



**THIRD QUARTER SECTOR STATISTICS REPORT FOR THE
FINANCIAL YEAR 2019/2020
(JANUARY - MARCH 2020)**

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Disclaimer:

Although every effort has been made to ensure accuracy of the data contained in this report, the Authority is not liable for inaccuracies in any of the information contained in this report, which is contingent upon the operators'/service providers' compliance returns.

LIST OF ACRONYMS

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
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
NCC	National Cyber-Security Centre
OTT	Over-The-Top
P2P	Person to Person
SEACOM	Sea Sub-Marine Communications Limited
SIM	Subscriber Identification Module
SMS	Short Messaging Service
TEAMS	The East African Marine System

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.
- In quarter one of 2019/20 financial year, the Authority revised its data collection template in consultation with service providers in a bid to meet data requirements by various stakeholders and also revised /dropped telecommunication indicators that were considered obsolete.
- The Authority also published and shared a manual on definitions and methodologies of collecting and reporting Telecommunication indicators with service providers and the public for purposes of common understanding of ICT indicators. The manual was developed in consultation with the International Telecommunications Union (ITU) and it adheres to the set international standards. The Manual is available on CA website <https://ca.go.ke/wp-content/uploads/2020/03/ICT-Indicators-Manual-2019-.pdf>

REPORT SUMMARY

The Sector Statistics Report for the Third Quarter of the 2019/20 Financial Year provides an overview of the performance and trends of the ICT sector for the period 1st January to 31st March 2020, in the following service categories:

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

As at 31st March 2020, the number of active mobile subscriptions (SIM¹ Cards) in the country stood at 55.2 million translating to mobile (SIM) penetration² of 116.1 percent.

During the third quarter of the FY 2019/20, the number of active registered mobile money subscriptions stood at 29.1 million while the number of active mobile money agents stood at 202,102.

Safaricom PLC recorded the highest number of mobile in-ports at 208, whereas Airtel Networks Limited and Telkom Kenya Limited recorded 41 and 16 in-ports respectively.

The total local outgoing mobile voice traffic increased by 2.3 percent during the quarter under review to post 15.3 billion from 14.9 billion minutes posted in the last quarter. On-net traffic stood at 13.5 billion up from 13.2 billion minutes recorded last quarter. Similarly, off net and

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

²Mobile Penetration is computed by dividing the total number of mobile subscriptions (SIM) Cards by the Total Population multiplied by 100

mobile to fixed traffic increased by 1.4 and 7.6 percent to post 1.7 billion and 15.8 million minutes respectively. The Minutes of Use per Subscription per Month increased to 92.5 from 91.5 minutes registered in the previous quarter.

The average Minutes of Use per Call for on-net and off-net local mobile voice traffic stood at 1.6 and 1.1 minutes respectively, during the period under review. This is attributed to the fact that operators offer lower calling rates within their network as compared to across other networks. Airtel Networks Limited subscribers recorded the highest duration of on-net minutes per call at 4.0 minutes, whereas Safaricom PLC recorded the least Minutes of Use per Call for both on-net and off-net traffic.

The total number of short messages sent during the period under review stood at 16.8 billion, up from 15.6 billion messages sent during the preceding quarter. The number of short messages sent per Subscription per Month increased to 101.5 during the third quarter, from 95.4 messages sent last quarter.

Traffic originating from other countries decreased by 4.7 per cent during the period under review to stand at 137.8 million minutes, whereas voice traffic terminating in other countries increased by 6.0 percent to post 118.0 million minutes. International traffic within EAC member countries has continued to decline over time owing to implementation of the regional One Network Area initiative, since 2014 that resulted in lowering of roaming voice charges within ONA member countries.

Traditional fixed line service registered a decline of 3.6 percent to post 19, 848 subscriptions. Fixed wireless and fixed Voice over Internet Protocol grew by 6.3 and 0.9 percentage points to post 1,076 and 49,227 subscriptions respectively.

Total data/Internet subscriptions dropped by 0.7 percent during the review period to stand at 39.3 million from 39.6 million subscriptions reported in second quarter. This is mainly attributed to the decline in the number of mobile data subscriptions posted by Telkom Kenya Limited during the period under review, which was as a result of measures taken by the company to scale down on investments in anticipation of the proposed Airtel-Telkom merger, although this has since changed.

Mobile data subscriptions for Safaricom PLC also declined during the period under review following stiff competition from other operators such as Airtel Networks Limited that reviewed their Vuka Pay as You Go tariff for mobile data from Ksh. 4/MB to Ksh. 2.3/MB.. The number of customers connected through radio technology also declined during the quarter to stand at 804 from 1,690 subscriptions recorded during the preceding quarter. This is attributed to the increased uptake of new technologies such as 4G that provide faster Internet speeds.

The total broadband subscriptions increased by 0.9 percent during the period under review to record 22.3 million from 22.0 million subscriptions recorded during the previous period. Mobile broadband subscriptions accounted for 97.6 percent of the total broadband subscriptions.

Total undersea bandwidth capacity leased in the country increased by 14.1 percent during the third quarter to stand at 7,123.36 Gbps from 6,241.84 Gbps recorded in quarter two. EASSy cable lit capacity by 5x100G + 38x10G activations, hence the increase in total lit capacity.

The undersea bandwidth capacity utilized within the country increased from 1,764.41 Gbps recorded during the previous period to 1,957.01 Gbps during the period under review. Similarly, undersea bandwidth capacity sold to other countries increased to 1,092.25 Gbps from 953.15Gbps recorded last quarter. Satellite capacity lit during the reference period declined by 0.72 percent to record 5.48 Gbps, whereas used satellite capacity stood at 2.61 Gbps.

The number of registered domains dropped from 91,940 reported during the previous quarter to 91,603 domains during the period under review. As indicated during the previous quarter, the drop is attributed to the closure of businesses and other non-governmental institutions in the country.

During the quarter, 34,644,531 cyber threats were detected, representing a slight decline from the previous quarter in which 37,133,200 cyber threats were reported. Further, 17,844 advisories were issued by the National KE-CIRT which was an increase from the 16,654 issued in the previous quarter.

During the quarter under review, most of the postal and courier traffic dropped as communication moved online, coupled with the end of busy festive season. The number of letters posted locally declined by 19.3 per cent to 8.5 million letters, down from 10.5 million letters posted in the previous quarter. Similarly, total courier items sent locally stood at 525,364 down from 575,498 items recorded during the preceding period.

The volume of letters received from other countries registered a growth of 19.2 per cent to stand at 2.6 million from 2.2 million letters reported in the previous quarter. On the other hand, letters sent to other countries declined to 865,117 from 952,933 letters recorded in the preceding quarter.

During the period under review, the Authority received 14 new applications for tariffs, and promotions & special offers, similar to those received during the previous quarter. Further, the Authority received 15 applications for revision of existing tariffs, and promotions & special offers during the same period.

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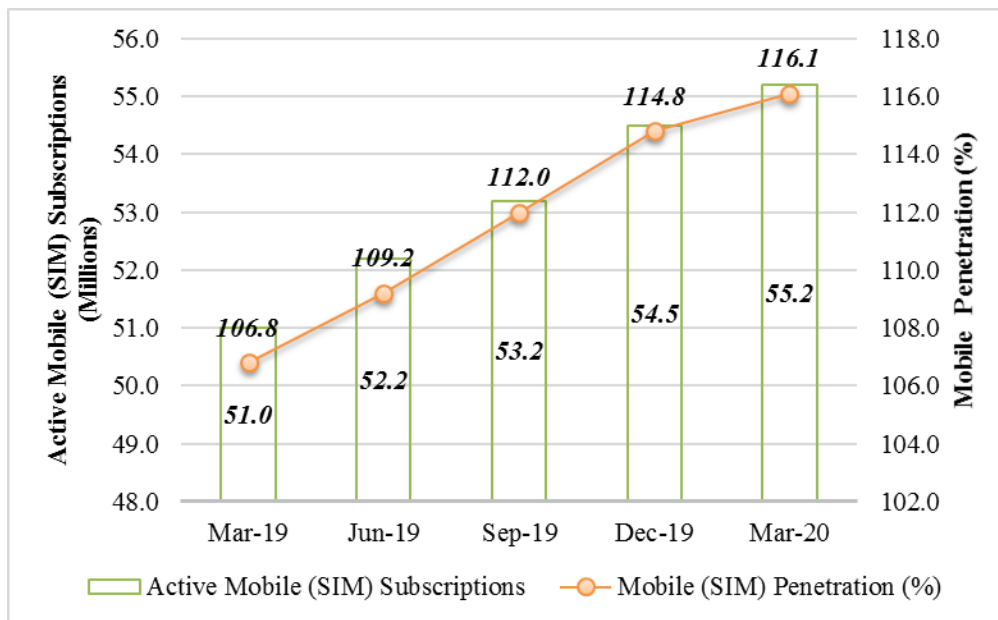
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1 CELLULAR MOBILE SERVICES

1.1 Mobile Subscriptions

The uptake of ICT services especially mobile and Internet services continued to grow during the third quarter of the 2019/20 financial year. As at the end of the quarter, the number of active mobile subscriptions (SIM Cards) in the country stood at 55.2 million translating to mobile (SIM) penetration of 116.1 percent.

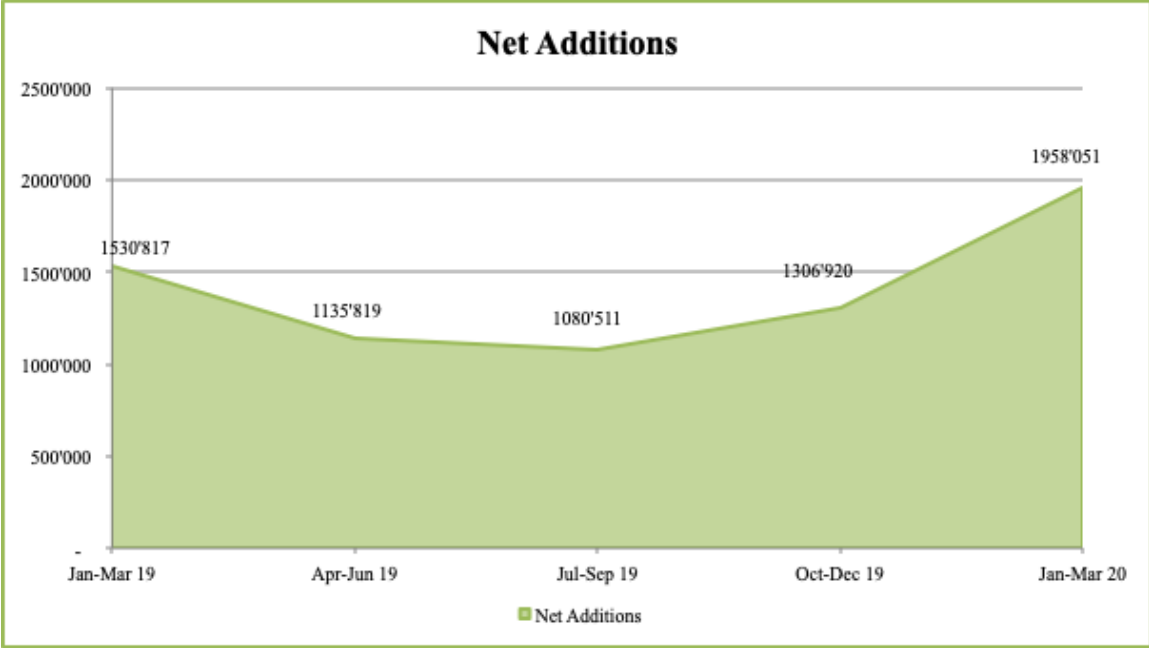
Figure 1 illustrates the trends in mobile subscriptions and penetration levels.



Source: CA, Operators' Returns, * Mobile Pay Ltd data not available due to non-compliance by the operator

Figure 1: Mobile Subscriptions and Penetration

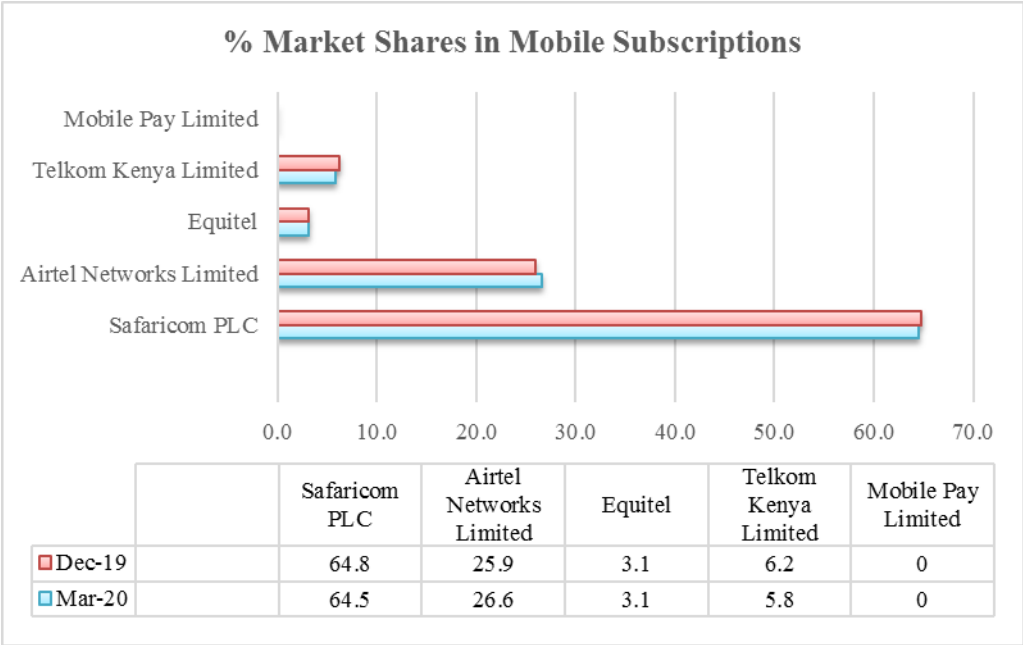
The number of SIM additions increased from 1.3 million recorded last quarter to 1.9 million SIM cards during the period under review.



Source: CA, Operators' Returns, * Mobile Pay Ltd data not available due to non-compliance by the operator

Figure 2: Net Additions

During the quarter under review, Safaricom PLC’s market share in mobile subscriptions declined by 0.3 percentage points to stand at 64.8 percent. Similarly, Telkom Kenya lost 0.4 percentage points to post a market share of 5.8 percent. Airtel Networks Ltd gained 0.7 percentage points to post 26.6 percent shares while market share for Equitel remained unchanged at 3.1 percent.



Source: CA, Operators' Returns, * Mobile Pay Ltd data not available due to non-compliance by the operator

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

<i>Operator Name /Indicator</i>	<i>Mar-20</i>			<i>Dec-19</i>			<i>Quarterly Variation (%)</i>
	Pre-paid	Post-paid	Total	Pre-paid	Post-paid	Total	
Total Mobile Subscriptions	50,912,628	4,294,000	55,206,628	53,266,480	1,289,017	54,555,497	1.2
<i>Safaricom PLC</i>	34,590,154	1,017,148	35,607,302	34,161,953	1,173,154	35,335,107	0.8
<i>Airtel Networks Limited</i>	14,575,603	106,690	14,682,293	14,021,519	97,050	14,118,569	4.0
<i>Telkom Kenya Limited</i>	20,499	3,170,162	3,190,661	3,373,133	18,813	3,391,946	-5.9
<i>Equitel</i>	1,726,372	-	1,726,372	1,709,875	-	1,709,875	1.0
<i>Mobile Pay Limited*</i>	-	-	-	-	-	-	-

*Source: CA, Operators' Returns, * Mobile Pay Ltd data not available due to non-compliance by the operator*

1.2 Mobile Money Services

During the third quarter of the FY 2019/20, the number of registered active mobile money subscriptions stood at 29.1 million and the number of active mobile money agents stood at 202,102. In terms of market shares for mobile money subscriptions, M-Pesa retained the highest market share of 98.8 per cent, whereas Airtel Money and T-Kash recorded market shares of 1.1 and 0.05 percent respectively. The values of transactions in Kenya Shillings made from Customers to Businesses (C2B), Business to Customer (B2C), Business to Business (B2B), Customer to Government (C2G), Person to Person (P2P) and total deposits per mobile money brand are as shown in Table 2.

Table 2: Mobile Money Transfer Services

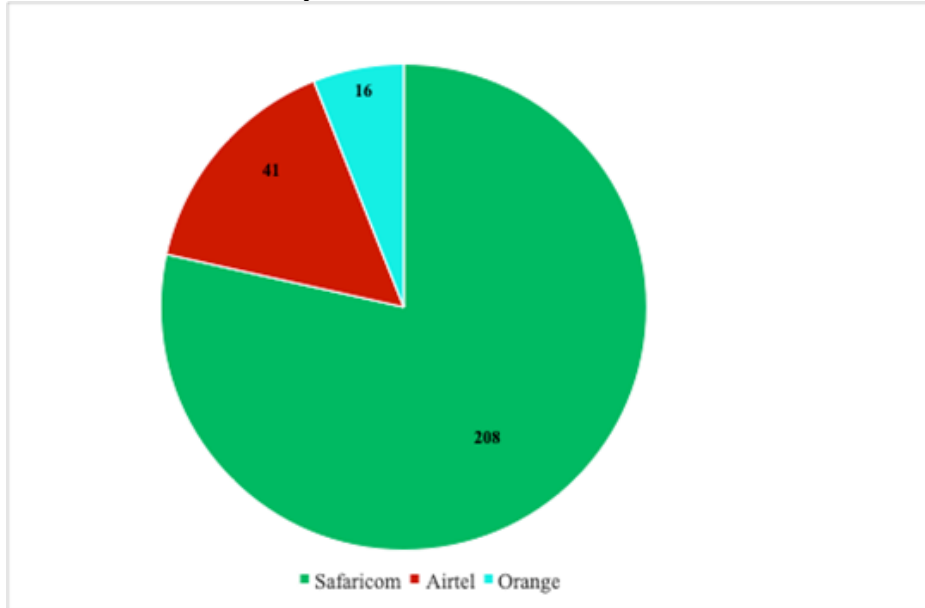
Mobile Money Brand/Indicator	M-Pesa	Airtel Money	T-Kash	Total
<i>Agents</i>	173,259	26,326	2,517	202,102
<i>Active Registered Mobile Money Subscriptions</i>	28,842,584	329'660	13,333	29,185,577
<i>Value of C2B Transfers in KShs.</i>	310,105,449,217	351'265'529	21,058,506	310,477,773,252
<i>Value of B2C Transfers in Kshs</i>	365,096,360,964	220'277'963	13,030,647	365,329,669,574
<i>Value of B2B Transfers in Kshs.</i>	878,163,456,535	-	-	878,163,456,535
<i>Value of C2GTransfers in Kshs.</i>	11,431,331,712	11,878,814,879		23,310,146,591
<i>Volume of P2P Transfers</i>	447,483,167	2,341,724	6,5596	449,890,487
<i>Value of P2PTransfers in Kshs.</i>	673,653,893,750	348,319,162	68,842,533	674,071,055,445
<i>Total value of Deposits in Kshs</i>	606,560,234,834	1,580,872,000	23,810,097	608,164,916,931

Source: CA, Operators' Returns, * Mobile Pay Ltd data not available due to non-compliance by the operator

1.3 Mobile Number Portability

As illustrated in Figure 4, Safaricom PLC recorded the highest number of in-ports at 208, whereas Airtel Networks Limited and Telkom Kenya Limited recorded 41 and 16 in-ports respectively.

Mobile Number Portability



Source: CA, Operators' Returns

Figure 4: Mobile Number Portability

1.4 Mobile Traffic and Usage Pattern

1.4.1 Local Voice Traffic

The total outgoing local mobile voice traffic increased by 2.3 percent during the period under review to post 15.3 billion from 14.9 billion minutes posted last quarter. On-net traffic stood at 13.5 billion from 13.2 billion minutes recorded last quarter. Similarly, off net and mobile to fixed traffic increased by 1.4 per cent and 7.6 percent to post 1.7 billion and 15.8 million minutes respectively.

Table 3 shows a summary of local mobile voice traffic.

Table 3: Local Mobile Voice Traffic in Minutes

<i>Mobile Traffic</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
Total Outgoing Traffic	15,323,482,843	14,984,678,305	2.3
<i>Own Network – Own Network</i>	13,550,922,882	13,237,490,239	2.4
<i>Own Network to Other Mobile Networks</i>	1,756,736,665	1,732,477,761	1.4
<i>Mobile Network to Fixed Network</i>	15,823,296	14,710,305	7.6

Source: CA, Operators' Returns, Mobile Pay Ltd data not available due to non-compliance by the operator

1.4.2 Voice Traffic by Operator

The local traffic volumes per service provider and the respective market shares are shown in Table 4.

Table 4: Local Mobile Voice Traffic by Operator

<i>Period</i>	<i>Name of Operator /Indicator</i>	<i>Safaricom PLC</i>	<i>Airtel Networks Kenya Limited</i>	<i>Telkom Kenya Limited</i>	<i>Equitel</i>	<i>Mobile Pay Limited*</i>	<i>Total</i>
<i>Jan-Mar 20</i>	On-net	9,559,475,830	3,691,211,160	295,271,608	4,964,284	-	13,550,922,882
	Off-net	495,566,341	1,042,803,227	191,436,832	26,930,265	-	1,756,736,665
	Total	10,055,042,171	4,734,014,387	486,708,440	31,894,549	-	15,307,659,547
	Market share (%)	65.7	30.9	3.2	0.2	-	
<i>Oct-Dec 19</i>	On-net	9,551,360,114	3,368,535,646	312,854,640	4,739,839	-	13,237,490,239
	Off-net	496,988,306	1,004,722,340	202,506,322	28,260,793	-	1,732,477,761
	Total	10,048,348,420	4,373,257,986	515,360,962	33,000,632	-	14,969,968,000
	Market share (%)	67.1	29.2	3.4	0.2	-	

Source: CA, Operators' Returns, Mobile Pay Ltd data not available due to non-compliance by the operator

As illustrated in Table 5, the average minutes of use per call for on-net and off-net local mobile voice traffic stood at 1.6 and 1.1 minutes respectively, during the period under review. The high on-net traffic per call is attributed to the fact that operators offer lower calling rates within their network as compared to across other networks. Airtel Networks Limited subscribers recorded the highest duration of on-net minutes per call at 4.0 minutes, whereas Safaricom PLC recorded the least number of off-net minutes per call at 0.9.

Safaricom PLC recorded the lowest duration of calls for both on-net and off-net calls due to the high calling rates charged by the operator both within and across networks.

Table 5 presents average Minutes of Use per Call per operator.

Table 5: Minutes of Use per Call per Operator

<i>Operator</i>	<i>Jan-Mar 20</i>		<i>Oct-Dec 19</i>	
	<i>On-net</i>	<i>Off-net</i>	<i>On-net</i>	<i>Off-net</i>
Total	1.6	1.1	1.5	1.0
<i>Safaricom PLC</i>	1.3	0.9	1.2	0.9
<i>Airtel networks Limited</i>	4.0	1.3	3.3	1.1
<i>Telkom Kenya Limited</i>	1.8	1.3	1.8	1.2
<i>Equitel</i>	1.3	1.3	1.2	1.1
<i>Mobile Pay Limited</i>	-	-	-	-

Source: CA, Operators' Returns, Mobile Pay Ltd data not available due to non-compliance by the operator

1.4.3 Domestic Short Messaging Service (SMS) Traffic

The total number of short messages sent during the period under review stood at 16.8 billion up from 15.6 billion messages sent during the preceding 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
Jan-Mar 20	On-net	15,485,640,638	176,357,877	10,419,218	1,835,368	-	15,674,253,101
	Off-net	482,456,704	583,176,631	72,583,692	5,272,752	-	1,143,489,779
	Total	15,968,097,342	759,534,508	83,002,910	7,108,120	-	16,817,742,880
	Market share (%)	94.9	4.5	0.5	0	-	
Oct-Dec 19	On-net	14,178,377,276	209,435,990	4,371,905	1,982,381	-	14,404,167,552
	Off-net	508,048,109	595,487,013	96,484,801	5,517,314	-	1,205,537,237
	Total	14,686,425,385	804,923,003	110,856,706	7,499,695	-	15,609,704,789
	Market share (%)	94.1	5.2	0.7	0.0	-	

Source: CA, Operators' Returns, Mobile Pay Ltd data not available due to non-compliance by the operator

The number of short messages sent per Subscription per Month increased to 101.5 during the third quarter from 95.4 messages sent last quarter. Similarly, Minutes of Use per Subscription per Month increased to 92.5 from 91.5 minutes registered in the foregoing previous quarter.

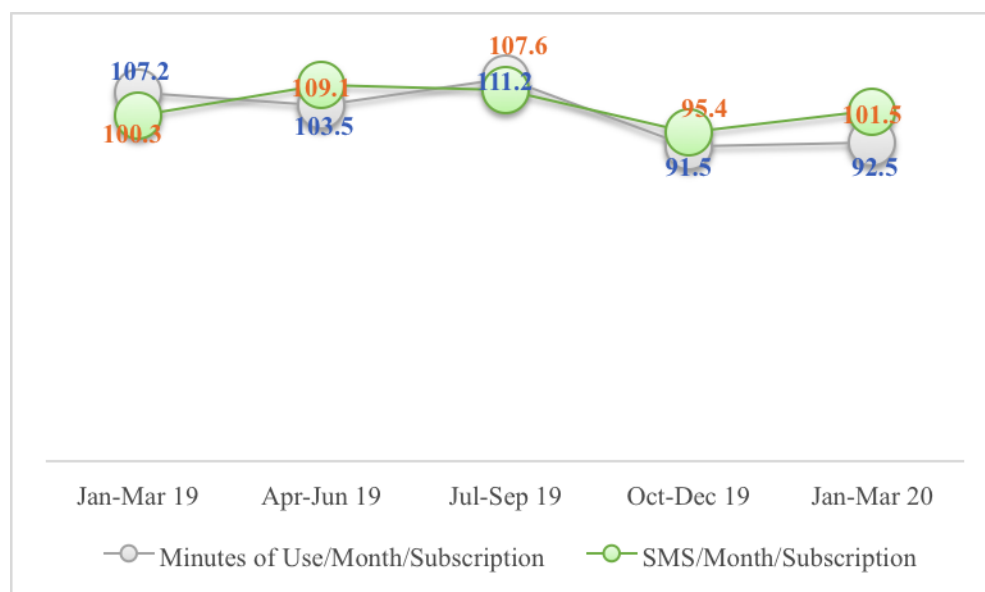


Figure 5: MoU/Month/Subscriptions vs SMS/Month/Subscription

1.4.4 International Mobile Traffic

Traffic originating from other countries decreased by 4.7 percent during the period under review to stand at 137.8 million minutes, whereas voice traffic terminating in other countries increased by 6.0 percent to post 118.0 million minutes. International traffic within EAC member countries has continued to decline over time, owing to implementation of the regional One Network Area initiative, since 2014 that resulted in lowering of roaming voice charges within ONA member countries. Consumers from Kenya, Uganda, Rwanda and South Sudan prefer to roam while visiting either of the countries rather than buying new SIM Cards to make international calls because of the fair calling rates within the One Network Area region. The volume of SMS originating from foreign networks declined by 11.8 percent whereas, messages terminating to foreign networks increased by 1.8 percent.

Table 7 provides the trends in international mobile traffic.

Table 7: International Mobile Traffic

<i>Traffic</i>	<i>Region</i>	<i>Jan-mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
<i>International Incoming Mobile Voice Minutes</i>	<i>EAC</i>	76,480,009	78,753,079	-2.9
	<i>Others</i>	61,359,253	65,659,454	-6.5
	<i>Total</i>	137,839,262	144,412,533	-4.6
<i>International Outgoing Mobile Voice Minutes</i>	<i>EAC</i>	56,751,306	53,032,008	7.0
	<i>Others</i>	61,331,876	58,366,137	5.1
	<i>Total</i>	118,083,182	111,398,734.7	6.0
<i>International Incoming Mobile SMS</i>		9,829,089	11,144,327	-11.8
<i>International Outgoing Mobile SMS</i>		9,465,167	9,298,702	1.8

Source: CA, Operators' Returns

1.4.5 Roaming Traffic

As illustrated in Tables 8 and 9, out-bound and in-bound voice SMS and data volumes remained high within the One Network Area member countries as compared to other countries, due to the low roaming charges implemented through the ONA initiative since 2014. Unlike before, nowadays most of the consumers across ONA countries prefer to roam rather than buy new SIM cards while visiting these countries.

Table 8: Out-bound Roaming Traffic

<i>Country / Indicator</i>	<i>Incoming Voice (Minutes)</i>	<i>Incoming SMS</i>	<i>Outgoing Voice (Minutes)</i>	<i>Outgoing SMS</i>	<i>Data Volumes (MB)</i>
<i>Uganda</i>	54'200'442	2'875'835	6'476'468	4'334'851	7'596'571
<i>Tanzania</i>	383'765	11'025'430	495'569	1'385'946	1'881'430
<i>Rwanda</i>	3'754'136	422'524	527'379	427'922	385'311
<i>Burundi</i>	7'082	297'091	2'953	31'226	10'377
<i>S. Sudan</i>	3'716'015	503'890	1'091'427	833'661	51'483
<i>Others</i>	1'344'434	18'638'834	4'850'357	7'733'251	8'239'586
Total	63'405'874	33'763'604	13'444'153	14'746'857	18'164'758

Source: CA, Operators' Returns

Table 9: In-bound Roaming Traffic

<i>Country / Indicator</i>	<i>Incoming Voice (Minutes)</i>	<i>Incoming SMS</i>	<i>Outgoing Voice (Minutes)</i>	<i>Outgoing SMS</i>	<i>Data Volumes (MB)</i>
<i>Uganda</i>	45'618'368	4'329'518	1'088'896	214'820	1'118'057
<i>Tanzania</i>	98'329	11'204'038	128'490	118'114	518'065
<i>Rwanda</i>	8'957'887	1'286'960	257'248	33'409	150'056
<i>Burundi</i>	1'005	19'208	2'286	779	48
<i>S. Sudan</i>	4'178'460	308'779	71'612	192'160	57'546
<i>Others</i>	1'176'884	11'247'460	2'460'746	1'213'420	1'176'884
Total	60'030'933	28'395'963	4'009'278	1'772'702	3'020'656

Source: CA, Operators' Returns

2 FIXED TELEPHONE SERVICE

2.1 Fixed Network Subscriptions

Traditional fixed line service registered a decline of 3.6 percent to post 19, 848 subscriptions. Fixed wireless and fixed Voice over Internet Protocol grew by 6.3 and 0.9 percentage points to post 1,076 and 49,227 subscriptions respectively.

Table 10: Fixed Network Subscriptions

<i>Subscriptions</i>	<i>Mar-20</i>	<i>Dec-19</i>	<i>Quarterly Variation (%)</i>
<i>Fixed Line</i>	19,848	20,588	-3.6
<i>Fixed Wireless</i>	1,076	1,012	6.3
<i>Fixed VoIP</i>	49,227	48,794	0.9

Source: CA, Operators' Returns

2.2 Fixed Network Traffic

The trend in local fixed voice network traffic is as illustrated in Table 11

Table 11: Local Fixed Network Traffic in Minutes

<i>Local Fixed Network Traffic</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
<i>Fixed-Fixed</i>	252,035	256,990	-1.9
<i>Fixed Wireless-Fixed Wireless</i>	295,477	307,910	-4.0
<i>Fixed to Mobile</i>	5,503,900	5,376,152	2.4
<i>Total Local Fixed Network Traffic</i>	6,051,412	5,941,052	1.9

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

<i>International Fixed Network traffic</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
<i>International Incoming Fixed Network Voice Traffic</i>	4,971,037	5,320,573	-6.6
<i>International Outgoing Fixed Network Voice Traffic</i>	3,915,695	3,683,823	6.3
<i>International Outgoing Fixed VoIP Traffic</i>	530,022	412,209	28.6

Source: CA, Operators' Returns

3 DATA/INTERNET AND BROADBAND SERVICES

3.1 Data/Internet Services

During the third quarter of the 2019/20Financial Year, total data/Internet subscriptions dropped by 0.7 percent to stand at 39.3 million from 39.6 million subscriptions reported in quarter two.

This is mainly attributed to the decline in the number of mobile subscriptions posted by Telkom Kenya Limited during the quarter as a result of measures taken by the company to scale down on investments in anticipation of the proposed Airtel-Telkom merger although this has since changed. Mobile data subscriptions for Safaricom PLC also declined during the period under review following stiff competition from other operators such as Airtel Networks Limited that reviewed their Vuka Pay as You Go tariff for mobile data from Ksh. 4/MB to Ksh. 2.3/MB during the reference period.

Subscriptions connected through radio technology also declined during the quarter to stand at 804 from 1,690 subscriptions recorded during the preceding quarter. This is attributed to the

emergence and increased uptake of new technologies such as 4G that provide faster data/internet speeds.

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

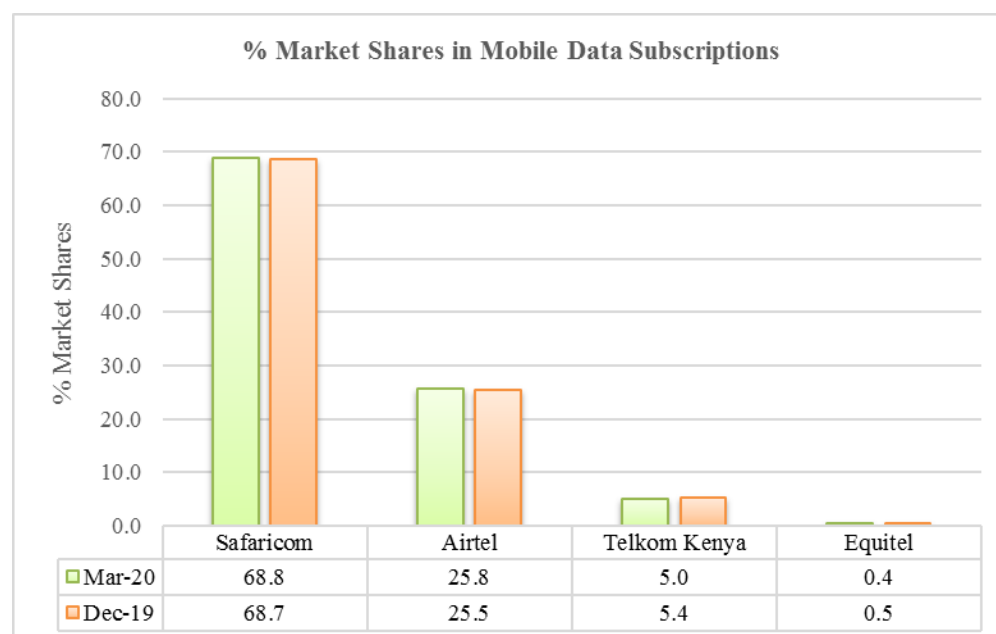
Table 13: Data/Internet Subscriptions

<i>Indicator/Period</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
Total Wireless Subscriptions	38,937,033	39,227,708	-0.7
<i>Mobile Data Subscriptions</i>	38,853,101	39,156,202	-0.8
<i>Terrestrial Wireless Data Subscribers</i>	82,403	70,035	17.7
<i>Satellite Data Subscribers</i>	1,529	1,471	3.9
Total Fixed (Wired) Subscriptions	457,669	429,382	6.3
<i>Fixed DSL Data Subscribers(Copper)</i>	1,027	751	36.8
<i>Fixed Fibre Optic Data Subscribers</i>	289,726	268,753	7.6
<i>Fixed Cable Modem Subscribers</i>	166,112	158,188	5.0
<i>Other Fixed Data Subscribers (e.g. Radio)</i>	804	1,690	-52.4
Total Subscriptions	39,394,702	39,657,090	-0.7

Source: CA, Operators' Returns, Provisional data for Jamii Telkom and Liquid Telecommunications

3.2 Market Shares in Mobile Data/Internet Subscriptions by Operator

During the period under review, Safaricom PLC recorded the highest market share in mobile data subscriptions at 68.8 percent whereas Equitel recorded the least market share at 0.4 per cent.



Source: CA, Operators' Returns

Figure 6: Market Shares in Mobile Data Subscriptions per Operator

3.3 Fixed Data/Internet Subscriptions by Speed

During the period under review, fibre-to-the-office/home data/Internet subscriptions recorded the highest number of broadband³ subscriptions, whereas fixed wireless recorded the highest number of narrowband⁴ subscriptions.

Table 14 shows the breakdown of fixed data/internet subscriptions by speed and technology.

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

Internet Technology/Speeds	<256Kbps	=>256Kbps < 2Mbps	=>2 Mbps <10 Mbps	=>10Mbps <30 Mbps	=>30 Mbps <100Mbps	=>100Mbps	Totals
<i>Cable Modem</i>	-	-	119,105	19,853	26,265	889	166,112
<i>Copper (DSL)</i>	45	225	715	42	0	0	1,027
<i>FTTH/O</i>	23	4,538	127,802	88,445	67,316	1,602	289,726
<i>Fixed Wireless</i>	9,809	9,691	62,046	734	123	-	82,403
<i>Satellite</i>	43	465	1,019	1	-	-	1,528
<i>Other Fixed</i>	0	105	355	198	84	62	804
Totals	9,920	14,953	310,495	109,138	93,740	2,491	541,600

Source: CA, Operators' Returns

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

Table 15: Fixed Data Subscriptions per Service Provider

Name of service Provider	Number of data/internet subscriptions	Percentage Market share
<i>Wananchi Group (Kenya) Ltd*</i>	188,167	34.7
<i>Safaricom PLC</i>	185,821	34.3
<i>Jamii Telecommunications Ltd**</i>	78,149	14.4
<i>Poa Internet Kenya Ltd</i>	53,272	9.8
<i>Mawingu Networks Ltd</i>	10,501	1.9
<i>Liquid Telecommunications Kenya Limited**</i>	9,444	1.7
<i>Internet Solutions Kenya Ltd</i>	8,897	1.6
<i>Telkom Kenya Ltd</i>	4,211	0.8
<i>Mobile Telephone Network (MTN)</i>	623	0.2
<i>Frontier Optical Networks Ltd</i>	536	0.2
<i>Iway Africa</i>	344	0.1
<i>Xtranet Ltd</i>	339	0.1
<i>Other Fixed Service providers</i>	1,296	0.3

³ Broadband; Data/internet speeds equal to or above 256 Kbps

⁴ Narrowband; Data/Internet speeds below 256 Kbps

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

3.4 Broadband⁵ Services

3.4.1 Mobile Broadband

The total broadband subscriptions increased by 0.9 percent during the period under review to record 22.3 million from 22.0 million subscriptions recorded during the previous period. Mobile broadband subscriptions accounted for 97.6 percent of the total broadband subscriptions.

The volume of mobile data consumed increased by 4.1 percent to stand at 110,642,771 GB during the reference period.

Table 16: Broadband Subscriptions

<i>Indicator/Period</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
Total Broadband Subscriptions	22,304,101	22,086,753	0.9
Total Fixed Broadband Subscriptions	531,600	491,183	8.2
<i>3G Broadband Subscriptions</i>	14,037,454	14,849,704	-5.5
<i>4G Broadband Subscriptions</i>	7,735,047	6,745,866	14.7
Total Mobile Broadband Subscriptions	21,772,501	21,595,570	0.8
<i>Consumed Mobile Data Volumes (GB)</i>	110,642,771.0	106,255,026.6	4.1

Source: CA, Operators' Returns

3.4.2 Fixed Broadband Subscriptions

Table 17 illustrates broadband subscriptions by speed and technology

Table 17: Fixed Broadband Subscriptions by Speed and Technology

Internet Technology/Speeds	=>256Kbps < 2Mbps	=>2 Mbps <10 Mbps	=>10Mbps <30 Mbps	=>30 Mbps <100Mbps	=>100Mbps	Totals
<i>Cable Modem</i>	-	119,105	19,853	26,265	889	166,112
<i>Copper (DSL)</i>	225	715	42	0	0	982
<i>FTTH/O</i>	4,538	127,802	88,445	67,316	1,602	289,703
<i>Fixed Wireless</i>	9,691	62,046	734	123	-	72,594
<i>Satellite</i>	465	1,019	1	-	-	1,485
<i>Other Fixed</i>	105	355	198	84	62	804
Totals	14,953	310,495	109,138	93,740	2,491	531,600

Source: CA, Operators' Returns

3.5 International Bandwidth

Total undersea bandwidth capacity leased in the country increased by 14.1 percent during the third quarter to stand at 7,123.36 Gbps from 6,241.84 Gbps recorded in quarter two. EASSy cable lit capacity by 5x100G + 38x10G activations hence the increase in total lit capacity.

The undersea bandwidth capacity utilized within the country increased from 1,764.41 Gbps recorded during the previous period to 1,957.01 Gbps during the period under review. Similarly, undersea bandwidth capacity sold to other countries increased to 1,092.25 Gbps from 953.15 Gbps recorded last quarter.

Satellite capacity lit during the reference period declined by 0.72 percent to record 5.48 Gbps whereas used satellite capacity stood at 2.61 Gbps.

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

Table 18: International Internet Bandwidth (Gbps)

<i>Indicator/ Operator</i>	<i>Jan-Mar 20</i>		<i>Oct-Dec 19</i>		<i>Quarterly Variation (%)</i>
<i>Total Available (Lit/Equip) Bandwidth Capacity</i>	7,123.36		6,241.84		14.1
<i>Undersea Bandwidth Capacity</i>	SEACOM	2,940.00	2,940.00		0.00
	TEAMS	1,618.00	1,618.00		0.00
	EASSY	2,310.00	1,430.00		61.51
	Lion 2	249.88	248.32		0.63
<i>Satellite Bandwidth Capacity</i>	5.48		5.52		-0.72
<i>Utilized Bandwidth in Gbps</i>					
<i>Total Utilized Bandwidth Capacity</i>					
<i>Undersea Bandwidth Capacity</i>	<i>Sold In Kenya</i>	<i>Sold in other Countries</i>	<i>Sold In Kenya</i>	<i>Sold in other Countries</i>	
	1,957.01	1,092.25	1,764.41	953.15	12.2
<i>Satellite Internet Capacity</i>	2.61		2.70		-3.3

Source: CA, Operators' Returns

3.6 Registered Domain Names

The number of registered domains dropped from 91,940 reported during the previous quarter to 91,603 domains during the period under review. As indicated during the previous quarter, the drop is attributed to the closure of businesses and other non-governmental institutions in the country.

Table 17 illustrates the various sub-domains and their respective use as at 31st March 2020.

Table 19: .KE Domains

<i>SUB-DOMAIN</i>	<i>USE</i>	<i>Jan-Mar 20</i>		<i>Oct-Dec 19</i>	
		Domains	% Users	Domains	% Users
<i>CO.KE</i>	Companies	87,090	95.1	87,243	94.89
<i>OR.KE</i>	Non-Profit-Making Organizations	1,811	2.0	1,831	1.99
<i>AC.KE</i>	Institutions of Higher Education	877	1.0	889	0.97
<i>SC.KE</i>	Lower and Middle Level Institutions	769	0.8	902	0.98
<i>NE.KE</i>	Personal Websites and E-mail	79	0.1	96	0.10
<i>ME.KE</i>	Personal Websites and E-mail	207	0.2	219	0.25
<i>MOBI.KE</i>	Mobile Content	39	0.0	40	0.04
<i>INFO.KE</i>	Information	153	0.2	155	0.17
<i>GO.KE</i>	Government Institutions	578	0.6	565	0.61
Total		91,603		91,940	

Source: CA, Operators' Returns

4 National Cyber Security Landscape

4.1 Cyber Threat Statistics

During the quarter, 34,644,531 cyber threats were detected, representing a slight decline from the previous quarter, in which 37,133,200 cyber threats had been detected. Further, 17,844 advisories issued by the National KE-CIRT in response, which was an increase from the 16,654 issued in the previous quarter.

During this period, the National KE-CIRT/CC detected 34.6 million cyber threats events, which was a 6.7 percent decrease from the 37.1 million threat events detected in the previous period, Oct - Dec 2019. This was attributed to the decline in cyber threats related to Malware, DDOS/Botnet and Web Application attacks. This is illustrated as follows:

Table 20: Cyber Threats Detected

<i>Cyber Threat</i>	Jan-Mar 20	Oct-Dec 19	Quarterly Variation (%)
Totals	34,644,531	37,133,200	-6.7
<i>Malware</i>	33,747,678	34,854,959	-3.2
<i>DDOS/Botnet</i>	287,481	346,704	-17.1
<i>Web Application Attacks</i>	582,281	1,908,001	-69.5
<i>System vulnerabilities</i>	27,091	23,536	15.1

Source: National KE-CIRT/CC

The National KE-CIRT/CC analyzed the cyber threat events detected and issued advisories to the affected critical information infrastructure service providers. The number of advisories issued during the period under review increased by 7.3 percent to stand at 17,844 from 16,637

advisories.

Table 21: Cyber Threats Advisories

<i>Cyber Threat Advisories</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
<i>Totals</i>	17,844	16,637	7.3
<i>Malware</i>	1,559	1,601	-2.6
<i>DDOS/Botnet</i>	111	943	-88.2
<i>Web Application Attacks</i>	147	45	226.7
<i>System Vulnerabilities</i>	15,517	13,815	12.3
<i>Others</i>	510	233	118.9

Source: National KE-CIRT/CC

5 POSTAL AND COURIER SERVICES

During the quarter under review, postal and courier traffic dropped as communications moved online, coupled with the end of busy festive season. The number of letters posted locally dropped by 19.3 per cent to 8.5 million letters, down from 10.5 million letters posted in the previous quarter. Similarly, total courier items sent locally stood at 525,364, down from 575,498 recorded in the last quarter. The downward trend in Postal and Courier items is attributed to the lapse of the busy festive season that falls within the preceding period.

The volume of letters received from other countries registered a growth of 19.2 percent to reach 2.6 million, up from 2.2 million reported in the previous quarter. On the other hand, letters sent to other countries declined to 865,117, from 952,933 letters recorded in the preceding quarter.

Table 22: Postal and Courier Traffic

<i>Postal and Courier Traffic</i>	<i>Jan-Mar 20</i>	<i>Oct-Dec 19</i>	<i>Quarterly Variation (%)</i>
<i>Number of Letters Sent (Up to 350 gms) Posted Locally</i>	8,518,805	10,555,124	-19.3
<i>Total Courier Items Sent locally</i>	525,364	575,498	-8.7
<i>International Incoming Letters (Up to 350 gms)</i>	2,681,610	2,250,577	19.2
<i>International Outgoing Letters (Up to 350 gms)</i>	865,117	952,933	-9.2

Source: CA, Operators' Returns

6 TARIFFS, PROMOTIONS AND SPECIAL OFFERS

During the period under review, the Authority received 14 new applications for tariffs, and promotions & special offers just like in the previous quarter.

Further, the Authority received 15 applications for revision of existing tariffs, and promotions & special offers during the same period. A detailed distribution of tariffs, and promotions & special offers applications for the past four quarters is as illustrated in Figures 7 and 8 respectively.

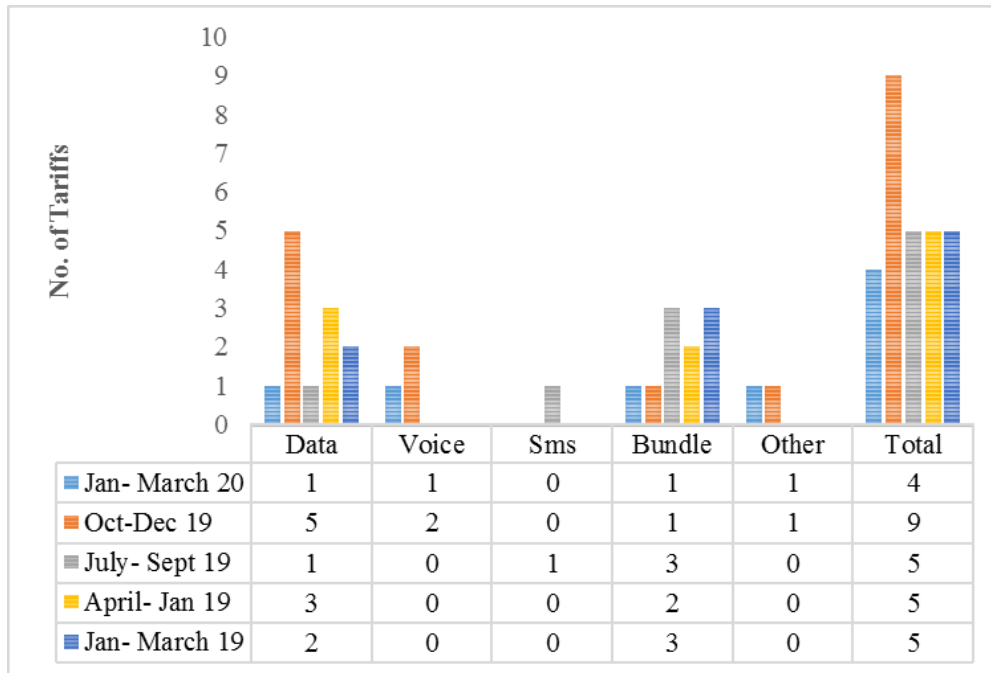


Figure 7: Tariffs

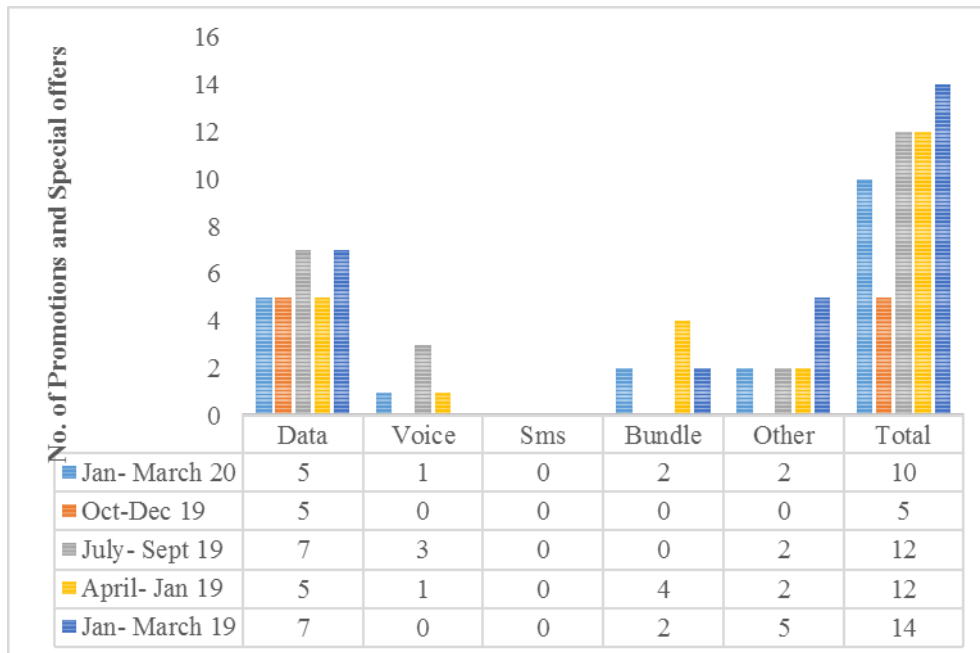


Figure 8: Promotions and Special Offers

7 CONCLUSION

Mobile telephony has been a key driver in the ICT industry across the county and the reference period was no exemption. The proportion of mobile subscribers has increased exponentially over the decade with consumers being able to access more services through their mobile phone devices. While voice, SMS and basic Internet browsing has driven significant impact on communication, mobile broadband also enabled users to access a wide range of services and information including health, financial services and entertainment among others.

Similarly, mobile money has played a key role in facilitation of e-commerce transactions, which has realized a remarkable growth in its volume. This strong growth indicates that more integration is happening directly between operators and online businesses. Meanwhile, the global spread of social media, coupled with the rapid growth of e-commerce, is giving rise to a new trend in which content sharing, messaging, and payments converge. Social commerce — the use of social interactions combined with the transactional nature of e-commerce has led to new forms of shopping in collaborative online environments. This growth is likely to be more evident in the Fourth Quarter during which, the manner of conducting business has changed drastically owing to the COVID-19 outbreak.

The outbreak of Corona Virus has brought an unprecedented impact on the economy by affecting businesses across industries. The impact of the outbreak will be more evident in Quarter Four

(April-June 2020), with negligible impact during the period under review, considering that the government started rolling out measures to curb the spread of the virus from mid-March 2020.

The ICT industry is helping the country weather the COVID-19 storm by providing technology that drives productivity, enables critical communication, fosters education and social ties, and protects ICT systems. Some of the measures rolled out by the Kenyan government to curb spread of the disease include people working from office, whenever possible and use of cashless payment modes especially mobile money services, and this is expected to have a huge impact on demand and supply for telecommunication services going forward.