and the EAC countries contributed 1.9 million messages. Roaming in data traffic stood at 11.1 million MB.

Roaming out and Roaming in traffic for the quarter is as indicated in Table 7.

[1] Roaming out is traffic originated and terminated by subscribers of national networks as users of foreign networks abroad
[2] Roaming in is traffic originated and terminated by foreign subscribers as users of local network.

Table 7 : Roaming Traffic

Name of Country	*Oct - Dec 16*					
	Roaming-Out (Own Subscribers)			*Roaming-In (Foreign Subscribers)*		
	Voice	*SMS*	*Data (MB)*	*Voice*	*SMS*	*Data (MB)*
Uganda	22,489,735	3,795,961	1,130,779	14,622,886	603,456	436,497
Tanzania	5,846,182	2,003,396	1,003,453	1,519,347	1,170,983	284,193
Rwanda	724,510	663,760	232,724	4,926,573	107,098	124,385
Burundi	21,663	20,195	4,574	14,936	6,133	2,504
S. Sudan	3,114,038	554,897	66,335	4,184,788	84,264	0
Others	4,661,169	5,595,868	2,480,356	5,240,831	15,520,409	10,265,824
Total	36,857,297	12,634,077	4,918,221	30,509,361	17,492,343	11,113,403

Source: CA, Operators' Returns.

1.4.6 International Mobile Traffic

In the quarter under review, International incoming mobile voice traffic increased by 11.5 per cent to stand at 147.1 million minutes up from 132.0 million minutes posted in the last quarter. The volume of mobile voice minutes received from EAC countries stood at 44.5 million minutes while non- EAC countries contributed 102.6 million minutes.

On the other hand, the total international outgoing mobile voice traffic declined slightly to stand at 116.7 million minutes during the period under review down from 117.5 million minutes recorded during the previous quarter. Although International mobile voice traffic to EAC countries grew by 5.0 per cent to stand at 48.6 million minutes, traffic to other countries dropped by 4.3 per cent to stand at 68.0 million minutes during the quarter under review.

The volume of International incoming mobile SMS declined by 4.2 per cent during the quarter under review to stand at 9.2 million messages down from 9.6 million messages recorded during the last quarter. Likewise, the total international outgoing messages were recorded at 9.0 million during the period under review down from 10.7 million messages.

International Voice and SMS traffic is as indicated in Table 8.

Table 8: International mobile traffic

Traffic	*Region*	*Oct-Dec 16*	*Jun-Sep 16*	*Quarterly Variation (%)*	*Oct-Dec 15*	*Jun-Sep 15*	*Quarterly Variation (%)*
International Incoming Mobile Voice Minutes	*EAC*	44,520,389	48,244,222	-7.7	56,157,419	54,225,909	3.6
	Others	102,636,939	83,768,899	22.5	101,419,942	104,550,002	-3.0
	Total	**147,157,328**	**132,013,121**	11.5	**157,577,361**	**158,775,911**	-0.8
International Outgoing Mobile Voice Minutes	*EAC*	48,653,026	46,352,963	5.0	36,957,264	41,927,278	-11.9
	Others	68,097,836	71,192,968	-4.3	83,046,354	84,425,407	-1.6
	Total	**116,750,862**	**117,545,931**	-0.7	**120,003,618**	**126,352,685**	-5.0
International Incoming Mobile SMS		9,226,640	9,629,508	-4.2	10,997,314	11,318,097	-2.8
International Outgoing Mobile SMS		9,000,009	10,798,729	-16.7	9,120,631	9,772,273	-6.7

Source: CA, Operators' Returns.

1.5 Mobile Revenue and Investments

Data on mobile revenue generated and investments made will be updated at the end of the 2016/17 financial year.

Table 9: Mobile Revenue and Investment

*Mobile Revenues and Investments**	**2015**	**2014**	**2013**	**2012**	**2011**	**Variation (%) Over 2014**	**Variation (%) Over 2013**	**Variation (%) Over 2012**	**Variation (%) Over 2011**
Mobile Revenue (KES Millions)	214,816	172,501	140,233	133,508	116,640	24.5	23	5	14.5
Mobile Investments (KES Millions)	52,222	32,133	30,387	33,827	34,590	62.5	5.7	-10.2	-2.2

Source: CA, Operators Returns, (*) includes Telkom Fixed Network Revenue and Investment.

1.6 Employment in the Mobile Service Industry

Data on the number of staff will be updated at the end of the 2016/17 Financial Year.

Table 10 : Staff in Mobile Sector

Staff	**Jun-16**	**Jun-15**	**Jun-14**	**Jun-13**	**Jun-12**	**Jun-11**	**Variation (%) Over 2015**	**Variation (%) Over 2014**	**Variation (%) Over 2013**	**Variation (%) Over 2012**	**Variation (%) Over 2011**
Male Staff	3,383	3,549	3,795	3,535	3,489	3,769	-4.7	-6.5	7.4	1.3	-7.4
Female Staff	2,795	2,598	2,644	2,082	2053	2058	7.6	-1.7	27	1.4	-0.2
Total Staff	**6,178**	**6,147**	**6,439**	**5,617**	**5,542**	**5,827**	**0.5**	**-4.5**	**14.6**	**1.4**	**-4.9**

Source: CA, Operators Returns, (*) includes Telkom Fixed Network.

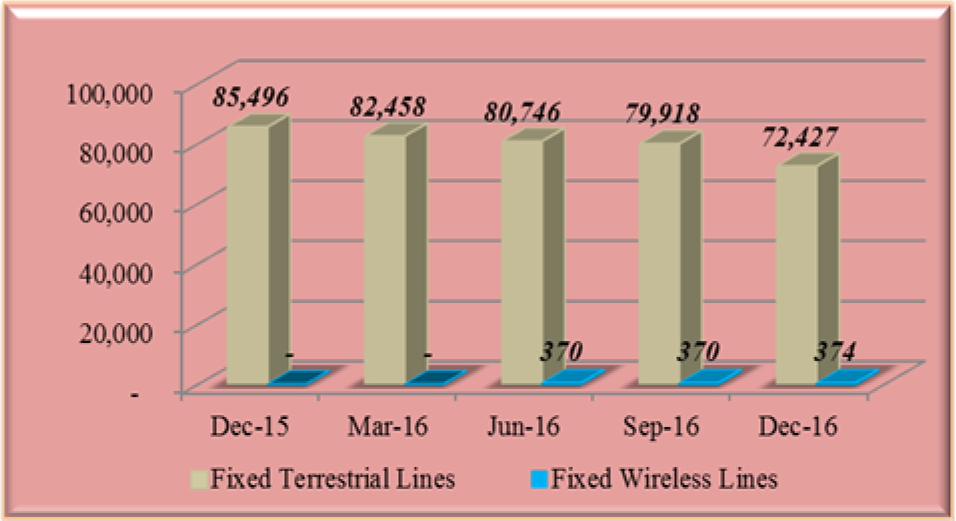
2 FIXED TELEPHONE SERVICE

2.1 Fixed Network Subscriptions

The total number of fixed telephone service has continued to record a downward trend over a period of time. During the quarter under review, the total number of fixed network subscriptions was recorded at 72,801 subscriptions down from last quarter’s 80,288 subscriptions.

The trend in fixed network subscriptions is illustrated in Figure 6.

Figure 6 : Fixed Network Subscriptions



Source: CA, Operators Returns.

2.2 Fixed Network Traffic

The volume of fixed network traffic declined during the quarter under review, which has been the case over the past quarters. The total local fixed network traffic stood at 675,123 minutes registering a drop of 3.2 per cent when compared to 697,322 minutes posted during the previous quarter. Fixed wireless to fixed wireless traffic registered a growth of 3.8 per cent to post 335,408 minutes during the quarter under review, while fixed to fixed traffic declined by 9.2 per cent to stand at 339,715 minutes down from last quarter's 374,715 minutes.

Table 11 illustrates the trend in fixed network traffic.

Table 11: Local Fixed Network Traffic in Minutes

Local Fixed Network traffic	*Oct-Dec 16*	*Jul-Sep 16*	*Quarterly Variation (%)*	*Oct-Dec 15*	*Jul-Sep 15*	*Quarterly Variation (%)*
Fixed-fixed	339,715	374,325	-9.2	541,262	542,722	-0.3
Fixed wireless-fixed wireless	335,408	322,997	3.8	-	-	-
Total Local Fixed network traffic	**675,123**	**697,322**	**-3.2**	**541,262**	**542,722**	**-0.3**

Source: CA, Operators' Returns.

The decline in the number of fixed network subscriptions has greatly affected the fixed network traffic.

Fixed network traffic received from other countries recorded a substantial drop of 22.7 per cent to stand at 2.5 million minutes during the quarter under review down from last quarter's 3.3 million minutes.

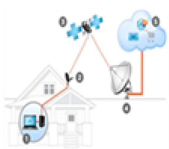
International outgoing fixed voice traffic declined by 10.9 per cent to post 2.0 million minutes down from 2.23 million minutes posted during last quarter. On the other hand, international outgoing fixed network VoIP traffic posted a growth of 9.2 per cent to stand 1.0 million minutes up from 0.9 million minutes registered in the last quarter.

The trend in international fixed network traffic is illustrated in Table 12.

Table 12 : International Fixed Voice Traffic

International Fixed Network traffic	*Oct -Dec 16*	*Jul-Sep 16*	*Quarterly Variation (%)*	*Oct -Dec 15*	*Jul-Sep 15*	*Quarterly Variation (%)*
International Incoming Fixed Network Voice traffic	2,573,212	3,328,356	-22.7	2,395,499	2,321,498	3.2
International Outgoing Fixed Network Voice traffic	2,090,833	2,345,458	-10.9	2,251,603	2,263,843	-0.5
International Outgoing Fixed Network VoIP traffic	1,000,509	916,620	9.2	-	-	-

Source: CA, Operators Returns.



3 DATA/INTERNET SERVICES

3.1 Data/Internet Service

The availability of various technologies and services that offer faster and reliable internet connections has continued to grow in the country with consumers embracing these services. This has led to increased usage of internet/data services over the years. During the quarter under review, the number of internet subscriptions grew slightly to stand at 26.6 million subscriptions up from last quarter's 25.6 million subscriptions. Subsequently, there was a nominal growth on estimated internet users of 5.2 per cent to stand at 39.6 million up from 37.7 million users reported at the end of the previous period. A reason that might have contributed to increase in the estimated internet users is long school holidays which the students subscribed to the data/internet services during the period.

Among those who accessed internet; mobile data subscriptions continued to account for the highest stake posting 26.5 million subscriptions during the quarter under review which represented 99 per cent of the subscriptions. This could be attributed to the affordability of smartphones in the country as well as affordable data/internet bundles offered by various internet service operators.

Terrestrial wireless data subscriptions increased during the quarter under review to register 29,724 subscriptions up from 15,835 subscriptions recorded during the previous quarter marking a sizeable growth of 87.7 per cent. This is could be attributed to additional players who provided the service during the quarter under review. Satellite subscriptions on the other hand fell by 2.3 per cent to stand at 584 subscriptions down from 598 subscriptions recorded in the last quarter. However, when compared to the same quarter in the last financial year, there was an increase of 19.4 per cent.

The number of fixed fibre optic subscriptions grew by 18.0 per cent during the quarter under review to post 39,255 subscriptions up from last quarter's 33,269 subscriptions. Fixed cable modem subscriptions recorded an increase of 2.8 per cent to post 86,139 subscriptions up from 83,789 recorded in the previous quarter.

The number of data/internet subscriptions and users is as indicated in Table 13.

Table 13 : Internet Subscriptions and Internet Users

Internet/Data Subscriptions	***Dec-16***	***Sep-16***	***Quarterly Variation (%)***	***Dec-15***	***Sep-15***	***Quarterly Variation (%)***
Total Internet Subscriptions	**26,679,222**	**25,672,474**	**4.0**	**23,929,657**	**21,628,271**	**10.6**
Mobile Data Subscriptions	26,521,037	25,536,400	3.9	23,794,550	21,511,638	10.6
Fixed Wireless Data Subscriptions	29,724	15,835	87.7	19,507	13,221	47.5
Satellite Data Subscriptions	584	598	-2.3	489	720	-32.1
Fixed DSL Data Subscriptions	2,483	2,583	-3.9	3,732	2,500	49.3
Fixed Fibre Optic Data Subscriptions	39,255	33,269	18.0	111,354	100,192	11.1
Fixed Cable Modem Subscriptions	86,139	83,789	2.8	25	25	0.0
Estimated Internet Users[3]	**39,664,377**	**37,718,650**	**5.2**	**35,549,620**	**31,985,048**	**11.1**

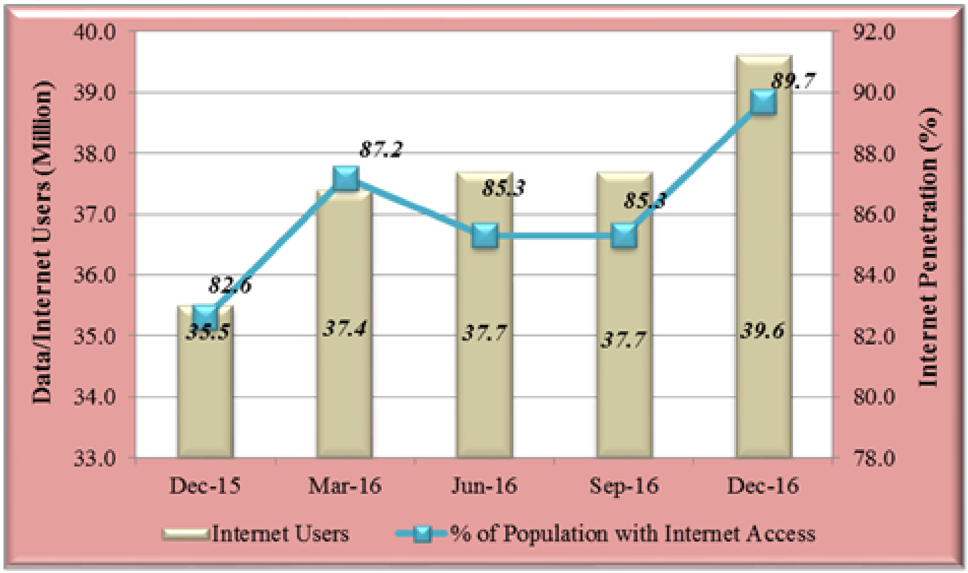
Source: CA, Operators' Returns.

Figure 7 shows that the number of data/Internet users grew from 37.7 million users reported last quarter to reach 39.6 million users during the quarter under review. This translated to an internet/data penetration level of 89.7 per cent up from 85.3 per cent recorded during the previous quarter.

The trends on internet/data usage and penetration level are as demonstrated in Figure 7.

[3] Estimated Internet users = (1MD+10TW+100FFOS) where MD is the number of mobile data/internet subscriptions; TW is the terrestrial wireless subscriptions; and FFOS by 100 is fixed DSL, Fibre optic and satellite subscriptions. There is no scientific method of estimating internet users; for the purpose of this report the methodology is adopted from the recommendation from ITU

Figure 7: Estimated Number of Internet Users and Internet Penetration

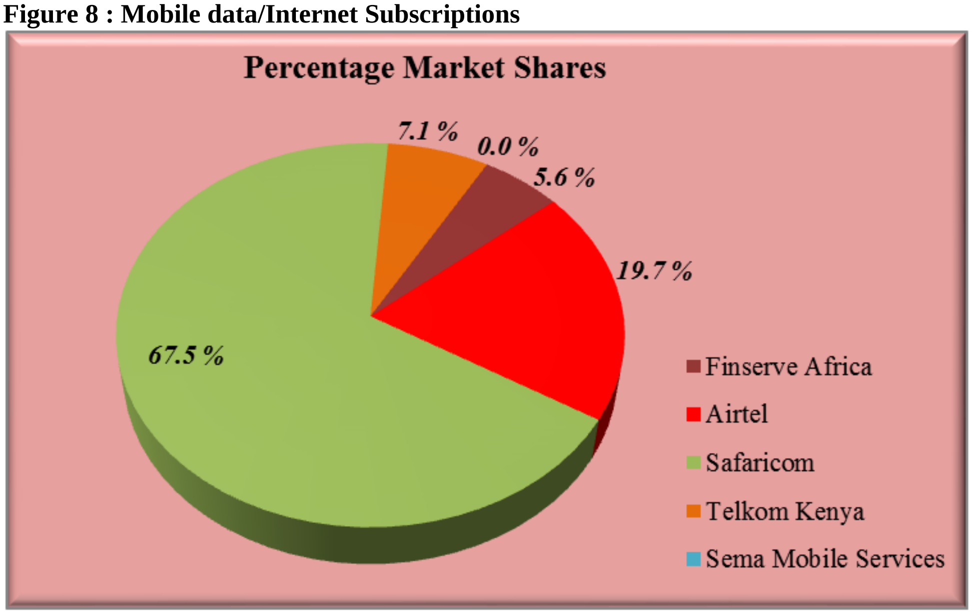


Source: CA, Operators' Returns.

In terms of operators' mobile data market share, Safaricom Limited maintained the highest market share. During the quarter under review, its market share grew by 4.3 per centage points to stand at 67.5 per cent up from 63.2 per cent posted in the previous quarter. Telkom Kenya Limited slightly gained in its market share to attain 7.1 per cent whereas Airtel Networks Limited and Finserve Africa Limited lost its market share to post 19.7 per cent and 5.6 per cent, respectively. Sema Mobile Services still maintained its market share below 0.0 per cent.

The market shares for mobile data/Internet market by operator are as shown in Figure 8.

Figure 8 : Mobile data/Internet Subscriptions



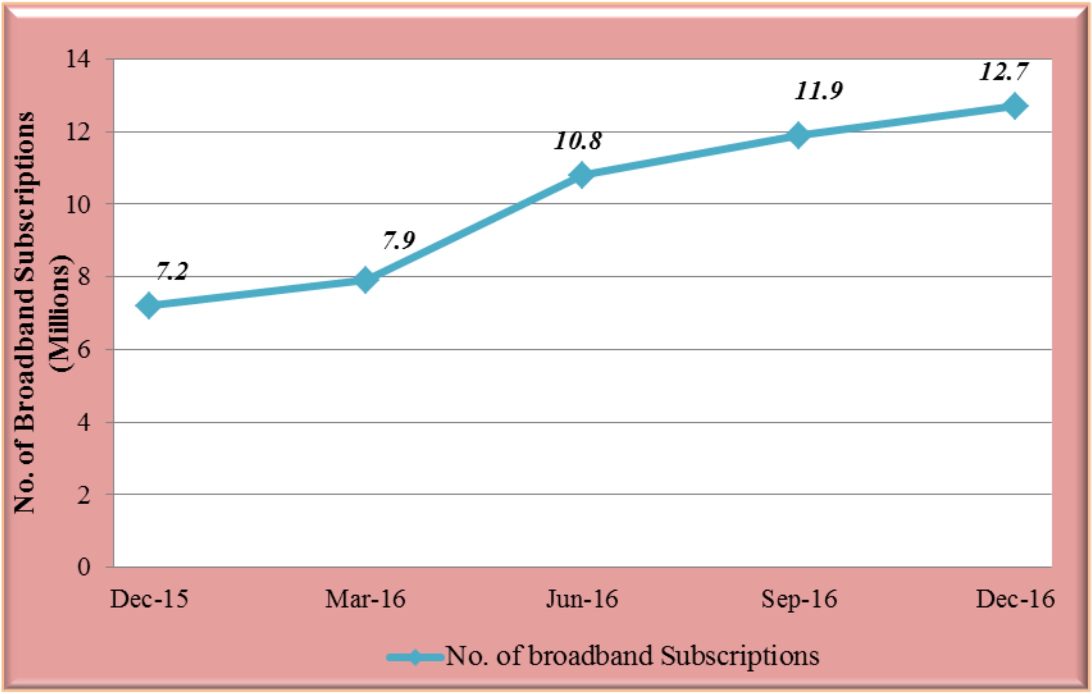
Source: CA, Operators' Returns.

3.2 Broadband Services

3.2.1 Data/internet broadband subscriptions

The Broadband subscriptions continues to grow over the period as illustrated in Figure 9. The number of broadband subscriptions grew by 6.7 per cent during the quarter under review to reach 12.7 million up from 11.9 million subscriptions reported during the previous quarter marking a penetration level of 28.7 per cent. Mobile broadband subscriptions account for 99 per cent of the total broadband subscriptions.

Figure 9 : Broadband Subscriptions

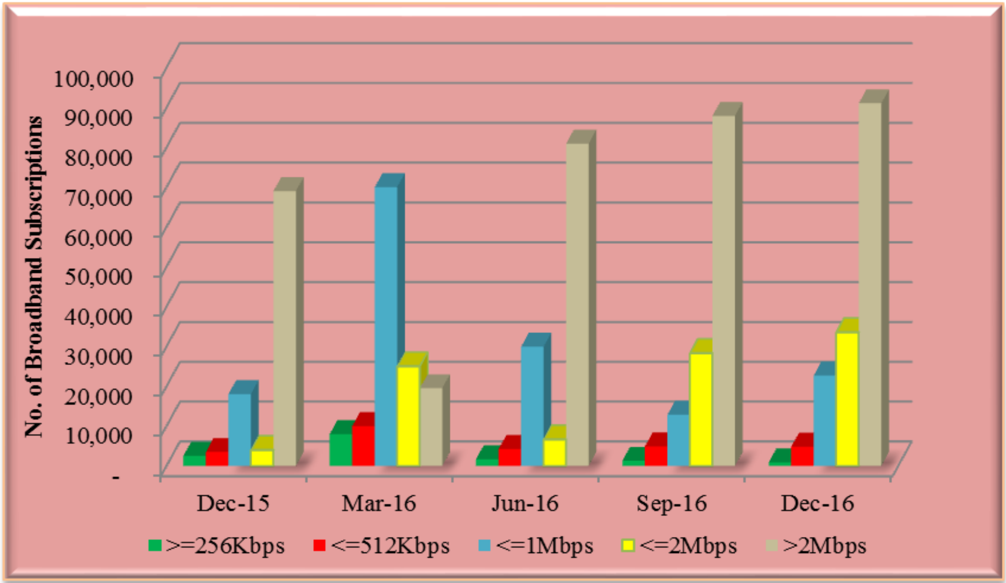


Source: CA, Operators' Returns.

3.2.2 Broadband subscriptions by Speed

During the quarter under review, Broadband speeds of more than 2Mbps recorded the highest number of subscriptions while those less than or equal to 256Kbps recorded the least as illustrated in Figure 10.

Figure 10 : Broadband Subscriptions by Speed



Source: CA, Operators' Returns.

3.3 International Bandwidth

Total amount of International Internet bandwidth available in the country (Lit/equipped capacity) remained unchanged to stand at 2.0 Million Mbps during the quarter under review.

The satellite capacity remained fairly stable at 473.283 Mbps during the quarter under review when compared to 473.43 Mbps reported during the previous quarter. The trend on international available bandwidth is as shown in Table 14.

Table 14 : International Internet Available Bandwidth (Mbps)

International Connectivity Bandwidth	***Dec-16***	***Sep-16***	***Quarterly Variation (%)***	***Dec-15***
SEACOM	1,250,000	1,250,000	0.0	770,000
TEAMS	700,000	700,000	0.0	702,000
EASSY	39,060	39,060	0.0	39,060
Lion 2	39,210	39,210	0.0	39,210
Satellite Internet Bandwidth	473.283	473.43	0.0	498.20
Total International Internet Bandwidth (Mbps)	**2,028,743.283**	**2,028,743.43**	**0.0**	**1,550,768.20**

Source: CA, Operators' Returns.

The total used international Internet bandwidth grew by 2.5 per cent to reach 860,570.283 Mbps during the quarter under review.

The undersea cable used bandwidth grew by 2.5 per cent to reach 860,300 Mbps up from 839,300 Mbps recorded last quarter while Satellite used bandwidth declined slightly to stand at 270.283 Mbps during the period under review.

The trend in international used bandwidth is shown in Table 15.

Table 15 : International Internet Used Bandwidth (Mbps)

International Leased (Used) Bandwidth	*Dec-16*	*Sep-16*	*Quarterly Variation (%)*	*Dec-15*
International Undersea Internet Connectivity Bandwidth (Mbps)	860,300.00	839,300.00	2.5	854,300.00
International Satellite Internet Connectivity Bandwidth	270.283	270.43	-0.1	250.90
Total International Internet Connectivity Bandwidth (Mbps)	**860,570.283**	**839,775.43**	**2.5**	**854,550.90**

Source: CA, Operators' Returns.

3.4 Registered Domain Names

The number of domain names.KE has continued to grow over time. During the quarter under review, the total registered domain names stood at 62,215 as shown in Table 16. ".co.ke" (companies) held the highest share of 92.83 per cent.

Table 16 : Number of Domain names

		Dec-16		*Sep-16*	
Sub-Domain	**Use**	**No. of Domains**	**Per cent (%)**	**No. of Domains**	**Per cent (%)**
CO.KE	Companies	57,752	92.83	56,568	92.74
GO.KE	Government Entities	372	0.59	369	0.60
OR.KE	Non Profit Making Organizations	1,859	2.99	1,841	3.02
AC.KE	Institutions of Higher Education	763	1.23	767	1.26
SC.KE	Lower and Middle Level Institutions	770	1.24	703	1.15
NE.KE	Personal Websites and E-mail	181	0.29	210	0.34
ME.KE	Personal Websites and E-mail	336	0.54	355	0.58
MOBI.KE	Mobile Content	43	0.07	47	0.08
INFO.KE	Information	139	0.22	138	0.23
Total		**62,215**	**100**	**60,998**	**100**

Source: Kenya Network Information Centre (KeNIC) - www.kenic.or.ke

3.5 Revenue and Investment in the Data/Internet Market

The revenues and investments generated and made for the data/internet sector will be updated at the end of 2016/2017 financial year. Data/Internet revenue and investment is shown in Table 17.

Table 17 : Data/Internet Revenue and Investment

Data/Internet Revenue and Investments	*2015**	*2014**	*2013*	*2012*	*2011*	*Variation (%) Over 2013*	*Variation (%) Over 2012*	*Variation (%) Over 2011*	*Variation (%) Over 2010*
Revenue (KES Millions)	8,498	10,158	21,941	25,627	13,710	-53.7	-14.4	86.9	58.3
Investments (KES Millions)	2,233	3,440	3,537	6,115	5,079	-2.7	-42.2	20.4	44.3

***Source:** CA, Operators' Returns. * Note that revenue and investments in data market excludes data revenues from the mobile sector*

4 BROADCASTING

4.1 Digital Television

As at 31st December 2016, the number of free-to-air TV channels on the digital terrestrial platform stood at 66 up from 63 recorded in the preceding quarter. The number of pay TV service providers on the Digital Terrestrial Television (DTT) platform on the other hand remained unchanged at two; GoTV and StarTimes.

4.2 Digital Terrestrial Television sites rollout

By the end of the period under review, the digital signal was on air in; Nairobi, Nakuru, Nyeri, Mombasa, Kisumu, Eldoret, Malindi, Meru, Kisii, Kericho, Narok, Nyahururu, Embu, Migori, Machakos, Murang'a, Naivasha, Nyeri, Webuye, Kapenguria,Kitui, Lamu, Namanga, Kakamega, Kabarnet, Siaya, Homabay, Timboroa, Nanyuki, Thika, Limuru, Mwingi, Kajiado, Kibwezi, Garissa, Voi and Kilifi. This translated to 66 per cent coverage of the Kenyan population as shown in Figure 11.

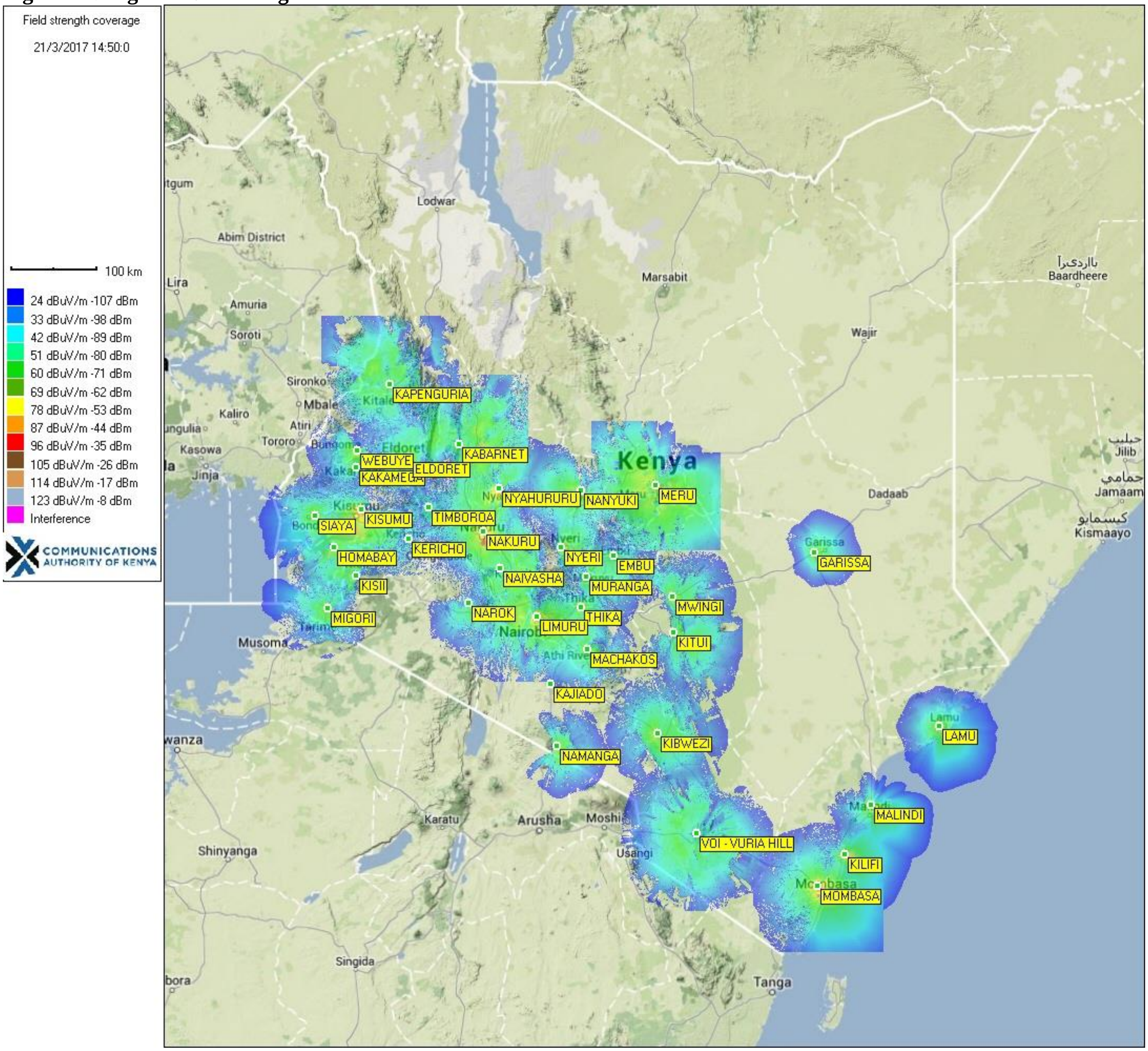
4.3 Set top Boxes

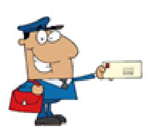
The cumulative number of digital Set Top Boxes purchased as at the end of the quarter under review stood at 722,196 Free-to-Air set top boxes (FTA STBs) and 3,534,086 for PAY TV.

4.4 FM Radio Broadcast

The total number of FM stations stood at 139 during the period under review.

Figure 11: Digital TV Coverage





5 POSTAL AND COURIER SERVICES

5.1 Postal and Courier Traffic

In the postal and courier sub sector, the volume of letters posted locally dropped by 7.7 per cent to stand at 15.8 million letters down from 17.2 million letters posted last quarter. On the contrary, the number of courier items sent locally during the quarter was registered at 1.6 million items marking a significant growth of 26.8 per cent.

On the other hand, the volume of letters received from other countries increased by 8.9 per cent during the quarter under review to stand at 2.2 million up from 2.1 million letters received during the previous quarter. International outgoing letters dropped during the period under review to stand at 1.9 million letters from last quarter's 2.0 million letters.

Table 18 : Postal and Courier Traffic

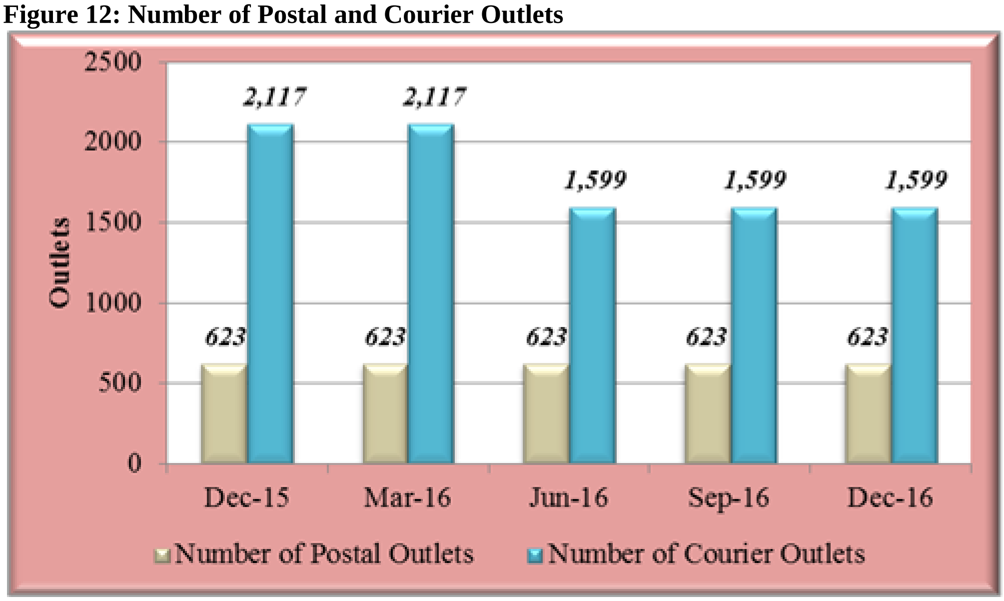
Post and Courier Traffic	*Oct-Dec 16*	*Jul-Sep 16*	*Quarterly Variation (%)*	*Oct-Dec 15*
Number of Letters (Up to 350 gms) Posted Locally	15,894,540	17,211,415	-7.7	17,613,809
Total Courier Items Sent Locally	1,679,188	1,324,786	26.8	445,836
International Incoming Letters (Up to 350 gms)	2,299,588	2,112,537	8.9	2,285,817
International Outgoing Letters (Up to 350 gms)	1,907,271	2,014,753	-5.3	2,665,410

Source: CA, Operators' Returns,

5.2 Number of Postal and Courier Outlets

The number of postal and private courier outlets remained at 623 and 1599 respectively in the quarter under review which is shown in figure 12.

Figure 12: Number of Postal and Courier Outlets



Source: CA, Operators' Returns,

5.3 Postal and Courier Revenue and Investments

Table 19 on revenues and investments in the postal and courier sub-sector will be updated at the end of the 2016/2017 financial year.

Table 19 : Postal and Courier Revenue and Investments

Post/Courier Revenue and Investment	*2015*	*2014*	*2013*	*2012*	*2011*	*Variation (%) Over 2014*	*Variation (%) Over 2013*	*Variation (%) Over 2012*	*Variation (%) Over 2011*
Revenue (KES Millions)	4,800	8,530	7,086	7,467	11,793	-43.7	20.4	-5.1	-36.7
Investments (KES Millions)	327	397	519	390	504	-17.6	-23.5	33.1	-22.6

Source: CA, Operators' Returns,

6 TARIFFS, PROMOTIONS AND SPECIAL OFFERS

The Authority received a total of 31 applications from telecommunication service providers for tariffs and promotions and special offers during the second quarter of FY 2016/2017, which were reviewed accordingly and approved. This was an increase of 16 applications compared to the previous quarter. The total number of tariffs received were 11 while the total number of promotions received were 20. The increase in the number of promotions could be attributed to the festive season where service providers gifted their customers to promote their various services.

Tables 20 and 21 shows the distribution of the applications in detail.

Table 20: Tariffs

Service Provider	***Oct-Dec 2016***						
	Voice	**SMS**	**Data**	**Bundle**	**Mobile Money**	**Other[4]**	**Total**
Safaricom	-	-	5	-	-	1	6
Airtel	1	-	1	-	1	-	3
Telkom	-	-	1	-	-	-	1
Finserve Africa	-	-	-	-		-	-
Wananchi Group	-	-	-	1	-	-	1
Total	1	-	7	1	1	1	11

Table 21: Promotions and Special Offers

Service Provider	***Oct-Dec 2016***							
	Voice	**SMS**	**Data**	**Bundle**	**Mobile Money**	**Lucky Draw[5]**	**Other[4]**	**Total**
Safaricom	1	-	4	-	3	1	1	10
Airtel	-	-	-	-	-	-	-	-
Telkom	-	-	1	2	-	-	3	6
Finserve Africa	1	-	1	-	-	-	1	3
Wananchi Group	-	-	-	-	-	-	1	1
Total	2	-	6	2	3	1	6	20

[4] "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

[5] 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 quarter under review witnessed mixed growth in different sub sectors in the industry. Mobile telephony segment witnessed an upward trend as well as the local mobile and SMS traffic. This could be as attributed to the busy festive season where operators launched various promotions and special offers to entice their customers. The growth is expected to continue as the network coverage is expanded to cover the remote areas, innovative solutions are deployed, competition drives down the cost of access and feature phones with Internet access capability becomes more widely available in Kenya.

In the data/internet sub sector, the uptake of smartphones by consumers that offer access to various mobile phone applications which include: social media, search engines, email and video chat which are very popular applications has seen increase in the use of internet/data services. As technologies develop and become popular, new uses and consumer behaviours emerge. It is expected that the introduction of new generation of network and device technologies will lead to further changes in usage.

In the postal and courier segment, contrary to previous performance during the festive season, there was drop in letters posted locally and a growth in courier items sent locally. The volume of international incoming letters experienced a growth while the volume of international outgoing letters dropped during the period.

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Author: Communications Authority of Kenya (CA)