



Communications Market Review

July to December 2016

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1. Reporting parameters

This is the latest report in a series of Communications Market Review (CMR) publications from the Malta Communications Authority (MCA)¹, covering the period 2012 to December 2016. The report draws on quarterly and half-yearly data compiled by the MCA from network operators and service providers involved in the provision of electronic communications and postal services in Malta. This data is then utilised to develop key performance indicators (KPIs) for the relevant sectors.

Figure 1 below lists the network operators and service providers submitting data to the MCA².

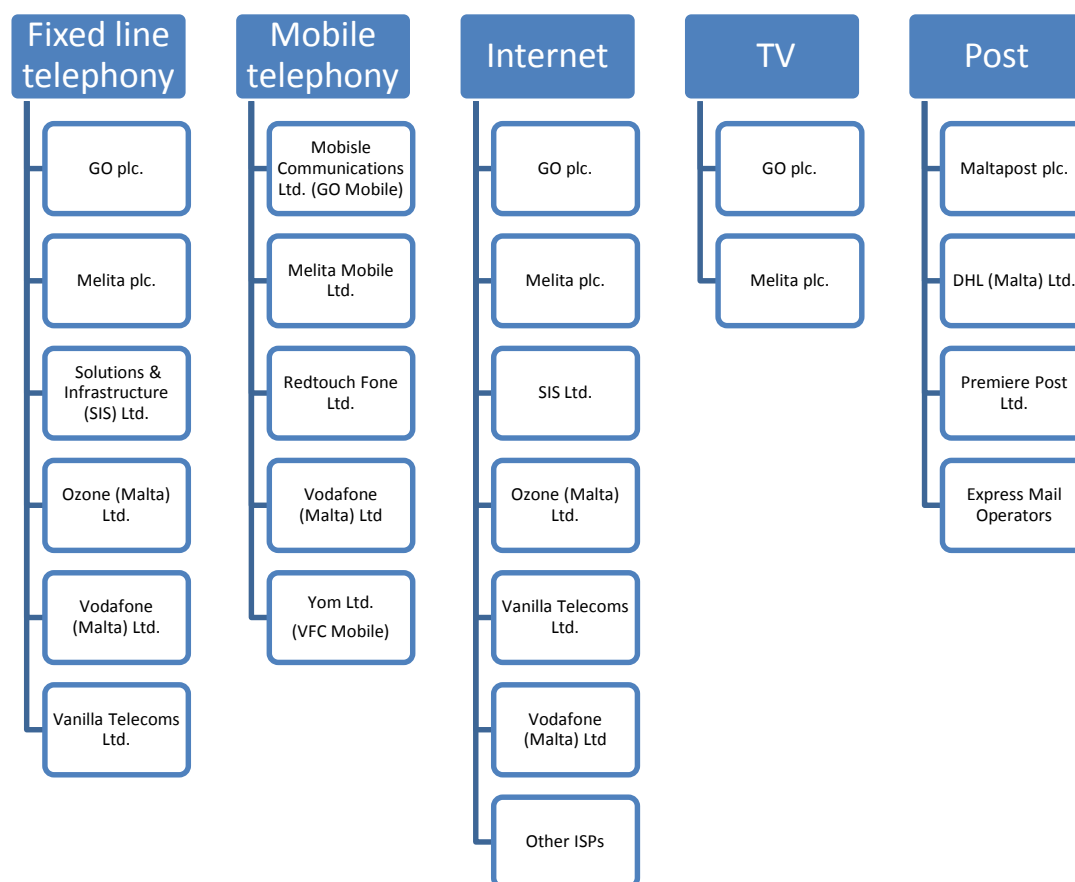


Figure 1: Operators providing quarterly data

This report also refers to findings extracted from publications of third parties in the areas of interest³.

1.1. The reporting period and data cut-off date

The current review presents data and KPIs on a quarterly and half-yearly basis for the period starting Q1 2012 and ending Q4 2016.

¹ Previous CMR publications are available to download for free from the MCA website on the following link: http://mca.org.mt/publications?term_node_tid_depth=585

² Earlier this year, SIS Ltd. has notified the MCA that it was ceasing operations.

³ References to information contained in other websites and quotes from third party sources, such as reference to Deutsche Post's postal rate figures in Malta and the EU, should not be interpreted as constituting endorsement, accuracy and/or responsibility by the MCA.

The data cut-off date for implementing changes and updates in the data has been set on the 29th of March 2017. Any data revised and updated by the sources after the cut-off date will be incorporated in the forthcoming Data Report Sheet (DRS) publication envisaged for July 2017⁴.

1.2. The KPIs in this report

This report is composed of five sections dealing with trends observed for fixed line telephony, mobile telephony, Internet, pay TV and post. Figure 2 below highlights the list of indicators covered in this review.

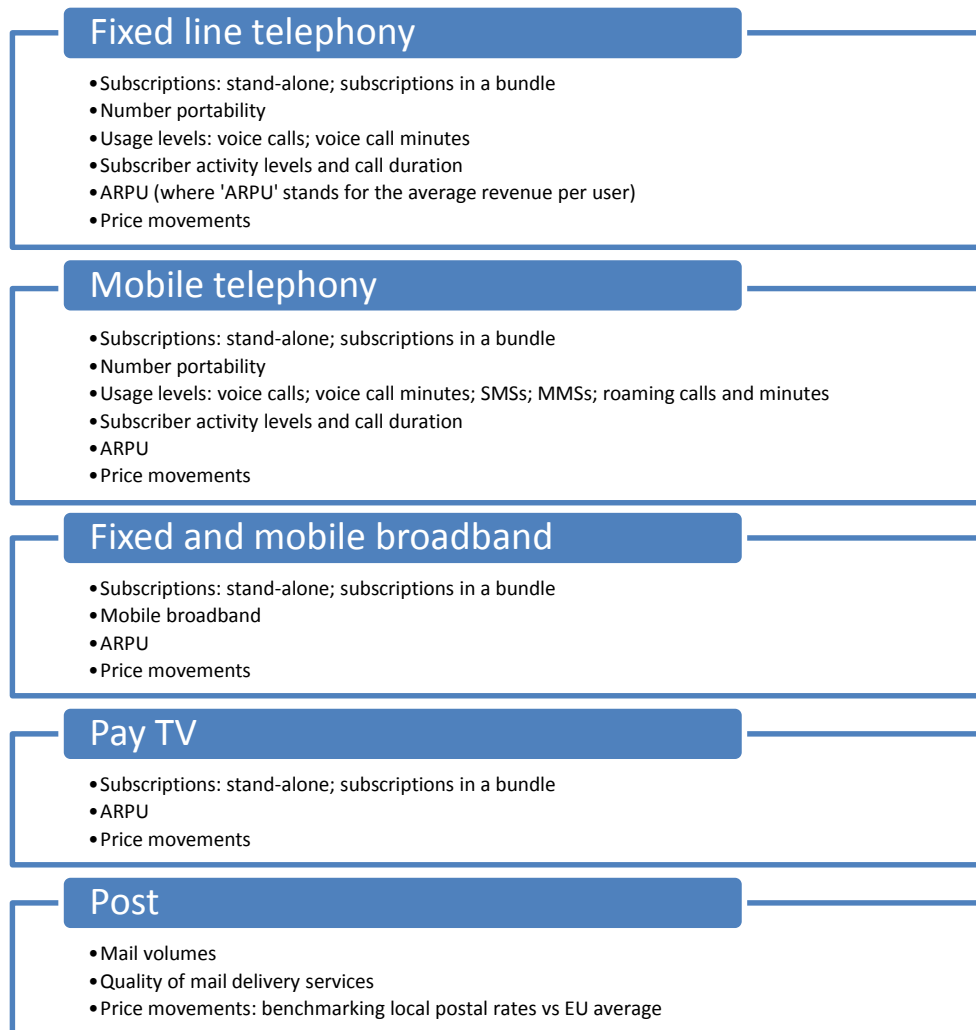


Figure 2: Key market indicators for electronic communications and post

⁴ The MCA publishes a DRS on a regular basis, the latest of which can be found on: <http://mca.org.mt/articles/key-market-indicators-electronic-communications-and-post-q1-2012-q4-2016>

2. Key market outcomes

The year 2016 experienced a continued increase in uptake for fixed and mobile telephony services, alongside stronger demand for fixed and mobile data services. Only the pay TV sector went against this trend, as the sector witnessed a decline in take-up. Underlying these changes is the increasing proportion of end-users opting for a bundled subscription.

Mobile telephony consolidated its position as the most commonly used form of voice communication in Malta, with 807.6 million voice call minutes registered in 2016, representing a 4.7% increase in traffic volumes over the previous year. This contrasts sharply with developments for the fixed telephony sector, where voice minute traffic volumes dipped by 7.7% year-on-year. Notwithstanding the decline in traffic volumes, the fixed telephony subscriber base strengthened year-on-year, with 4,157 more subscriptions reported at the end of the reporting period. This shows that people still value having a fixed line connection at home or at their business premises, even though their usage of the service is falling. The mobile sector also registered an upward trend in take up, with the number of subscriptions going up by 6.3% year-on-year to reach 592,923 by the end of 2016. Whilst the on-going growth in the mobile telephony subscriber base partly reflects the trend of end-users purchasing multiple connections instead of switching, changing consumer preferences (particularly in the use of mobile data services) contribute significantly to the increase. Meanwhile, improved minute allowances and falling average rates per minute of communication contribute to the increase in mobile voice traffic volumes.

The positive developments for the mobile sector did not however translate in improved revenue streams on a per user level for local service providers. In fact, mobile telephony ARPU in 2016 stood at €177.38, down by 2.2% from €181.37 in 2015. The spread of consumption by end-users over their multiple subscriptions contributes to the drop in mobile telephony ARPU, alongside falling average rates per minute of voice communication and improved data and minute allowances. The fixed telephony sector registered a bigger drop in ARPU, with this indicator sliding by of 5.7% from €151.46 in 2015 to €142.77 in 2016. The main factor explaining the drop in fixed line telephony ARPU is the significant decline reported in terms of voice traffic volumes.

Another important trend concerns the changing consumer preferences in view of mobile data usage levels. It is of note that the number of end-users actively using mobile broadband services was up by almost 39,000 (or by 14.4%) between December 2015 and December 2016. This increase coincides with the rising popularity of mobile applications, social networking and other online activities, which all contribute to a stronger take-up of mobile data plans. There have also been instances where service providers offered more generous data allowances, thus enticing end-users to make higher use of mobile broadband data services.

Take-up of fixed broadband strengthened in 2016, with 8,088 new customers added to the local subscriber base. This increase in take-up pushed up the fixed broadband penetration rate to 39.0% by the end of 2016, compared to 37.6% a year earlier. The customer profile for the sector changed considerably last year, as service providers notified their clients that some legacy products were being withdrawn and eventually customers switched to connections supporting faster download speeds of 30Mbps or more. Of note is that the number of fixed broadband subscriptions supporting download speeds of 30Mbps or higher at the end of last year stood at almost 101,755. This figure is up by 3,822 (or by 3.9%) when compared to the number of such subscriptions recorded a year earlier. Fixed broadband subscriptions supporting download speeds of 30Mbps or higher now represent 59.4% of the local fixed broadband subscriber base. Take-up of fixed broadband in a bundle remained very popular in 2016, with the proportion of such subscriptions rising from 72.7% at the end of 2015 to 78.7% at the end of last year. The increasing number of fixed broadband connections on super-fast download speeds enabled local service providers to improve ARPU by almost 10.0%, from €181.45 in 2015 to €199.45 in 2016. This increase in ARPU happened at a time when the average price per Mbit was down by 26.3% year-on-year.

The falling take-up of pay TV contrasts with the positive developments in take-up reported for other electronic communications services. The pay TV sector has seen its subscriber base shrink by 1.1% year-on-

year, from 149,378 subscriptions at the end of 2015 to 147,756 subscriptions at the end of the current reporting period. One common explanation to this trend is the rise in the popularity of online video streaming services, like YouTube, Netflix, Skype and Internet Protocol Television (IPTV). The MCA does not have the actual figures as to the number of people actively using these services. However, surveys carried out regularly by the MCA indicate a consistent rise in take-up of such services. Another important trend concerning the pay TV sector is the rising proportion of end-users purchasing their pay TV service in a bundle. The proportion of pay TV subscriptions purchased in a bundle went up by 4.4 percentage points between 2015 and 2016, from 56.0% to 60.4%. These latest changes in take-up of pay TV weighed significantly on the sector's revenue side, as evidenced by the year-on-year decline in ARPU reported by local service providers.

As for the postal sector, developments were in line to long-term market trends, with mail volumes reported in 2016 falling by 3.1% compared to mail volumes reported a year earlier. This overall decline results from lower letter mail and bulk mail volumes, with declines reported for these mail streams outweighing stronger volumes for registered mail and parcel mail. The latter increases in mail volumes are mainly attributable to an ever more buoyant ecommerce activity.

The main market outcomes for the electronic communications and postal sectors are presented below, and more detailed information on market developments by sector is provided in Sections 4 to 8 of this document.

i. Mobile Telephony

- The number of mobile telephony subscriptions totalled 592,923 as at the end of 2016. This figure is up by 35,340 (or by 6.3%) from 557,583 reported at the end of 2015. Correspondingly, the mobile penetration rate at the end of last year stood at 135.1%, up from 128.4% a year earlier.
- The number of post-paid subscriptions was up by 22,415 (or by 12.3%) during this period and the number of pre-paid subscriptions was up by 12,925 (or by 3.4%). As a result, the proportion of the subscriber base for mobile telephony on a post-paid contract increased from 32.7% at the end of 2015 to 34.5% at the end of the current reporting period.
- 9.7% of all mobile subscriptions recorded at the end of 2016 were bundled with some other electronic communications service.
- The number of mobile inward portings totalled 15,625 in the second half of 2016, down by 4.8% from 16,415 inward portings recorded in the same period a year earlier.
- The number of mobile voice call minutes recorded in the second half of 2016 totalled 412.9 million, which is up by 20.9 million (or by almost 5.3%) from 392.0 million recorded in the second half of 2015. Meanwhile, the number of mobile voice calls was also up, this time by 2.2 million (or by 0.8%). Because the rate of increase in voice minute volumes exceeds the rate of increase in the number of voice calls, mobile-originated calls in the second half of 2016 were lengthier than was the case in the same period a year earlier.
- Meanwhile, given the reported increase in subscriber numbers, usage levels per subscription were down in terms of voice calls but slightly up in terms of voice call minutes. Table 1 below outlines these contrasting trends and the continued decline in usage levels per subscription noted in the case of SMSs.

Mobile telephony	SH 2014	SH 2015	SH 2016
Subscriptions (end of period)	546,229	557,583	592,923
Activity levels per subscription			
Number of voice calls	487	490	471
Number of voice call minutes	675	700	702
Number of SMSs	461	406	337
ARPM (overall)	€0.088	€0.083	€0.076
Average rate per SMS (overall)	€0.031	€0.032	€0.034
ARPU	€91.07	€92.66	€89.69

Table 1: Take-up, activity levels and pricing for the mobile sector

- The number of SMSs per subscription fell from an average of 406 per mobile subscription in the second half of 2015 to an average of 337 per mobile subscription in the second half of 2016.
- In line with long-term market trends, mobile telephony maintains the drive towards more competitively priced voice call offers. In fact, the average rate per minute of mobile communications in the second half of 2016 was down by 8.4% to €0.076 from €0.083 in the second half of the previous year.
- The larger subscriber base and the resulting increase in voice call minute traffic volumes and mobile data consumption did not translate in improved ARPU levels for the mobile sector. This is most likely because of improved minute and data allowances and the spreading of traffic across multiple connections owned by local end-users. ARPU in the second half of 2016 stood at €89.69, which is down by 3.2% from €92.66 in the second half of 2015.

ii. Fixed line telephony

- The number of fixed line subscriptions totalled 234,383 at the end of 2016, up by 4,157 (or by 1.8%) from 230,226 a year earlier.
- The number of post-paid subscriptions was up by 6,056 and the number of 'enhanced' subscriptions (the latter type of subscriptions supporting multiple connections at a particular location) was up by 229. In contrast, the number of pre-paid subscriptions was down by 2,128.
- As for the proportion of the local subscriber base by type of subscription at the end of last year, 92.1% were on a post-paid contract, 6.7% were on a pre-paid plan and 1.2% were on an 'enhanced' plan.
- 68.4% of all standard post-paid fixed line telephony subscriptions at the end of the current reporting period were bundled with some other electronic communications service.
- There were 942 fixed line inward portings in the second half of 2016, down from 848 inward portings recorded in the second half of 2015.
- Traffic volumes in the second half of 2016 were lower than recorded during the same period a year earlier. The number of outgoing voice calls was down by 7.4 million (or by 9.9%) and the number of outgoing voice call minutes was down by 20.9 million (or by almost 11.0%). The decline in traffic volumes combined with a larger subscriber base contributed to a dampening in voice activity levels per subscription. Table 2 below illustrates these trends.

Fixed line telephony	SH 2014	SH 2015	SH 2016
Subscriptions (end of period)	232,469	228,991	231,792
Voice activity levels per subscription			
Number of voice calls	349	327	291
Number of voice call minutes	1,209	1,143	1,037
Average rate per minute (ARPM)	€0.031	€0.030	€0.028
on-net FTF call	€0.010	€0.009	€0.008
off-net FTF call	€0.013	€0.013	€0.011
FTM call	€0.161	€0.155	€0.137
FTI call	€0.094	€0.094	€0.094
Average revenue per user (ARPU)	€77.20	€75.22	€70.35

Table 2: Take-up, activity levels and pricing for the fixed line sector

- ARPU for fixed line telephony in the second half of 2016 was down by 6.5% when compared to the same period a year earlier, from €75.22 to €70.35. This decline mainly reflects the falling voice traffic volumes per user and the increase in take-up of fixed telephony in bundled subscriptions. These bundled subscriptions typically entail a monthly access fee that is cheaper than is the case with the combined total of access fees for electronic communications services purchased on a stand-alone basis.
- The average rate per minute (ARPM) of fixed line communications was also down by 6.7%, from €0.030 in the second half of 2015 to €0.028 in the second half of 2016.

iii. Fixed and mobile broadband

- The number of fixed broadband subscriptions totalled 171,293 at the end of last December. This figure is up by 8,088 (or by 5.0%) from 163,205 reported a year earlier.
- The fixed broadband penetration rate (measured as the proportion of the number of active fixed broadband connections to Malta's population) stood at 37.9% at the end of 2016, representing an increase of almost one percentage point on the corresponding rate at the end of 2015.

Fixed broadband	SH 2014	SH 2015	SH 2016
Subscriptions (end of period)	151,557	163,205	171,293
less than 5Mbps	9,387	2,435	1,035
greater than or equal to 5Mbps but less than 10Mbps	306	296	234
greater than or equal to 10Mbps but less than 20Mbps	53,213	57,902	60,621
greater than or equal to 20Mbps but less than 30Mbps	4,885	4,639	7,648
greater than or equal to 30Mbps but less than 50Mbps	78,699	87,256	29,899
greater than or equal to 50Mbps but less than 100Mbps	3,998	8,407	61,295
100Mbps and more	1,069	2,270	10,561
Average rate per Mbps	€1.71	€1.52	€1.12
less than 5Mbps	€3.79	€3.95	€4.43
greater than or equal to 5Mbps but less than 10Mbps	€4.81	€4.67	€4.33
greater than or equal to 10Mbps but less than 20Mbps	€1.77	€1.65	€1.63
greater than or equal to 20Mbps but less than 30Mbps	€1.84	€1.88	€2.01
greater than or equal to 30Mbps but less than 50Mbps	€0.95	€1.10	€1.10
greater than or equal to 50Mbps but less than 100Mbps	€0.87	€0.73	€0.61
100Mbps and more	€0.80	€0.83	€0.44
ARPU	€89.91	€91.27	€103.16

Table 3: Take-up and pricing for the fixed broadband sector

- 78.7% of all fixed broadband subscriptions reported at the end of last December were in a bundle. This figure is up by 6.0 percentage points compared to 12 months earlier. In absolute terms, the number of fixed broadband subscriptions in a bundle totalled 134,855 at the end of 2016.
- The number of fixed broadband subscriptions with download speeds of 30Mbps but less than 100Mbps was down by 4.7%, from 95,663 at the end of 2015 to 91,194 at the end of 2016. During the same period, the number of subscriptions supporting download speeds of 100Mbps or higher more than quadrupled, from 2,270 to 10,561.
- Of all fixed broadband subscriptions reported at the end of last December, those on the cable platform totalled 80,881 (equivalent to 47.2% of the total). Meanwhile, the number of subscriptions on the DSL and wireless platforms totalled 75,738 (equivalent to 44.2% of the total) and 5,170 (equivalent to 3.0% of the total) respectively. Fibre-to-the-Home (FTTH) subscriptions totalled 9,504 (equivalent to 5.5% of the total).
- Fixed broadband ARPU in the second half of 2016 stood at €103.16, up by 13.0% from €91.27 in the second half of 2015. ARPU increased despite the fall in the average rate per unit of download speed (or per Mbps) recorded during this period and the increase in subscriptions on a bundle.
- The number of people utilising mobile broadband services continued to rise in the second half of 2016 with the average usage of these services in Malta moving closer to the EU average. The number of end-users actively making use of mobile broadband services went up from 270,055 at the end of 2015 to 308,829 at the end of last year.

iv. Pay TV

- The number of Pay TV subscriptions totalled 147,756 at the end of 2016, down by 1,622 (or by 1.1%) from 149,378 a year earlier.
- The number of analogue cable subscriptions was down by 693 (or by 11.4%) in twelve months to 5,399 at the end of last December. Meanwhile, the number of DTTV subscriptions fell by 5,750 (or by 11.2%) to 45,640 whilst the number of digital cable subscriptions was down by 1,409 (or by 1.9%). In contrast, the number of IPTV subscriptions was up by 6,230 (or by 32.3%).

Pay TV	SH 2014	SH 2015	SH 2016
Subscriptions (end of period)	147,880	149,378	147,756
Average market rates for pay TV packages	€22.44	€22.54	€22.97
up to 24 channels	€3.99	€5.00	
25 to 49 channels	€15.66	€15.66	€16.49
50 to 74 channels	€23.49	€24.99	
75 to 99 channels	€26.32	€23.99	€23.99
100 channels or more	€34.99	€32.99	€32.99
ARPU	€85.40	€83.38	€82.66

Table 4: Take-up and pricing for the Pay TV sector

- The share of total pay TV subscriptions on the analogue cable and digital cable platforms stood at 3.7% and 48.2% respectively at the end of 2016. In the former case, the share is down by 0.4 percentage points from 4.1% at the end of 2015, whilst in the latter case the share is down by 0.2 percentage points from 48.6%. Meanwhile, the Digital terrestrial TV (DTTV) and Internet Protocol TV (IPTV) platforms accounted for 30.9% and 17.3% of total pay TV subscriptions recorded at the end of 2016 respectively. The representativeness of the former compared to its standing at the end of 2015 is down by 3.5 percentage points, whilst that of the latter is up by 4.4 percentage points.
- Take-up of pay TV subscriptions in a bundle went up further during the last six months of 2016. In this respect, the number of bundled pay TV subscriptions went up from 80,215 at the end of 2015 to 85,926 at the end of last year. The percentage of pay TV subscriptions purchased in a bundle⁵ at the end of last December stood at 60.4%, which is up by 4.4 percentage points in a year.
- Pay TV ARPU in the second half of 2016 stood at €82.66, down from €83.38 in the second half of 2015.
- MCA workings show that the overall average advertised rate (or average monthly access fee) for pay TV stood at €22.97 in the second half of 2016, slightly up from €22.54 a year earlier.

⁵ This working excludes analogue pay TV subscriptions as these services are only offered to existing clients and on a stand-alone basis.

v. Post

- Postal mail volumes delivered in the second half of 2016 totalled 18.4 million items, down by 1.1 million (or by 5.5%) from 19.5 million items delivered in the second half of 2015.
- Two types of mail, standard mail and express mail, account for postal mail activity in Malta. 96.4% of all mail activity recorded in the second half of 2016 was standard mail. Express mail accounted for the remaining activity.
- In absolute terms, standard mail activity in the second half of 2016 was down by 1.2 million items (or by 6.4%) when compared to the same period a year earlier. A similar comparison for express mail shows that volumes were up by 0.1 million mail items (or by 27.0%).

Post	SH 2014	SH 2015	SH 2016
Postal mail volumes	19,936,521	19,457,230	18,381,153
Standard mail volumes	19,504,634	18,940,024	17,724,580
Single piece letter mail	7,727,524	7,486,877	7,043,518
Bulk mail	11,040,459	10,704,011	9,882,172
Registered mail	668,329	670,995	710,796
Parcel mail	68322	78,141	88,094
Express mail volumes	431,887	517,206	656,573
Single piece letter mail	280,239	320,680	426,987
Bulk mail	-	-	-
Registered mail	-	-	-
Parcel mail	151,648	196,526	229,586

Table 5: Postal mail volumes

- As to developments by type of mail item (standard mail and express mail added together), bulk mail activity accounted for 53.8% of all postal activity recorded in the second half of this year, followed by single piece letter mail at 40.6%, registered mail at 3.9% and parcel mail at 1.7%.

3. Market share trends of the local subscriber base

This section looks at the changes in market position of local service providers, based on the number of subscriptions reported at the end of the current review period.

3.1. Fixed line telephony

GO's market share at the end of last year stood at 64.8% compared to Melita's share of almost 34.0%. Meanwhile, the combined market share of other service providers, namely Vodafone (Malta), Ozone (Malta), SIS and Vanilla Telecoms stood at 1.2% at the end of the current reporting period, slightly up from 0.7% reported a year earlier.

Market shares	GO	Melita	SIS	Ozone (Malta)	Vanilla Telecoms	Vodafone (Malta)
End of 2016	64.83%	33.97%	0.07%	0.32%	0.03%	0.78%
End of 2015	65.43%	33.84%	0.08%	0.34%	0.02%	0.29%
End of 2014	66.29%	33.07%	0.10%	0.34%	0.02%	0.17%

Figure 3: Market shares in terms of fixed line telephony subscriptions as at end of period

3.2. Mobile telephony

The two largest mobile telephony operators recorded a slight decline in their market share in the 12-month period ending December 2016. Vodafone's market share was down by a0.3 percentage points, from 43.9% to 43.6%, whilst that of GO Mobile was down by 0.2 percentage points, from 38.2% to 38.0%.

Meanwhile, the market share of Melita strengthened by 0.8 percentage points, up from 16.0% to 16.8%.

The smaller players in the sector, namely RedTouch Fone and VFC Mobile, together accounted for just 1.7% of the local subscriber base at the end of 2016.

Market shares	GO Mobile	Vodafone (Malta)	Melita Mobile	Other
End of 2016	37.99%	43.59%	16.78%	1.65%
End of 2015	38.24%	43.94%	16.01%	1.81%
End of 2014	39.08%	44.28%	14.78%	1.86%

Figure 4: Market shares in terms of mobile telephony subscriptions as at end of period⁶

⁶ Ping Mobile has not been active since 2013.

3.3. Fixed broadband

GO's market share gained 0.8 percentage points in the 12-month period to December 2016 and stood at 49.7% at the end of the current review period. Vodafone also recorded an improvement of 1.5 percentage points in its market share to 2.7%.

During the same period, the market share of Melita was down to 47.2% from 49.5%. The combined market share of other service providers, namely Vanilla Telecoms, Ozone (Malta) and SIS, was relatively unchanged⁷.

Market shares	GO	Melita	SIS	Ozone (Malta)	Vanilla Telecoms	Vodafone (Malta)	IP-based ISPs
End of 2016	49.71%	47.22%	0.05%	0.21%	0.11%	2.70%	-
End of 2015	48.92%	49.48%	0.06%	0.21%	0.11%	1.21%	-
End of 2014	48.59%	49.88%	0.05%	0.25%	0.14%	0.99%	0.10%

Figure 5: Market shares in terms of fixed broadband subscriptions as at end of period

3.4. Pay TV

The latest changes in the market shares for GO and Melita in the pay TV sector are in line with developments observed over the last few years. The market shares of these two operators are converging to a 50/50 scenario.

Year-on-year, GO's market share was up by 0.8 percentage points to reach 48.2% at the end of 2016. During the same period, Melita's market share dropped by the same margin to 51.8% by the end of the current reporting period.

Market shares	GO	Melita
End of 2016	48.15%	51.85%
End of 2015	47.31%	52.69%
End of 2014	47.16%	52.84%

Figure 6: Market shares in terms of pay TV subscriptions as at end of period

⁷ IP-based ISPs were no longer active as from the end of 2015.

4. Fixed line telephony

The fixed line sector reported a healthy increase in subscriber numbers in 2016, with subscriptions going up by 4,157 to reach 233,178 by the end of the year. The number of post-paid subscriptions went up by 6,056, whilst the number of 'enhanced' subscriptions was up by 229. These increases outweighed a decline of 2,128 pre-paid subscriptions reported during the same period. The proportion of pre-paid subscriptions of the local subscriber base stood at just 6.7% by the end of 2016, whilst that for post-paid subscriptions stood at 92.1%. Enhanced subscriptions accounted for the remaining share.

The increase in post-paid subscriptions happened as service providers further consolidated their efforts to switch end-users from pre-paid to post-paid plans and more end-users purchased bundled subscriptions including fixed telephony services. In fact, the number of stand-alone subscriptions went down by 10,439 (or by 10.7%) in the 12-month period ending last December. Meanwhile, the number of fixed telephony subscriptions purchased in a bundle went up by 14,626 (or by almost 11.0%).

In terms of traffic levels, the volume of originating fixed line calls and minutes in the second half of 2016 was lower than that recorded in the same period a year earlier. In this regard, the number of fixed line voice calls was down by 9.9% while the number of fixed voice call minutes was down by almost 8.0%. This decline in traffic volumes coincided with an increase in subscriber numbers, which is a clear indication that although more end-users have a fixed telephony connection usage is shifting to mobile. As a result, voice activity levels per fixed telephony subscriber dipped in the second half of 2016 when compared to the same period a year earlier, with the number of voice calls per subscription falling to 290 from 327 and number of voice call minutes per subscription falling to 1,037 from 1,143.

As more end-users get their fixed telephony subscription in a bundle, the minute allowances offered in these packages become accessible to a larger segment of the subscriber base. This has an impact on the average rate per minute of fixed line communications, with calculations showing that the ARPM fell by 6.7% from €0.030 in the second half of 2015 to €0.027 in the second half of 2016.

The fall in traffic volumes and the decline in the average rate per minute of fixed line communication translated into a lower ARPU for the sector in the second half of 2016 when compared to the same period a year earlier. In this regard, fixed telephony ARPU was down by 6.5%, from €75.22 to €70.35.

4.1. Subscriptions

The number of fixed telephony subscriptions at the end of last year totalled 234,383 compared to 230,226 a year earlier. This corresponds to a year-on-year increase of 4,157 subscriptions.

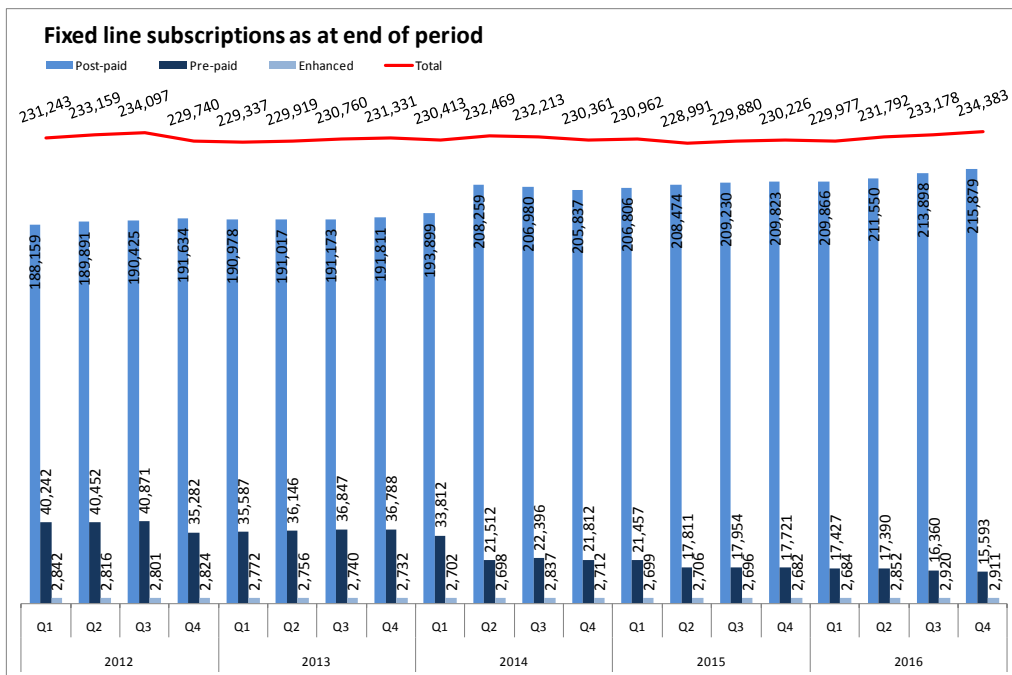


Figure 7: Fixed line telephony subscriptions as at end of period

This review distinguishes between two types of fixed line telephony subscriptions, namely standard subscriptions and enhanced subscriptions.

Standard subscriptions are categorised as either post-paid or pre-paid, with the former type contractually binding the consumer to purchase the service for a specified period (typically two years) and to pay a monthly access fee for the whole duration of the contract term agreement. Pre-paid subscriptions do not entail a contractual term agreement. However, both pre-paid and post-paid subscriptions offer the end-user a single connection at his/her residential unit or business location.

The fixed line subscriber base at the end of last year comprised 215,879 post-paid subscriptions and 15,593 pre-paid subscriptions. Compared to the end of 2015, the number of post-paid subscriptions was up by 6,056 (or by 2.9%) whilst the number of pre-paid subscriptions was down by 2,128 (or by 12.0%).

Enhanced fixed line telephony subscriptions refer to those subscriptions offering multiple (dual or more) channel connections. There were 2,911 enhanced subscriptions at the end of 2016. Compared to the end of the previous year, the number of enhanced subscriptions was up by 229 (or by 8.5%).

At the end of the current reporting period, 92.1% of all fixed line telephony subscriptions were on a post-paid contract, which represents a 1.0 percentage point increase compared to 91.1% recorded at the end of 2015. Meanwhile, pre-paid subscriptions accounted for 6.7% of the local fixed telephony subscriber base, down from 7.7% a year earlier, whilst the proportion of enhanced subscriptions was unchanged at 1.2%.

Subscriptions on a bundle

The notable increase in post-paid fixed telephony subscriptions coincided with an increase in subscriptions to bundled packages. In absolute terms, the number of post-paid fixed line telephony subscriptions purchased in a bundle increased by 14,606 (or by almost 11.0%) from 133,051 at the end of 2015 to 147,657 at the end of last year.

Post-paid fixed line telephony subscriptions in a bundle	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Fixed telephony subscriptions on a dual play contract	34,641	35,521	33,056	33,715	39,137	47,948	52,230	57,870	62,844	67,217
Fixed telephony + mobile telephony	12,738	13,567	12,156	12,443	13,427	11,112	8,985	7,850	7,502	7,258
Fixed telephony + fixed broadband	6,222	9,653	10,068	11,349	15,979	29,890	36,927	44,179	49,622	54,415
Fixed telephony + pay TV	15,681	12,301	10,832	9,923	9,731	6,946	6,318	5,841	5,720	5,544
Fixed telephony subscriptions on a triple play contract	9,802	9,794	15,459	21,376	22,477	25,490	26,718	27,525	28,613	30,540
Fixed telephony + fixed broadband + mobile telephony	437	-	344	289	312	620	630	139	84	58
Fixed telephony + fixed broadband + pay TV	9,365	9,794	15,115	21,087	22,165	24,870	26,088	27,386	28,529	30,482
Fixed telephony subscriptions on a quad play contract	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Fixed telephony + fixed broadband + pay TV + mobile telephony	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Total number of fixed post-paid telephony subscriptions in a bundle	83,462	85,898	89,854	97,577	105,683	117,867	124,631	132,383	139,532	147,657
Number of fixed post-paid telephony subscriptions as at end of period	189,891	191,634	191,017	191,811	208,259	205,837	208,474	209,823	211,550	215,879
Percentage of fixed post-paid telephony subscriptions in a bundle	43.95%	44.82%	47.04%	50.87%	50.75%	57.26%	59.78%	63.09%	65.96%	68.40%

Table 6: Fixed line post-paid subscriptions on a bundled offer

Table 6 shows that 68.4% of all post-paid fixed line telephony subscriptions recorded at the end of 2016 were in a bundled package of electronic communications services⁸. This figure was up by five percentage points when compared to the end of 2015.

4.2. Fixed line inward portings

The number of fixed line inward portings⁹ recorded in the second half of 2016 totalled 942, up by 94 (or by 11.1%) from 848 portings reported in the second half of 2015.

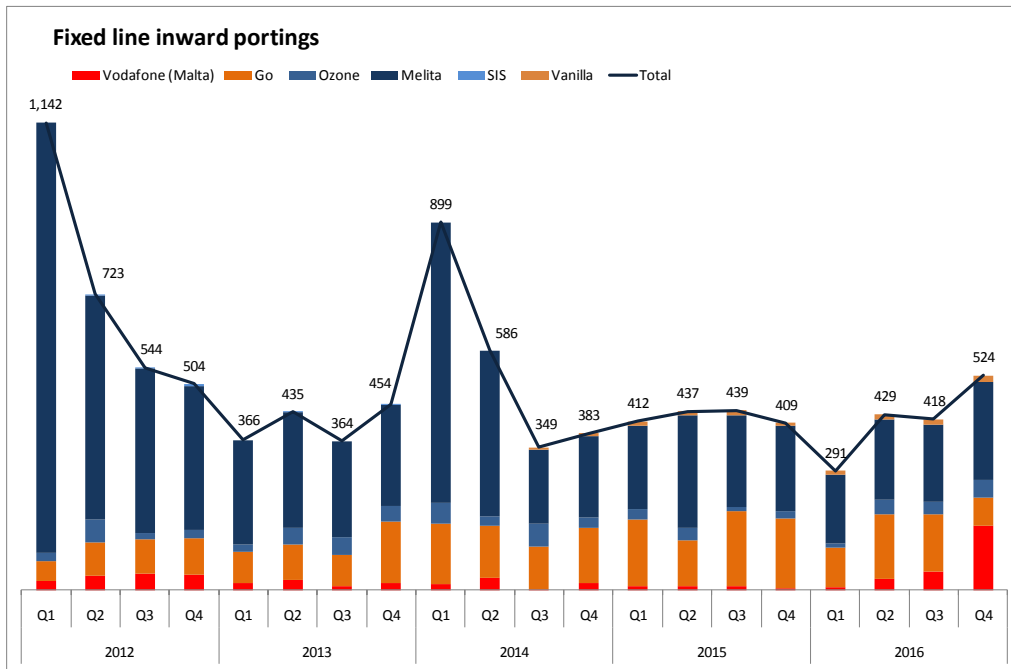


Figure 8: Fixed line number portability - number of inward portings

Melita accounted for 45.5% of all inward portings reported in the second half of last year, followed by GO at 22.2% and Vodafone at 16.6%. During the same period, Ozone (Malta) and Vanilla Telecoms accounted for 7.9% and 3.2% of inward portings respectively.

⁸ Locally, only fixed line subscriptions on a post-paid contract can be purchased in a bundle with other electronic communications services.

⁹ The term 'fixed line inward portings' refers to the total number of subscribers that switch from a fixed line operator to another whilst keeping the same number. Figures presented above only take into account inward portings.

Market share developments for the different operators also indicate that fixed line portability during this period mostly came about because of end-users switching from GO to Melita and Vodafone.

4.3. Usage trends for fixed line telephony

Fixed line traffic volumes in the second half of 2016 were down when compared to traffic volumes reported in the same period a year earlier. The number of landline calls was down by 7.4 million (or by 9.9%) from 75.1 million in the second half of 2015 to 67.7 million. The number of fixed line voice call minutes was also down, in this case by 20.9 million (or by 8.0%), from 262.6 million to 241.6 million.

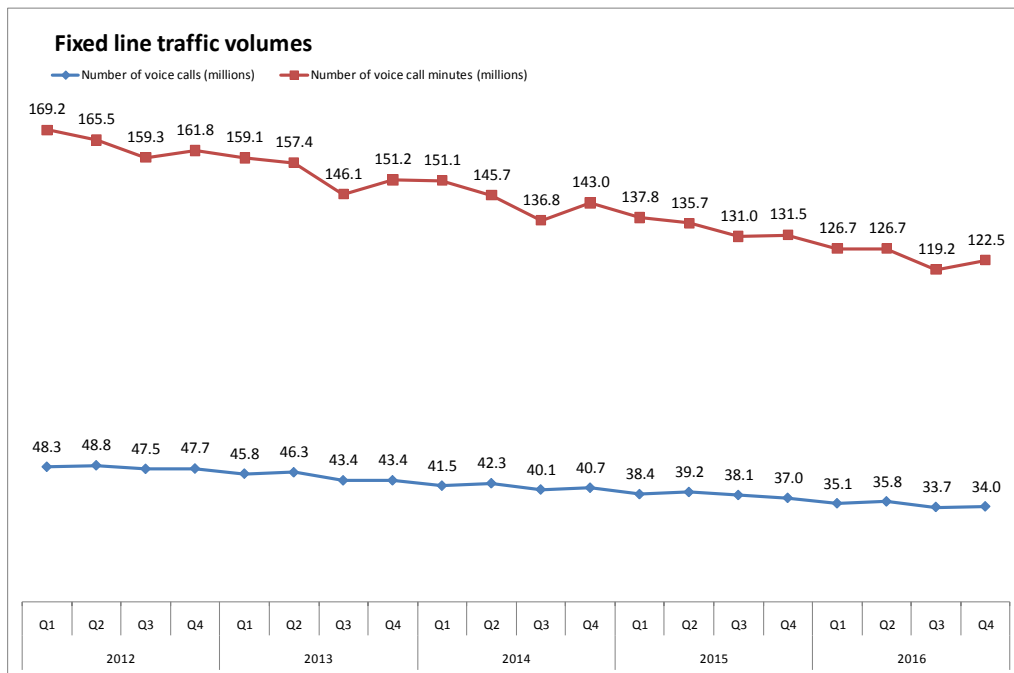


Figure 9: Voice traffic originating from local fixed line networks

Total fixed line traffic volumes referred to in Figure 9 encompass the national voice traffic segment and the international voice traffic segment. The former refers to volumes of fixed voice calls and voice minutes originated and terminated in Malta, whilst the latter traffic segment refers to volumes of fixed voice calls and voice minutes originated locally and terminated in a foreign territory. The following sections will focus on the relevant developments for these traffic segments.

4.3.1 National voice traffic volumes

National fixed line traffic volumes in the second half of 2016 amounted to 65.6 million voice calls and 229.3 million voice call minutes. This means that, on average, each fixed telephony subscriber made approximately 282 national voice calls and 986 national voice call minutes during the period under review.

National voice calls

The number of national fixed line voice calls in the second half of 2016 totalled 65.6 million, down by 7.1 million (or by 9.7%) from 72.7 million in the corresponding period a year earlier.

A further drill down of these figures would show that all components of the national traffic segment registered a decline in volumes.

The number of on-net FTF calls fell by 3.7 million (or by 9.9%), from 37.7 million in the second half of 2015 to 34.0 million in the second half of 2016. At the same time, the number of off-net FTF calls dropped by 2.1 million (or by 1.0%), from 16.1 million to 14.0 million, and the number of FTM calls dipped by 1.2 million (or by 6.9%), from 17.4 million to 16.2 million.

Fixed voice calls (national)	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Total	93,253,424	91,072,184	88,230,089	83,794,407	81,061,884	78,122,647	75,080,520	72,657,406	68,547,147	65,587,008
Fixed-to-fixed (FTF)	71,106,727	68,614,478	67,982,076	63,912,398	61,829,592	58,333,116	56,188,852	53,829,105	50,621,535	48,015,924
on-net FTF	51,767,904	49,553,582	48,651,217	45,868,914	44,020,136	41,187,247	39,631,778	37,723,423	35,555,002	34,006,590
off-net FTF	19,338,823	19,060,896	19,330,859	18,043,484	17,809,456	17,145,869	16,557,074	16,105,682	15,066,533	14,009,334
Fixed-to-mobile (FTM)	20,692,609	20,917,476	18,688,835	18,362,387	17,543,834	18,127,981	17,490,548	17,404,228	16,572,110	16,203,030
Other	1,454,088	1,540,230	1,559,178	1,519,622	1,688,458	1,661,550	1,401,120	1,424,073	1,353,502	1,368,054

Table 7: Outgoing fixed line traffic - number of national voice calls

The 'other' national calls component¹⁰ has also witnessed a decline in traffic volumes, with the number of calls reported in the second half of 2016 totalling 1.4 million, down by 0.06 million (or by 3.9%) compared to the same period a year earlier.

National voice call minutes

In terms of national voice call minutes, traffic volumes in the second half of 2016 totalled 229.3 million. This figure is down by 18.9 million (or 7.5%) from 248.0 million minutes reported in the second half of 2015.

All national voice traffic components experienced a drop in minute volumes. The number of on-net FTF traffic voice minutes was down by 11.4 million (or by 7.5%), from 152.2 million in the second half of 2015 to 140.7 million in the second half of 2016. Meanwhile, the number of off-net FTF minutes was down by 6.6 million (or by 10.2%), from 64.8 million to 58.2 million. The number of national FTM voice minutes totalled 26.7 million in the second half of 2016, which is down by 0.8 million (or by 2.8%) from 27.4 million in the second half of 2015.

Fixed voice call minutes (national)	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Total	314,021,005	300,574,025	297,752,857	279,628,212	280,368,533	263,568,719	258,636,682	248,023,544	239,931,933	229,336,553
Fixed-to-fixed (FTF)	279,148,307	264,934,516	265,708,234	248,045,344	249,682,050	231,976,896	228,062,609	216,988,931	209,588,785	198,963,296
on-net FTF	202,010,148	190,009,017	189,659,199	177,296,513	178,064,325	163,134,907	160,680,942	152,164,197	147,487,069	140,731,241
off-net FTF	77,138,159	74,925,499	76,049,036	70,748,832	71,617,725	68,841,990	67,381,667	64,824,734	62,101,716	58,232,055
Fixed-to-mobile (FTM)	31,562,195	32,081,886	28,531,576	27,941,261	26,892,375	27,867,348	27,223,360	27,436,775	26,774,772	26,660,001
Other	3,310,503	3,557,623	3,513,046	3,641,606	3,794,108	3,724,475	3,350,713	3,597,839	3,568,376	3,713,256

Table 8: Outgoing fixed line traffic - number of national voice call minutes

On the other hand, the number of 'other' national voice minutes was up by 0.1 million (or by 3.2%), from 3.6 million in the second half of 2015 to 3.7 million in the second half of last year.

4.3.2 International voice traffic volumes

During the second half of 2016, fixed line telephony users made 2.1 million fixed-to-international (FTI) voice calls and 12.3 million fixed-to-international voice call minutes. This translates into approximately 9 international voice calls and around 52 international voice call minutes per active fixed telephony subscriber during this period.

Compared to the second half of 2015, the number of fixed-to-international (FTI) voice calls was down by 0.3 million (or by 13.9%), whilst the number of international voice call minutes was down by 2.2 million (or by 15.4%).

¹⁰ This traffic component includes freephone calls, premium calls and payphone calls.

4.4. Activity levels and call duration

With the decline in traffic volumes coinciding with an increase in subscriptions, activity levels per subscription (i.e. the average number of voice calls and voice call minutes per active fixed line subscription) in the second half of 2016 dipped compared to activity levels recorded in the second half of the previous year.

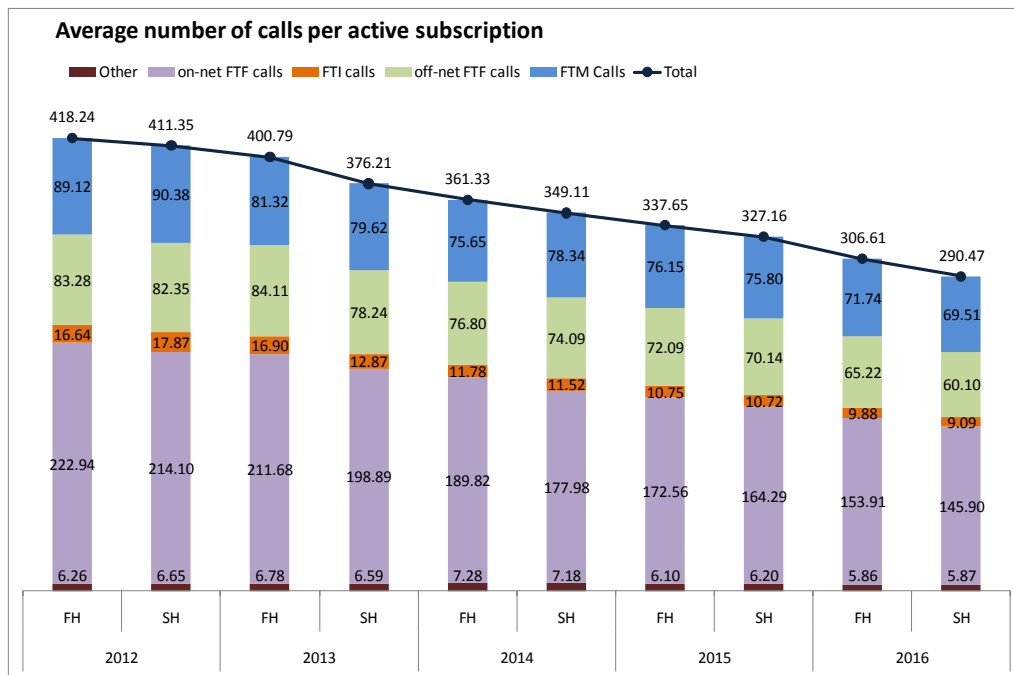


Figure 10: Average number of calls per active subscription

Figure 10 illustrates that each active fixed line subscription accounted for an average of around 290 calls in the second half of 2016¹¹, down from around 327 in the second half of 2015. This drop mainly reflects the negative developments for on-net FTF, off-net FTF, and FTM traffic volumes.

In terms of fixed voice call minutes, each fixed line subscription accounted for an average of 1,039 in the second half of 2016 compared to 1,143 in the second half of the previous year. This development is mainly attributed to the drop in on-net traffic.

¹¹ Total depicted in Figure 10 includes the number of *other calls* (which encompasses premium, freephone, and Internet calls) per active subscription.

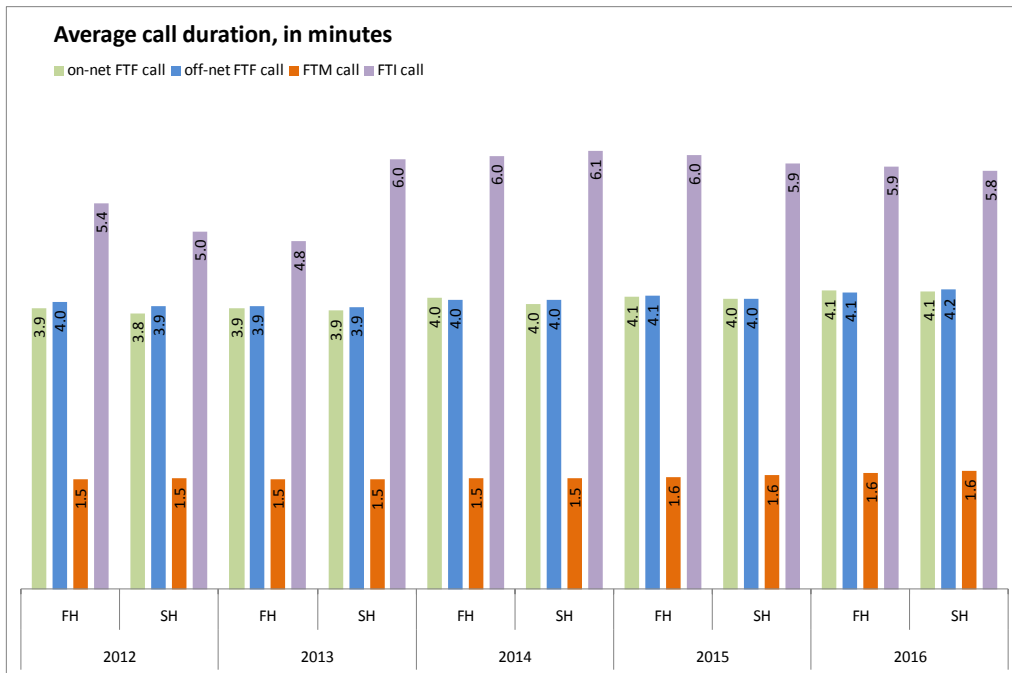


Figure 11: Average duration of an outgoing fixed line call

As for the average duration of an outgoing fixed line call, this stood at 3.6 minutes (or 3 minutes and 36 seconds) during the second half of 2016, which is slightly higher from that recorded in the second half of last year.

As to the average length of fixed line calls according to type, Figure 11 illustrates that the average duration of a FTI call stood at around 6 minutes in the second half of 2016. Meanwhile, the average duration of a FTM call stood at 1 minute and 42 seconds for a FTM call. On-net FTF calls and off-net FTF calls on average lasted around four minutes and six seconds during the same period.

4.5. Fixed ARPU

The average revenue per user (ARPU) in the fixed line sector totalled €70.35 in the second half of 2016. This is down by 6.5% compared to the ARPU level observed in the second half of the 2015, which stood at €75.22.

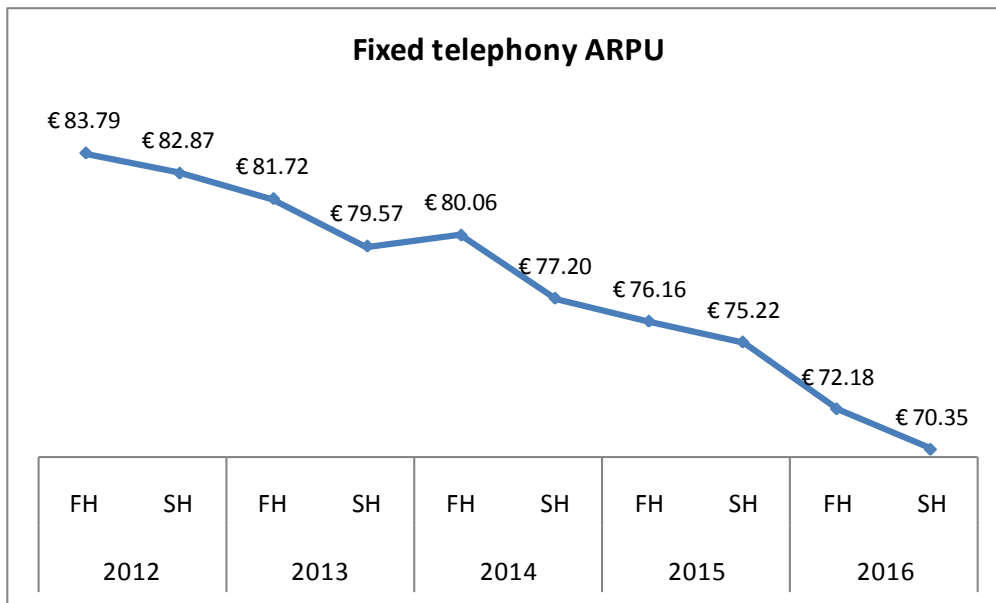


Figure 12: Average revenue per fixed line user

The persistent shift of voice traffic volumes to mobile has contributed significantly to this decline in fixed telephony ARPU. This decline in voice traffic volumes also coincided with an increase in uptake of fixed telephony in bundled subscriptions. The latter factor has a significant impact on ARPU given that service providers occasionally offer discounts and promotional offers related electronic communications services purchased in a bundle, apart from the fact that bundle access fees are lower than when the services in a bundle are purchased on a stand-alone basis.

Methodology used in deriving fixed ARPU figures

Fixed ARPU figures are derived by dividing the total revenues of service providers by the average number of active subscribers, during a given period.

The 'total revenues' heading includes a number of retail revenue elements, namely:

1. revenues from access;
2. revenues from all local and international voice call activity (incl. freephone & premium call activity); and
3. revenues from 'other' activity as specified by the operator.

The average number of active subscribers during a given period corresponds to the number of active subscriptions at the start of the period plus the number of subscriptions at the end of the same period, divided by two.

4.6. Average rate per minute of fixed line communications

The second half of 2016 has seen a 11.4% drop in the ARPM of a FTM call¹², from €0.16 in the second half of 2015 to €0.14 in the current reporting period. This change coincides with increasing take-up of post-paid fixed telephony subscriptions in a bundle, which typically allow for a FTM call allowance, over and above other allowances for on-net and off-net FTF calls. Meanwhile, the ARPM for a FTI was unchanged at €0.09.

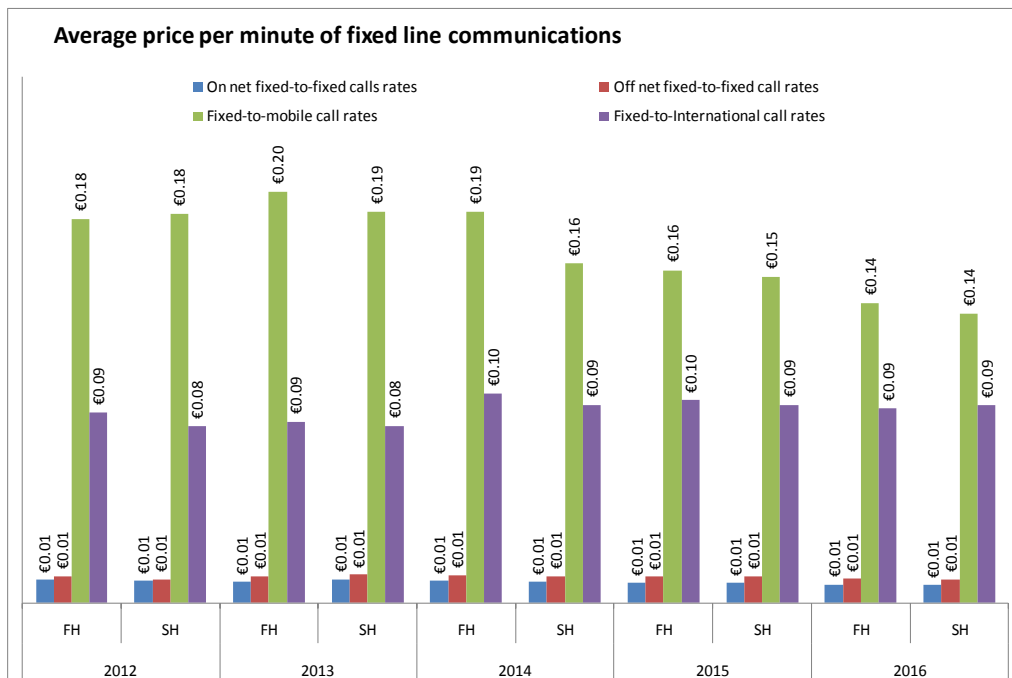


Figure 13: Average cost of a fixed line call derived from revenue-based workings

The ARPM of an on-net FTF call and an off-net FTF call stood at €0.01 in the second half of 2016, relatively unchanged from the corresponding rate observed in the second half of 2015.

Methodology used in deriving fixed ARPM figures

The average rate per minute of fixed line communications is derived by subdividing voice traffic revenues, but excluding revenues from access fees, VAT and excise tax, by the number of minutes reported under each respective heading.

Figures are to be interpreted with caution, as these are not the actual rates quoted on the market for the different plans and schemes launched by local operators. It is also noted that local fixed line operators may offer free calls or discounted call rates, such as free on-net calls with bundled offers and cheaper call rates on weekends. This would affect the outcome for the average rate per minute of fixed line communications.

¹² Workings do not take into account monthly access fees from fixed telephony plans and traffic volumes and revenues from free phone calls, premium calls and payphone calls.

5. Mobile telephony

Mobile telephony subscriptions continue to rise, with demand for voice and data services expanding rapidly in contrast to falling SMS traffic volumes. Year-on-year, the number of subscriptions was up by 6.3%, from 557,583 at the end of 2015 to 592,923 at the end of 2016. The continued growth in post-paid segment of the market contributed significantly to this increase. In fact, the number of post-paid subscriptions was up by 22,415 (or by 12.3%) during this period. Alongside this increase, local service providers reported that the pre-paid segment of the market saw a rise in the number of subscriptions, in this case by 12,925 (or by 3.4%). In view of these changes, the proportion of post-paid subscriptions to the local mobile subscriber base reached 34.5% by the end of 2016, up by 1.8 percentage points from a proportion of 32.7% a year earlier. The increase in subscriptions resulted in a higher mobile penetration rate, up from 128.4% at the end of 2015 to 135.1% at the end of last year¹³.

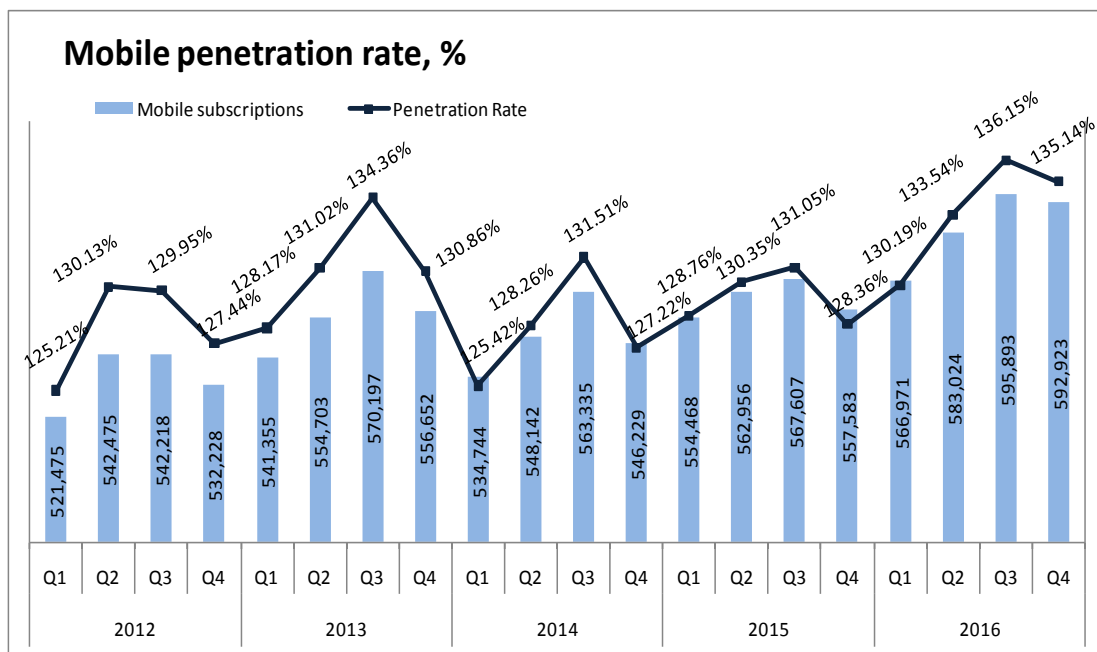


Figure 14: Mobile penetration in Malta

Despite the increase in mobile subscriptions, the proportion of these purchased in a bundle stood at just 10.2% by the end of 2016, relatively unchanged year-on-year. This reflects the prevailing preference of end-users to keep their mobile subscription as a personal service, as opposed to other electronic communications services that several people share in a particular household / business premises.

Mobile telephony has further consolidated its position as the most commonly used form of communication in Malta, with voice traffic and data volumes rising rapidly year-on-year. Upon comparing the second half of 2016 to the same period a year earlier, voice call minute volumes were up by 20.9 million (or by 5.3%). Meanwhile, text messaging was less utilised, as evidenced by the decline in SMS traffic volumes, which were down by 29.5 million (or by almost 13.0%). As already noted in previous CMR publications, these developments reflect the changes in the profile of the local mobile subscriber base and the evolution of consumer preferences. For example, the steady improvements in the minute and data allowances accompanying post-paid plans have actually enticed more end-users to opt for such products. With more consumers availing themselves of these improved minute allowances, voice calls got lengthier and text

¹³ The mobile penetration rate corresponds to the proportion of Malta’s population owning an active SIM card.

messaging got even less popular. In addition, the number of end-users actively using mobile broadband services surged in the current reporting period.

The increase in the number of end-users benefiting from minute allowances has contributed to the decline observed in the average rate per minute (ARPM) of mobile communication. In fact, the ARPM of mobile communication in the second half of 2016 stood at €0.076, which is down by 8.7% from €0.083 in the second half of 2015.

Given the above, the second half of 2016 experienced further fixed-to-mobile (FTM) substitution. The figure below clearly depicts a scenario of end-users increasingly making use of mobile voice calling rather than fixed line calling, also considering that people nowadays are getting increasingly on the move. Figure 15 illustrates that the number of mobile-originated voice call minutes has been exceeding the number of fixed-originated voice call minutes since 2013¹⁴. The gap between the two continued to widen in the period under review.

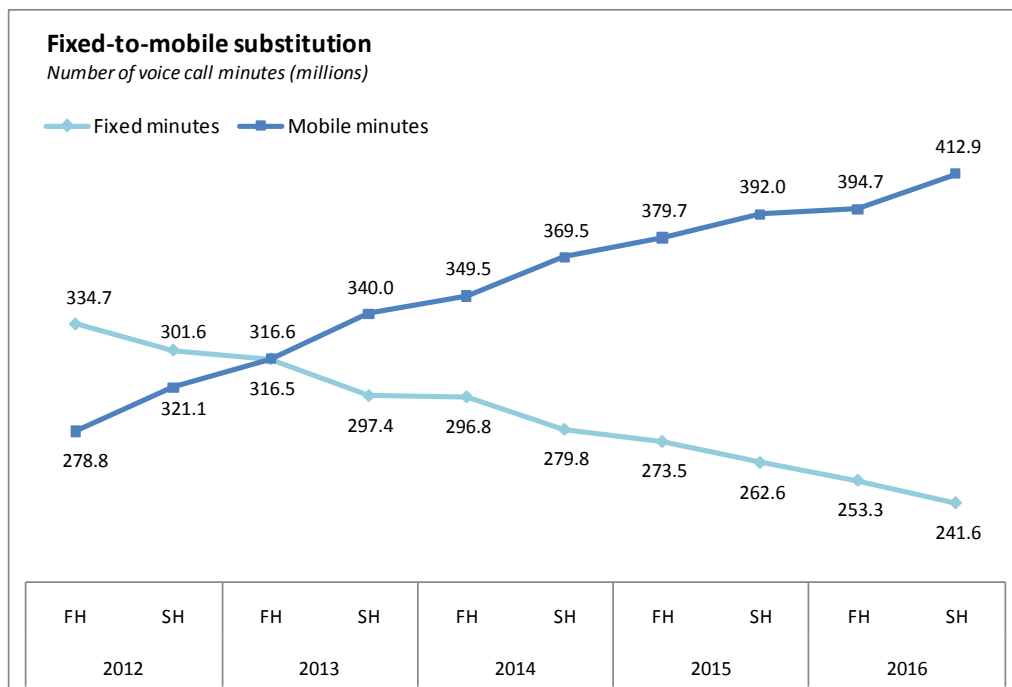


Figure 15: Fixed-to-mobile substitution

The positive trends in terms of take-up and improved voice minute traffic volumes did not however translate into improved ARPU levels for the sector. In fact, mobile telephony ARPU in the second half of 2016 were down by 3.2% to €89.69 from €92.66 in the second half of 2015. This is because of an increasing number of end-users spreading their expenditure on mobile services over multiple connections. This is happening alongside other market developments, such as where service providers improve minute and data allowances and thus reduce the rate per unit of consumption of these services.

¹⁴ It is also relevant to underline here that the number of mobile-originated voice calls has also been exceeding the number of fixed line-originated voice calls for the last few years.

5.1. Subscriptions

The number of active mobile subscriptions¹⁵ totalled 592,923 as at the end of 2016, up by 35,340 (or by 6.3%) from 557,583 a year earlier. The number of mobile subscriptions on a post-paid contract at the end of the current reporting period totalled 204,703. This figure corresponds to 34.5% of all mobile subscriptions registered at the time, up from almost 32.7% a year earlier. Meanwhile, the number of mobile subscriptions on pre-paid terms totalled 388,220 at the end of last year. This figure corresponds to 65.5% of the local mobile subscriber base, down from 67.3% a year earlier.

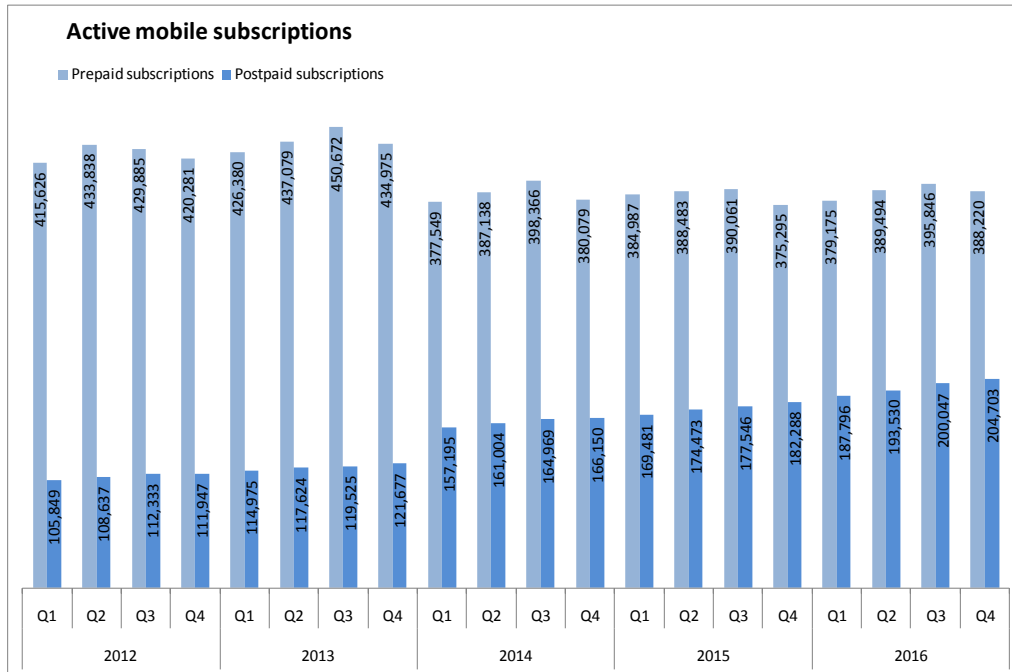


Figure 16: Mobile telephony subscriptions as at end of period

Subscriptions on a bundle

Table 9 illustrates that the number of mobile telephony subscriptions in a bundle went up by 2,239 (or by 4.1%) in the 12-month period to December 2016. The proportion of mobile subscriptions on a bundle stood at 9.7% at the end of the current reporting period. As already highlighted at an earlier stage, local end-users tend to prefer purchasing their mobile subscription on a stand-alone basis as a service for personal consumption, rather than as a service to be shared with other end-users.

¹⁵ The number of active mobile subscriptions refers to the number of subscribers having a MSISDN with registered inbound or outbound activity within 90 days of the period stipulated for pre-paid connections and within 30 days of the period stipulated for post-paid connections.

Mobile telephony subscriptions in a bundle	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Mobile telephony subscriptions on a dual play contract	12,738	13,567	12,156	12,443	13,427	11,112	8,985	7,850	7,502	7,258
Mobile telephony + fixed telephony	12,738	13,567	12,156	12,443	13,427	11,112	8,985	7,850	7,502	7,258
Mobile telephony subscriptions on a triple play contract	437	-	344	289	312	620	630	139	84	58
Mobile telephony + fixed telephony + fixed broadband	437	-	344	289	312	620	630	139	84	58
Mobile telephony subscriptions on a quad play contract	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Mobile telephony + fixed telephony + fixed broadband + pay TV	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Total number of mobile telephony subscriptions in a bundle	52,194	54,150	53,839	55,218	57,808	56,161	55,298	54,977	55,661	57,216
Number of mobile telephony subscriptions as at end of period	542,475	532,228	554,703	556,652	548,142	546,229	562,956	557,583	583,024	592,923
Percentage of mobile telephony subscriptions in a bundle	9.62%	10.17%	9.71%	9.92%	10.55%	10.28%	9.82%	9.86%	9.55%	9.65%

Table 9: Mobile subscriptions on a bundled offer¹⁶

5.2. Mobile inward portings

There were 15,625 mobile inward portings¹⁷ in the second half of 2016, down by 790 (or by 4.8%) compared to the second half of the previous year. This means that, on average, two out of every 100 subscribers have switched mobile operator in the current reporting period. As to the reason why there were less inward portings in the second half of 2016 compared to the second half of 2015, it is worth reiterating that this is not due to any problems with the switching procedure per se but rather the continued uptake of multiple mobile connections by end-users.

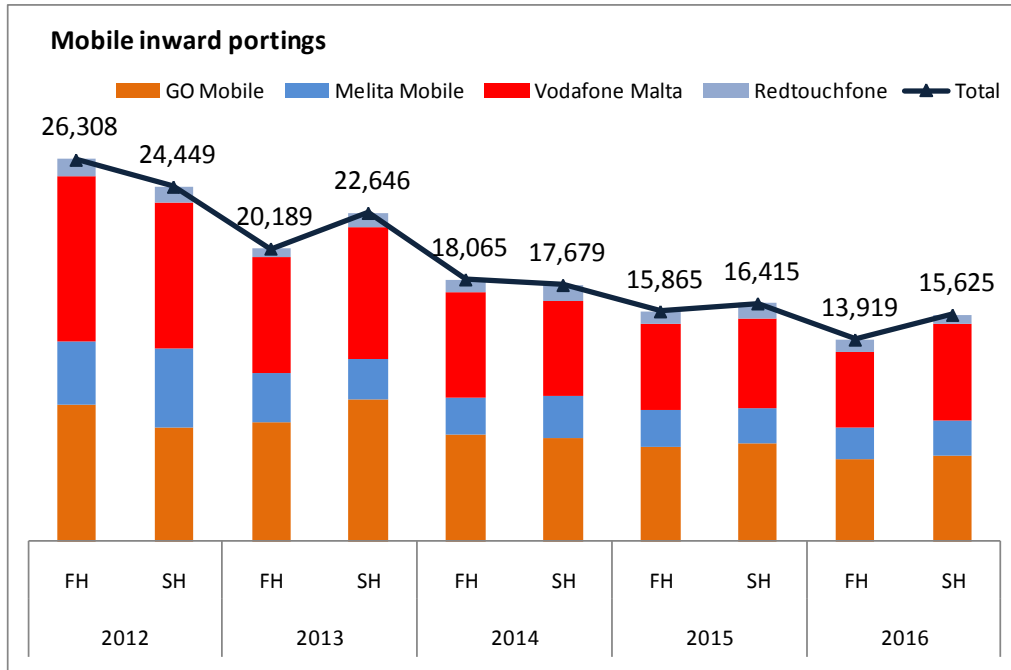


Figure 17: Mobile number portability - number of mobile portings

At an operator level, Vodafone Malta accounted for 42.4% of all mobile inward portings reported in the second half of 2016, closely followed by GO Mobile at 37.9% and Melita Mobile at 15.5%. Redtouchfone accounted for approximately 4.2% of all mobile inward portings reported in the period under consideration.

5.3. Usage trends for mobile telephony

Mobile voice traffic witnessed growth in the second half of 2016, with the number of voice calls and voice call minutes for this period exceeding that recorded in the second half of 2015. The trend in the current

¹⁶ See footnote 5, page 11.

¹⁷ This term corresponds to the total number of mobile users that switch their subscription from one operator to another, whilst keeping the same number. Figures presented above only take into account the number of mobile inward portings.

review period was also for end-users to make less use of SMS, as evidenced by declining traffic volumes for this service.

5.2.1 Voice calls

The number of mobile voice calls in the second half of 2016 amounted to 26.3 million, which is up by 2.2 million (or by 0.8%) from 274.7 million in the second half of 2015.

Mobile voice calls	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Total	171,361,818	201,557,865	222,389,166	257,715,584	251,385,555	266,261,676	261,196,465	274,656,869	259,931,283	276,870,488
Mobile-to-mobile (MTM)	150,010,581	179,111,283	201,047,159	233,211,255	229,218,248	242,622,349	237,813,657	248,146,406	236,647,482	248,321,306
on-net MTM	100,014,801	126,798,175	148,799,681	178,674,543	174,288,807	183,103,762	177,725,948	183,376,949	172,775,579	180,081,108
off-net MTM	49,995,780	52,313,108	52,247,478	54,536,712	54,929,441	59,518,587	60,087,709	64,769,457	63,871,903	68,240,198
Mobile-to-fixed (MTF)	18,228,588	19,564,658	17,824,243	20,452,242	18,443,136	19,163,833	19,176,332	20,336,816	19,340,803	23,176,213
Mobile-to-international (MTI)	3,122,650	2,881,924	3,517,764	4,052,087	3,724,171	4,475,494	4,206,476	6,173,647	3,942,998	5,372,969

Table 10: Outgoing mobile traffic - number of voice calls

This increase came on the back of a larger number of (i) off-net mobile-to-mobile (MTM) calls; and (ii) mobile-to-fixed (MTF) calls. Volumes were up by 3.5 million (or by 5.4%) for the former type of calls and by 2.8 million (or by 14.0%) for the latter type. These increases outweighed a fall in the number of on-net MTM calls and a fall in the number of mobile-to-international (MTI) calls. The number of on-net MTM calls was down by 3.3 million (or by 1.8%) and the number of MTI calls was down by 0.8 million (or by 13.0%).

5.2.2 Voice call minutes

Call minute volumes were higher in the current reporting period when compared to the same period a year earlier. An increase in volumes materialised across all voice traffic segments, except for the international element.

The number of mobile voice call minutes totalled 412.9 million in the second half of 2016, up by 20.9 million (or by almost 5.3%) from 392.0 million in the second half of 2015.

Mobile voice call minutes	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Total	278,778,213	301,626,037	316,595,055	339,975,169	349,449,383	369,508,631	379,645,131	391,996,179	394,663,889	412,929,157
Mobile-to-mobile (MTM)	237,380,477	256,368,562	271,614,107	291,904,514	302,343,734	318,839,211	328,242,026	332,491,267	342,331,655	355,826,664
on-net MTM	175,051,399	192,040,781	205,020,567	219,863,900	224,440,686	231,550,138	234,871,600	234,096,857	235,093,966	240,856,728
off-net MTM	62,329,077	64,327,781	66,593,540	72,040,614	77,903,048	87,289,073	93,370,425	98,394,410	107,237,689	114,969,936
Mobile-to-fixed (MTF)	33,264,802	35,650,809	36,001,708	38,029,700	37,279,753	39,565,696	39,894,002	42,412,245	41,464,160	44,120,924
Mobile-to-international (MTI)	8,132,934	9,606,666	8,979,240	10,040,955	9,825,896	11,103,724	11,509,103	17,092,667	10,868,074	12,981,569

Table 11: Outgoing mobile traffic - number of voice call minutes

Disaggregating this increase by the type of traffic shows that on-net MTM minutes were up by 6.8 million (or by 2.9%); off-net MTM minutes were up by 16.6 million (or by 16.9%); MTF minutes were up by 1.7 million (or by 4.0%). In contrast, the number of MTI minutes was down by 4.1 million (or by 24.1%).

5.4. SMS and MMS activity levels

In line with long-term market trends, SMS traffic volumes maintained their downward trajectory, with volumes recorded in the second half of 2016 lower than recorded during the same period in 2015. Meanwhile, MMS activity in the second half of 2016 was slightly higher than reported in the corresponding period a year earlier.

5.4.1 SMS traffic volumes

The number of outgoing text messages totalled 198.1 million in the second half of this year, down by 29.5 million (or by 13.0%) from 227.7 million in the same period of 2015¹⁸.

This development is again mainly attributable to a large drop in the number of on-net SMSs, although other traffic segments registered declines as well.

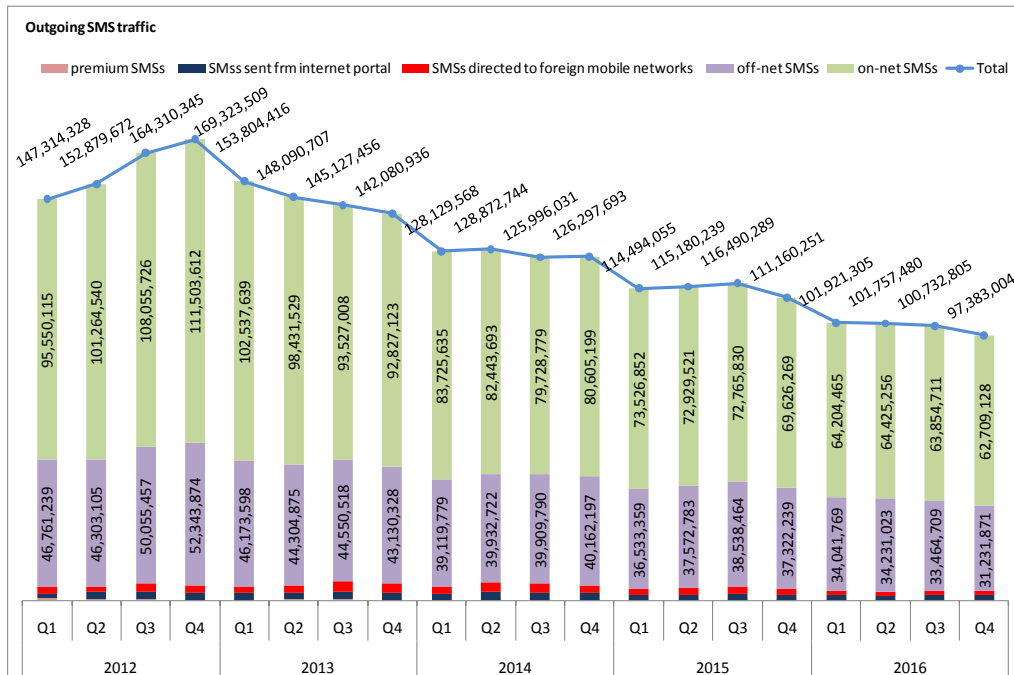


Figure 18: SMS activity - number of outgoing SMSs (1)

The number of on-net SMSs in the second half of 2016 totalled 126.6 million, down by 15.8 million (or by 11.1%) from 142.4 million in the second half of 2015. Meanwhile, the number of off-net SMSs was down by 11.2 million (or by 14.7%) from 75.9 million to 64.7 million and the number of premium SMSs declined by 0.02 million (or by 10.0%).

¹⁸ Including on-net SMSs, off-net SMSs, SMSs sent to foreign mobile networks, SMSs sent from Internet Portal and premium SMSs.

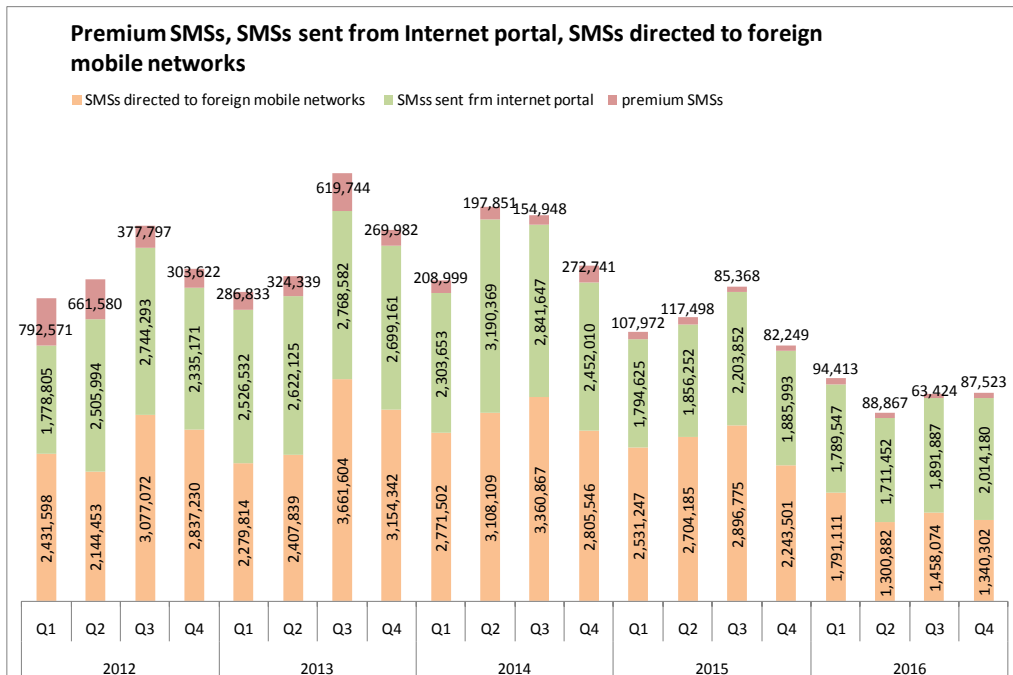


Figure 19: SMS activity - number of outgoing SMSs (2)

Other volume declines were recorded for SMSs directed to foreign mobile networks and SMSs sent from Internet portals. The former was down by 2.3 million (or by 45.6%), from 5.1 million in the second half of 2015 to 2.8 million in the second half of 2016. At the same time, the latter traffic segment was down by 0.2 million (or by 4.5%), from 4.1 million to 3.9 million.

5.4.2 MMS traffic volumes

The number of MMSs in the second half of this totalled 96,177. This figure is up by 13,095 (or by 15.8%) from 83,082 MMSs recorded in the second half of 2015.

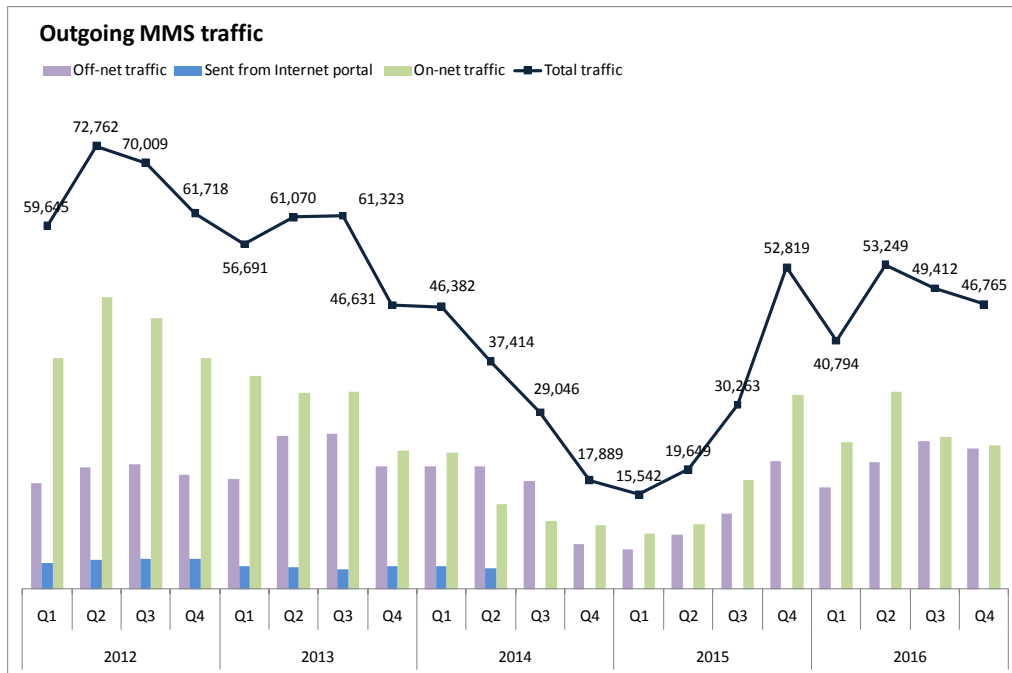


Figure 20: MMS activity - number of outgoing MMSs

5.5. Activity levels per mobile subscription

Developments in activity levels per mobile subscription depend on the rate of growth in traffic volumes and the change in the number of subscriptions.

5.5.1 Voice call activity levels per subscription

During the second half of 2016, mobile telephony subscriptions and mobile voice traffic volumes were on the rise. Growth in voice call minutes outpaced growth in subscriber numbers. Hence, the number of voice call minutes per subscription was up from 700 in the second half of 2015 to 702 in the second half of 2016.

On-net traffic continues to represent the largest portion activity recorded by the sector. However, the average number of on-net voice call minutes per subscription was down from 418 in the second half of 2015 to 410 in the second half of 2016. MTI voice minute activity levels were also down, from an average of 31 per subscription in the second half of 2015 to an average of 22 in the second half of 2016.

Meanwhile, gains in voice minute activity levels for the off-net MTM segment outweighed the above-mentioned declines. The average number of off-net MTM voice call minutes per subscription was up from 176 to 196. Meanwhile, the average number of MTF voice call minutes per subscription was relatively unchanged at 75.

Comparing activity levels in terms of the number of voice calls shows that average traffic per subscription was lower in the second half of 2016 compared to the same period a year earlier. This is because the rate of growth in terms of mobile subscriptions in the current review period exceeded the rate of growth for voice call traffic. Disaggregating the trends by traffic segment shows a drop in activity levels for on-net MTM and MTI traffic, in contrast to a gain in activity levels for off-net MTM and MTF traffic. This is most likely a result of an increasing number of post-paid subscriptions with more favourable allowances for the latter types of calls. The corresponding figures are presented in the chart below.

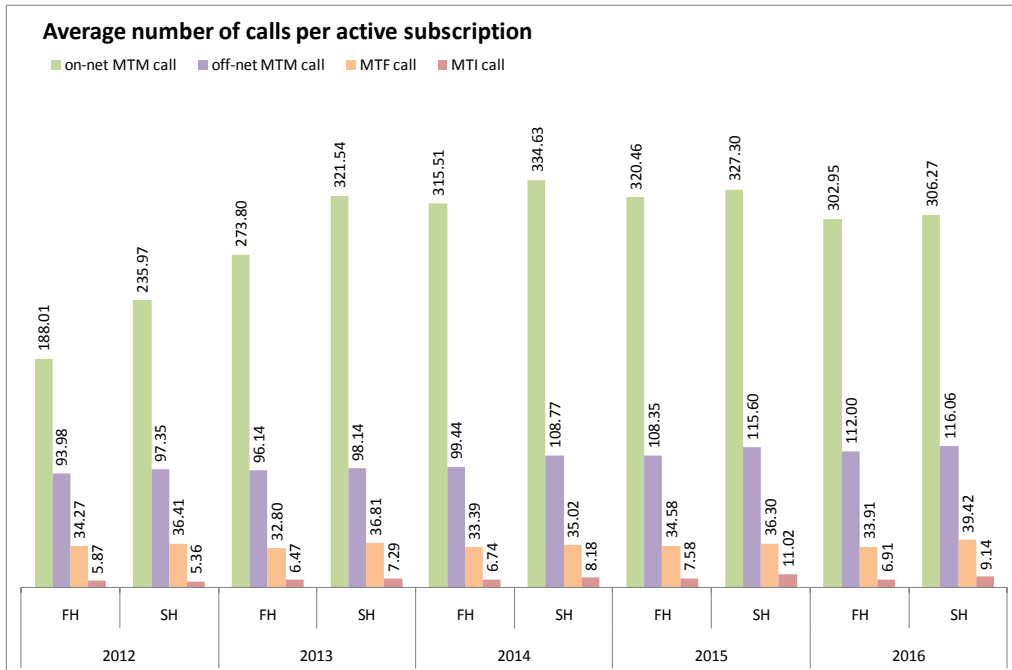


Figure 21: Average number of calls per active subscription

5.5.2 SMS activity levels per subscription

As already highlighted at an earlier stage, SMS traffic volumes in the second half of 2016 were down considerably when compared to volumes reported in the same period a year earlier. In combination with the increase in the number of mobile subscriptions, the decline in SMS traffic volumes resulted in lower activity levels per subscriber for this type of traffic.

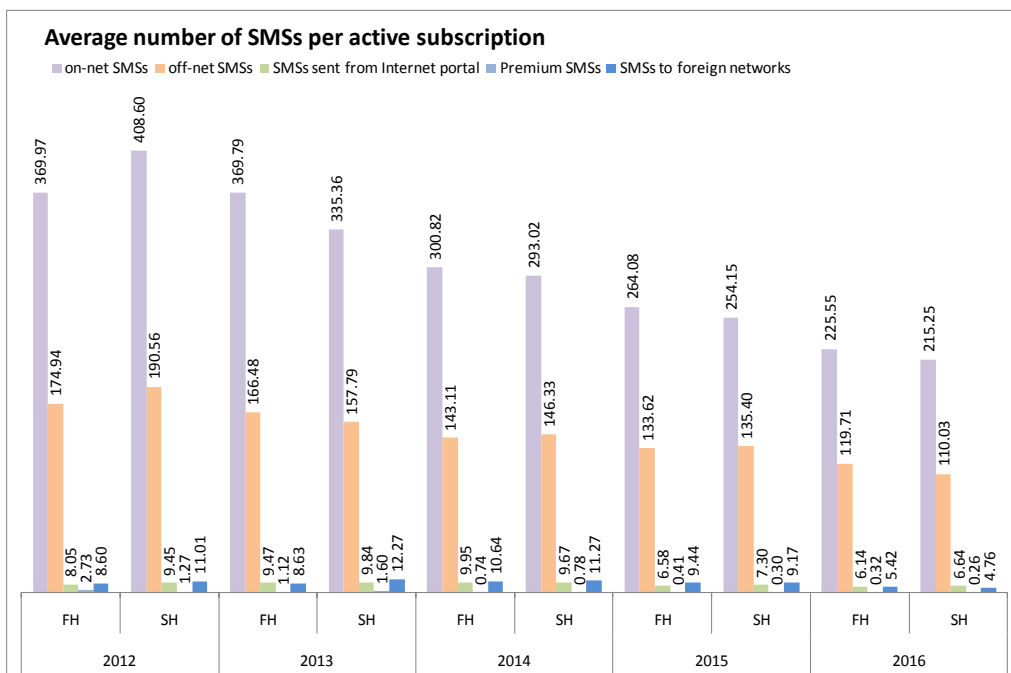


Figure 22: Subscriber activity - average number of SMSs per active subscription

In fact, the number of SMSs per active subscription in the second half of 2016 amounted to 337, notably down from 406 in the second half of 2015. Figure 22 illustrates that each SMS traffic segment registered a fall in activity levels.

As already observed in previous publications, this development mainly reflects the ongoing increase in usage of mobile voice services as opposed to a falling use of texting services. This is in part due to the improved availability of minute allowances and the increasing popularity of social networking platforms and OTT services.

5.6. Average mobile call duration

As minute allowances improve and mobile call rates decline, a mobile-originated voice call would most likely last longer, as latest trends seem to suggest. Nevertheless, such iteration is not always straightforward given that there are various factors at play, particularly in a market where service providers constantly launch new offers and promotional discounts to enhance take-up and usage, which may influence pricing outcomes and consumer preferences. For example, cheaper call rates and free minute allowances may entice end-users to substitute SMSs with on-net MTM voice calls that are of a shorter duration.

Overall, average mobile call duration in the second half of 2016 was 1.49 minutes (or approximately 89 seconds), slightly lengthier to what has been reported for the second half of 2015, at 1.43 minutes (or approximately 86 seconds).

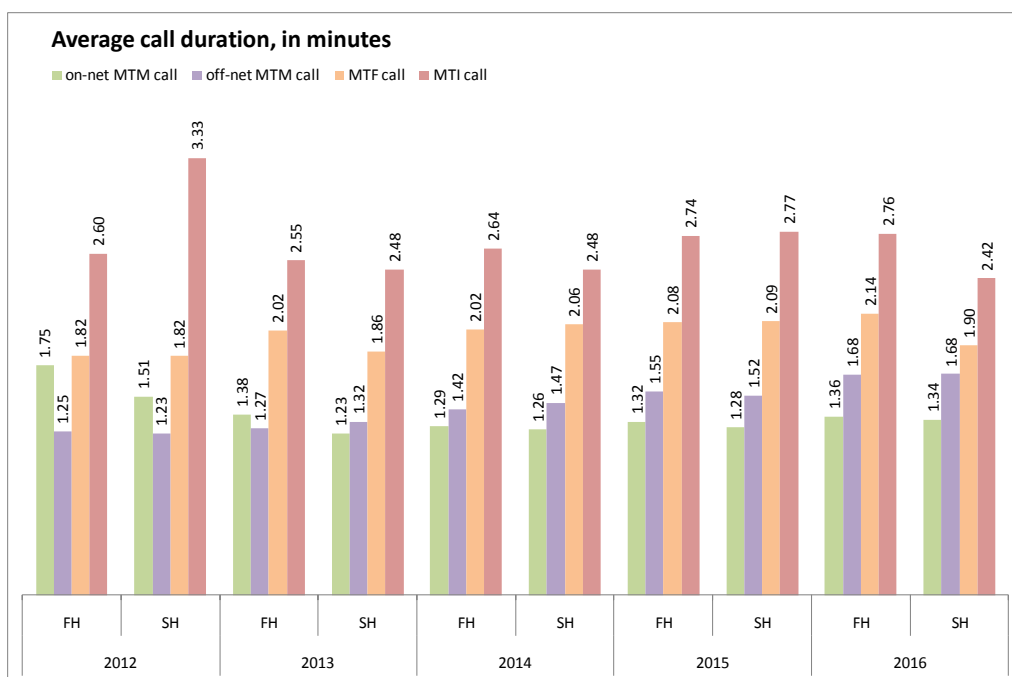


Figure 23: Average duration of an outgoing mobile call

This result is in line with the trends observed over the last few years, mainly that the wider availability of minute allowances, and their respective impact on the average rate per minute of mobile communications, contribute to longer calls and lower use of SMS.

5.7. International roaming activity levels

The level of international roaming activity¹⁹ depends on two main factors, namely the frequency and pattern of travel by end-users and the relative roaming charges that apply for calls and SMSs. It is of relevance to underline here that Malta continues to experience a consistently higher inflow and outflow of tourists. Meanwhile, the number of Maltese travelling abroad is also on the rise. These trends coincided with a period of falling roaming charges, both in the case of voice calls and text messaging.

5.7.1 Outbound roaming activity

This type of roaming activity refers to voice call, SMS, and data services operated on foreign mobile networks by local subscribers when roaming abroad.

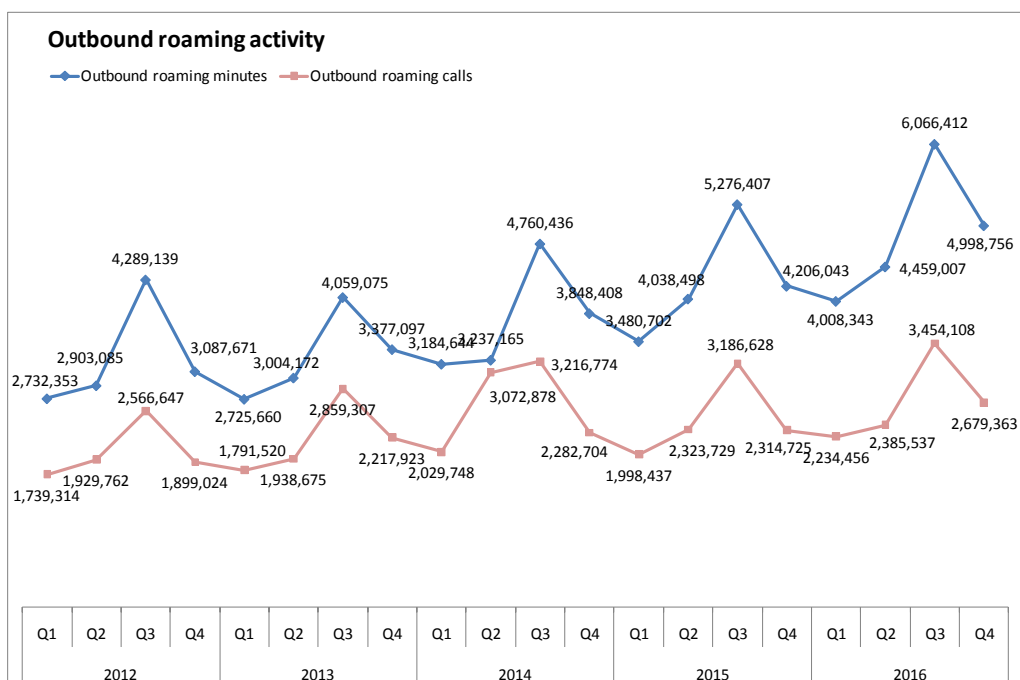


Figure 24: Outbound roaming activity

The number of outbound roaming calls totalled 6.1 million in the second half of 2016, up 11.5% from 5.5 million in the second half of last year. Meanwhile, the number of outbound roaming minutes in the second half of 2016 totalled 11.1 million, up by 1.6 million (or by 16.7%), from 9.5 million in the second half of 2015. These developments are a result of more people travelling abroad and the implementation of lower roaming call charges. The fall in roaming call charges enticed mobile end-users to make more and lengthier calls whilst travelling.

¹⁹ From a technical perspective, international roaming encompasses any activity registered by mobile subscribers whilst travelling abroad. In this regard, end-users would be using voice-roaming services when making or receiving calls via their mobile subscription while abroad. They would be using SMS roaming services when sending or receiving an SMS via their mobile subscriptions. End-users can also send or receive data while abroad over their mobile.

Data for inbound and outbound roaming calls is currently under review and subject to revisions.

5.7.2 Inbound roaming activity

This type of roaming activity refers to call, SMS and data services operated on local mobile networks by foreign subscribers when roaming in Malta.

The number of inbound roaming calls totalled 20.1 million in the second half of 2016, which is down by 0.8 million (or by 3.8%) from 20.9 million in the corresponding period a year earlier. This is again most likely a result of the decline in roaming call charges, which enticed end-users to make lengthier calls whilst travelling abroad rather than a larger number of calls with a short duration.

This is confirmed by figures observed for inbound roaming activity in terms of voice traffic minutes.

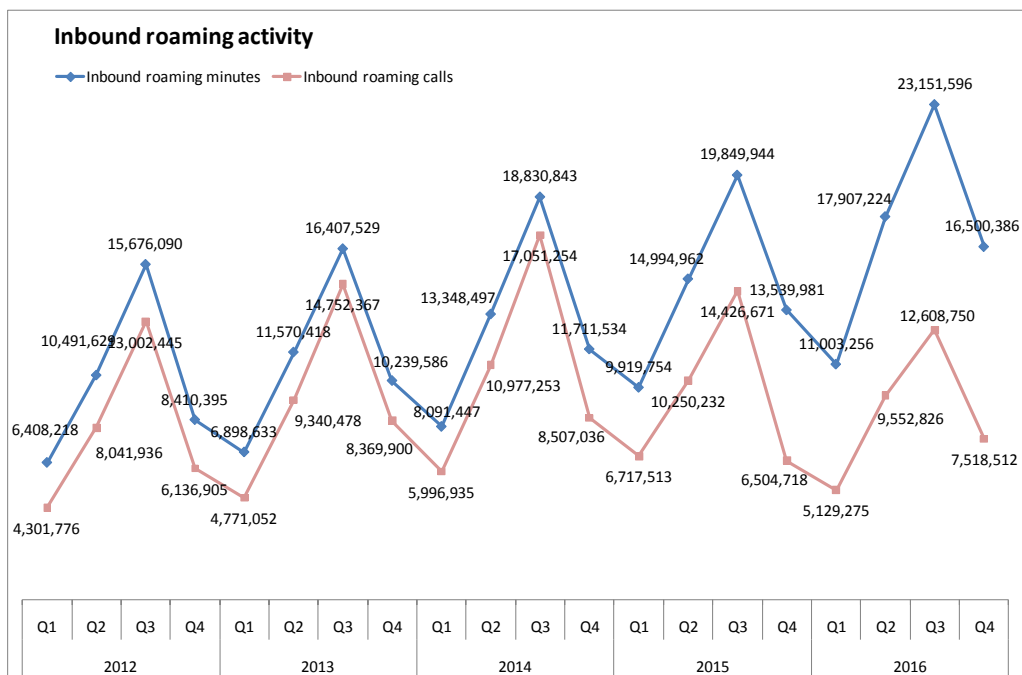


Figure 25: Inbound roaming activity

In fact, the number of inbound roaming minutes went up by 6.3 million (or by 18.8%), from 33.4 million in the second half of 2015 to 39.7 million in the second half of last year.

5.8. Mobile ARPU

The ARPU levels for mobile telephony are seasonal in nature, as amply demonstrated in Figure 26 below, with ARPU for the second half of the year typically better than that recorded in the first half. The average revenue per user (ARPU) in the mobile sector for the second half of 2016 stood at €89.69, which is down by 3.2% from €92.66 in the second half of 2015.

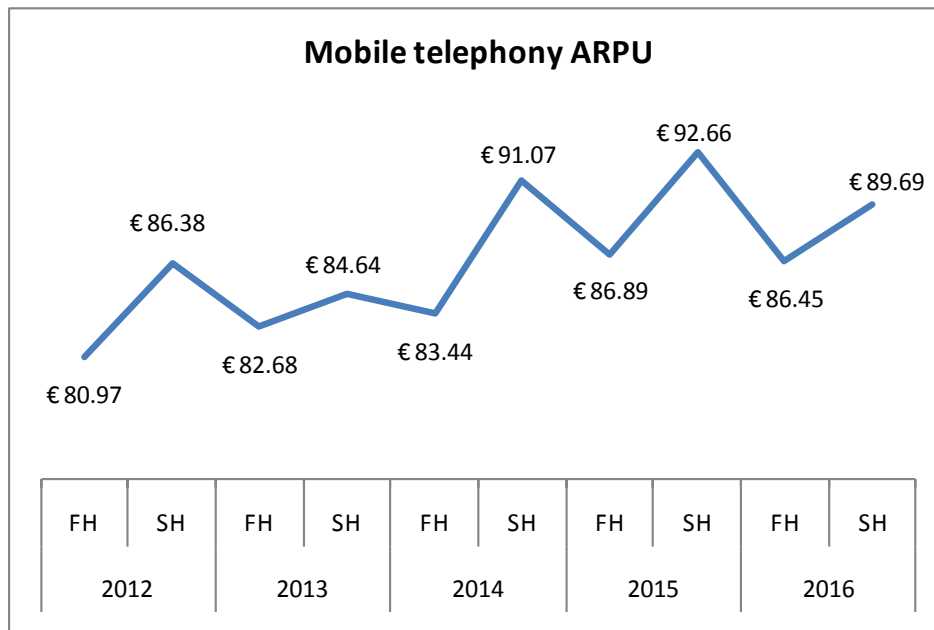


Figure 26: Average revenue per mobile user

This decline in average revenue per mobile user may be attributed to the continued increase in the number of end-users having multiple mobile subscriptions and the possibility of these end-users spreading their usage of mobile voice, SMS and data services across several subscriptions. In addition, the improved voice minute and data bundles somewhat contribute to the decline in mobile ARPU.

Methodology used in deriving mobile ARPU figures

Mobile ARPU figures are derived by dividing total revenues of service providers by the average number of active subscriptions, during a given period.

The 'total revenues' heading includes a number of retail revenue elements, namely:

1. revenues from all outgoing voice activity (excluding interconnection revenues);
2. revenues from SMS and MMS activity;
3. revenues from monthly access fees;
4. revenues from data services; and
5. revenues from outbound roaming activity (but excl. revenues from inbound roaming activity).

The average number of active subscribers during a given period is derived by adding the number of active subscriptions at the start of the period plus the number of subscriptions at the end of the said period, divided by two.

5.9. Pricing developments for mobile telephony

The continued shift observed from pre-paid to post-paid subscriptions goes to show that consumer preferences keep changing, underscored by strong substitution from fixed to mobile voice services and the accelerating demand for mobile data.

Although it remains difficult to determine the exact price paid by the end-user to make a mobile voice call and / or to send an SMS, an overall pattern of falling average rates for these services has been observed in recent years as depicted in the charts below²⁰.

²⁰ The MCA carries out a regular exercise to calculate the average rate per minute of mobile voice call services and the average rate per SMS. In the former case, figures are derived by dividing domestic and international mobile voice traffic revenues (including voice related access revenues but excluding roaming revenues), by the number of minutes reported under each respective heading. In the latter case, figures correspond to the division of SMS-related revenues by the number of SMSs made during the period.

Developments in the second half of 2016 have remained consistent with this trend. Figure 27 shows that the average rate per minute of mobile communication for a domestic call stood at €0.076 in the second half of 2016, down by 8.4% from €0.083 in the second half of 2015²¹.

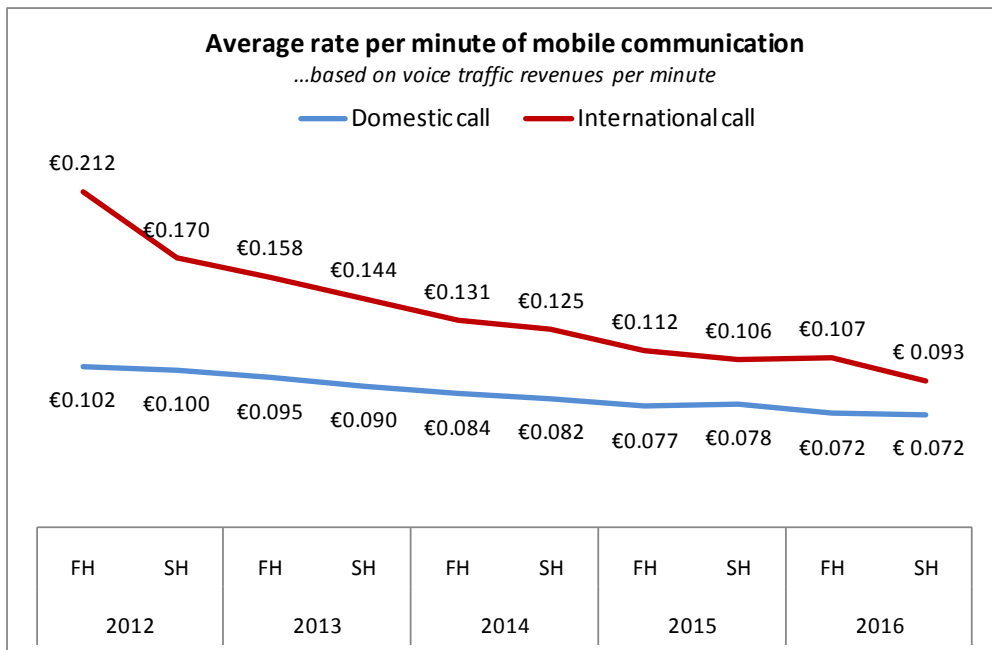


Figure 27: Average rate per minute of mobile communications

Meanwhile, the average rate per minute of mobile communication for an international call over the mobile network was also down, this time by 12.3%, from €0.106 in the second half of 2015 to €0.093 in the second half of 2016.

In these calculations, revenues from VAT, excise tax, and retail roaming services are excluded.

²¹ It is again noted here that local mobile operators may offer free calls or discounted call rates, such as on weekends and evenings, and also in the case of particular schemes for closed user groups and bundled products. However, the current calculations do not take these factors into account.

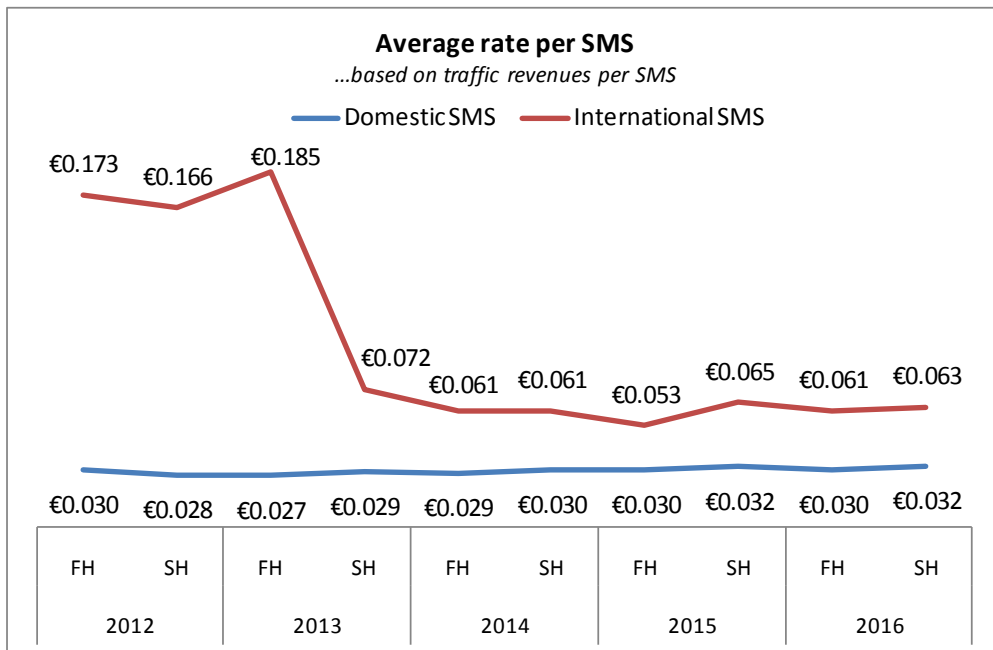


Figure 28: Average rate per domestic and international SMS

In terms of the average rate per SMS, Figure 28 illustrates that, in the second half of 2016, the consumer on average paid €0.032 for a domestically bound SMS and €0.063 for an internationally bound SMS.

6. Fixed and mobile broadband

The fixed broadband sector continues to register positive results, with growing demand translating into higher revenues. Year-on-year, the number of subscriptions rose by almost 5.0% to reach 171,293 by the end of 2016. The fixed broadband penetration rate improved accordingly, from 37.6% at the end of 2015 to 39.0%, given that growth in subscriptions surpassed population growth.

Regarding the different download speeds currently on offer in Malta, take-up of subscriptions supporting superfast download speeds (i.e. download speeds of 30Mbps or more) remains very strong. The number of connections with superfast download speeds outnumbered the number of connections with lower speeds in 2014. This trend consolidated further in the second half of 2016, with the number of subscriptions supporting download speed of 30Mbps or more totalling 101,755 by the end of last year, which corresponds to 59.4% of the local fixed broadband subscriber base²². In absolute terms, the number of fixed broadband subscriptions supporting download speeds of 30Mbps or more was up by 3,822 (or by 3.9%) year-on-year.

The number of fixed broadband subscriptions purchased in a bundle also increased steadily in the second half of 2016. Compared with the end of 2015, the proportion of fixed broadband subscriptions purchased in a bundle to the total fixed broadband subscriber base recorded at the end of last December was up by 5.6 percentage points, from 73.1% to 78.7%. For the end-user, the purchase of a fixed broadband subscription in a bundle typically helps in reducing the monthly access fees that he/she would incur with purchasing the service on a stand-alone basis. This is because local service providers offer bundled packages including fixed broadband at a discount, also in the form of lower set-up charges and / or lower rental fees for equipment when signing up for bundled packages. This explains why fixed broadband is the service that is most purchased in a bundle when compared to other services.

Another important trend observed for fixed broadband is the continued decline in the average rate per Mbps, in particular for products supporting superfast download speeds. This decline in the average rate per Mbps indicates a more competitive cost-to-quality relationship for the consumer, in particular when opting for offers supporting superfast download speeds. The average rate per Mbps in the second half of 2016 stood at €1.04, down by around 26.3% from €1.52 in the second half of 2015²³.

Despite the reported decline in the average rate per Mbps and the increase in the number of fixed broadband subscriptions purchased in a bundle, stronger take-up of superfast fixed broadband products in the second half of 2016 boosted the average revenue per fixed broadband subscription. Fixed broadband ARPU in the second half of 2016 stood at €103.16, which is up by 13.0% from €91.27 in the second half of 2015.

The second half of 2016 also registered a strong increase in the uptake of mobile broadband services. The underlying factors driving this positive change remain the wider availability of smartphones and other mobile devices and improved mobile broadband plans and data allowances, which all contribute to a better experience for end-users when using mobile data services. There were around 308,829 end-users actively using mobile broadband services at the end of last year, up by 14.4% from 286,444 a year earlier.

²² Reference is to 'headline' (or 'advertised') download speeds.

²³ These figures vary from those quoted further down below given that they refer to the average rate per Mbps for the whole six-month period under review rather than the average rate per Mbps at the end of the reference period.

6.1. Fixed broadband subscriptions

The number of fixed broadband subscriptions totalled 171,293 at the end of 2016. This figure is up by 8,088 (or by 5.0%) from 163,205 fixed broadband subscriptions recorded at the end of 2015²⁴.

The number of fixed broadband subscriptions recorded at the end of last year equates to a fixed broadband penetration rate of 37.9%, an increase of 0.9 percentage points since the end of 2015.

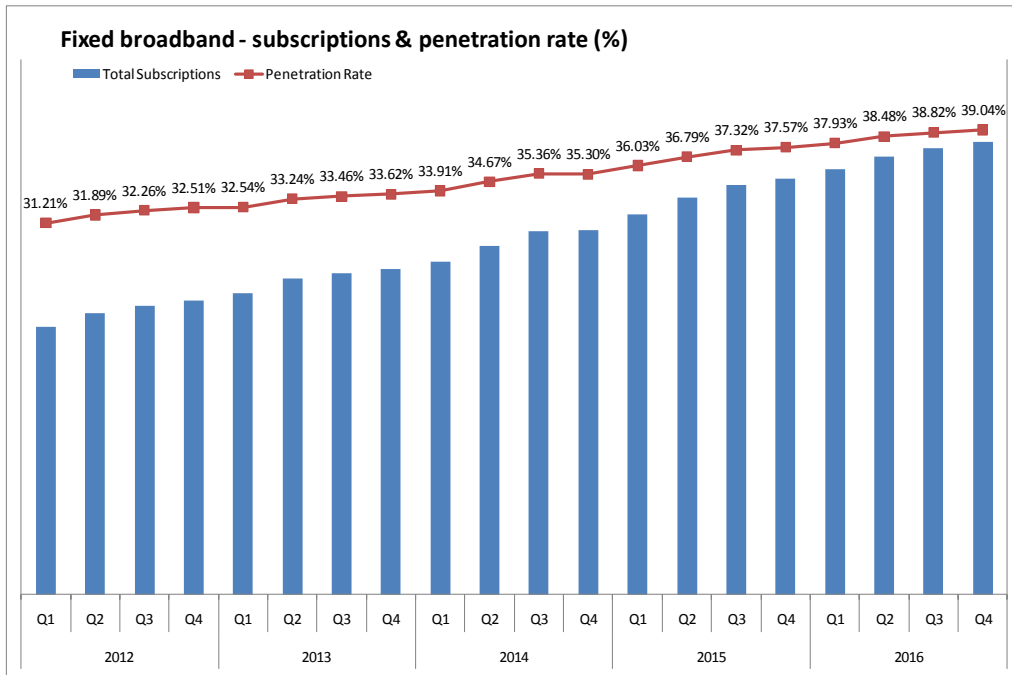


Figure 29: Take-up of fixed broadband and fixed broadband penetration

Fixed broadband subscriptions in a bundle	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Fixed broadband subscriptions on a dual play contract	6,222	9,653	10,068	11,349	15,979	29,890	36,927	44,179	49,622	54,415
Fixed broadband + fixed telephony	6,222	9,653	10,068	11,349	15,979	29,890	36,927	44,179	49,622	54,415
Fixed broadband subscriptions on a triple play contract	9,802	9,794	15,459	21,376	22,477	25,490	26,718	27,525	28,613	30,540
Fixed broadband + fixed telephony + mobile telephony	437	-	344	289	312	620	630	139	84	58
Fixed broadband + fixed telephony + pay TV	9,365	9,794	15,115	21,087	22,165	24,870	26,088	27,386	28,529	30,482
Fixed broadband subscriptions on a quad play contract	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Fixed broadband + fixed telephony + pay TV + mobile telephony	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Total number of fixed broadband subscriptions in a bundle	55,043	60,030	66,866	75,211	82,525	99,809	109,328	118,692	126,310	134,855
Number of fixed broadband subscriptions as at end of period	132,921	135,758	140,711	143,010	148,175	151,557	158,869	163,205	168,008	171,293
Percentage of fixed broadband subscriptions in a bundle	41.41%	44.22%	47.52%	52.59%	55.69%	65.86%	68.82%	72.73%	75.18%	78.73%

Table 12: Fixed broadband subscriptions on a bundled offer

The take-up of fixed broadband subscriptions in bundled packages has also seen a rapid increase, with fixed broadband featuring as the product that is mostly purchased in a bundle from amongst other electronic communications services. In this regard, the number of fixed broadband subscriptions purchased in combination with some other electronic communications service on a bundle totalled 134,855 at the end of the current review period. The latter figure is equivalent to 78.7% of all fixed broadband subscriptions recorded at the time, which represents an increase of 6.0 percentage points over a 12-month period.

²⁴ For the purpose of this report, fixed broadband Internet subscriptions refer to those connections that are *always on* and have a speed of 128kbps or more.

6.2. Fixed broadband subscriptions by type of access technology

A breakdown of fixed broadband subscriptions by technology shows that there were 80,881 cable-based subscriptions at the end of 2016, marginally up by 131 (or by 0.2%) from 80,750 subscriptions a year earlier.

DSL-based subscriptions and FTTH-based subscriptions²⁵ totalled 75,738 and 9,504 respectively at the end of last year. The DSL subscriber base went up by 999 connections over a 12-month period since the end of 2015, whilst the subscriber base for FTTH registered an increase of 4,290 connections over the same period.

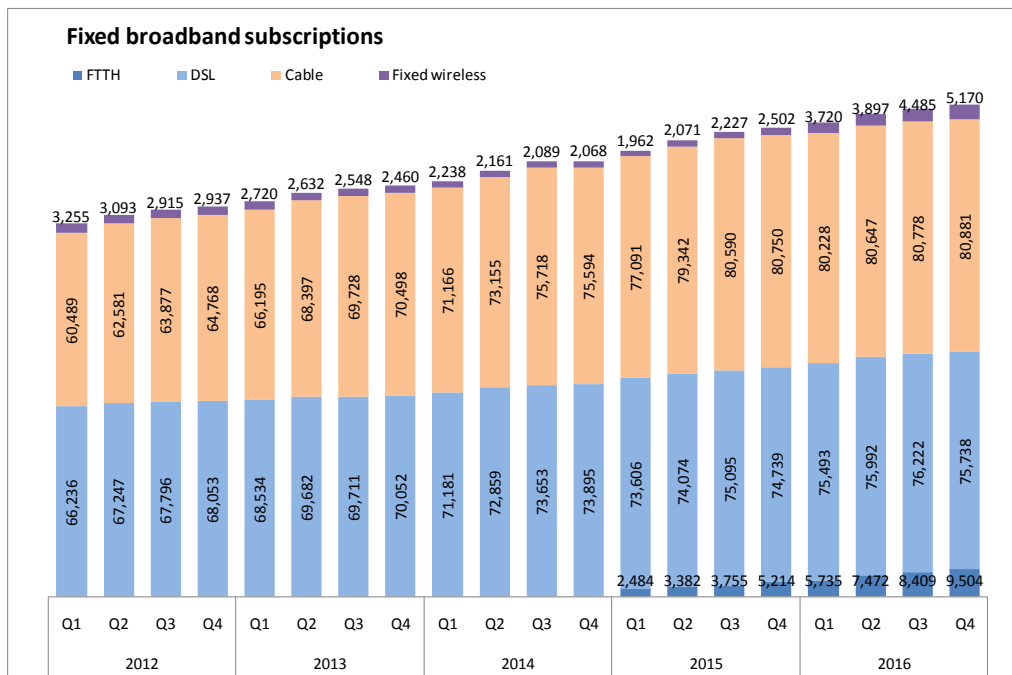


Figure 30: Broadband Internet subscriptions as at end of period - by technology

As for the number of fixed wireless connections, these totalled 5,170 at the end of year, up by 2,668 (or by 106.6%) from 2,502 a year earlier. This big change follows the launch of new fixed broadband products by Vodafone (Malta).

In view of the changes observed above, cable’s market share fell by 2.3 percentage points, from 49.5% at the end of 2015 to 47.2% at the end of the current reporting period. DSL also lost market share, in this case by 1.6 percentage points, from 45.8% to 44.2%.

In contrast, the market share of fixed wireless doubled from 1.5% to 3.0%, whilst that of FTTH improved by 2.4 percentage points, from 3.2% to 5.6%.

6.3. Fixed broadband subscriptions by speed²⁶

Take-up of fixed broadband continued to strengthen in the case of products supporting higher download speeds, specifically superfast fixed broadband products i.e. products supporting download speeds of 30Mbps or more.

²⁵ This is the second time that the MCA is reporting on FTTH-based subscriptions as a separate category of fixed broadband.

²⁶ Quoted figures refer to advertised speeds.

Figure 31 illustrates that the number of fixed broadband subscriptions supporting download speeds of less than 30Mbps at the end of 2016 totalled 69,538. This figure is up by 4,266 (or by 6.5%) year-on-year, mainly resulting from a big jump in subscriptions supporting download speeds of 20Mbps but less than 30Mbps.

Meanwhile, the number of fixed broadband subscriptions allowing for a download speed of 30Mbps but less than 100Mbps was down by 4,469 (or by 4.7%), from 95,663 to 91,194. This change materialised after a number of subscriptions within this download speed bracket upgraded to the 100Mbps option.

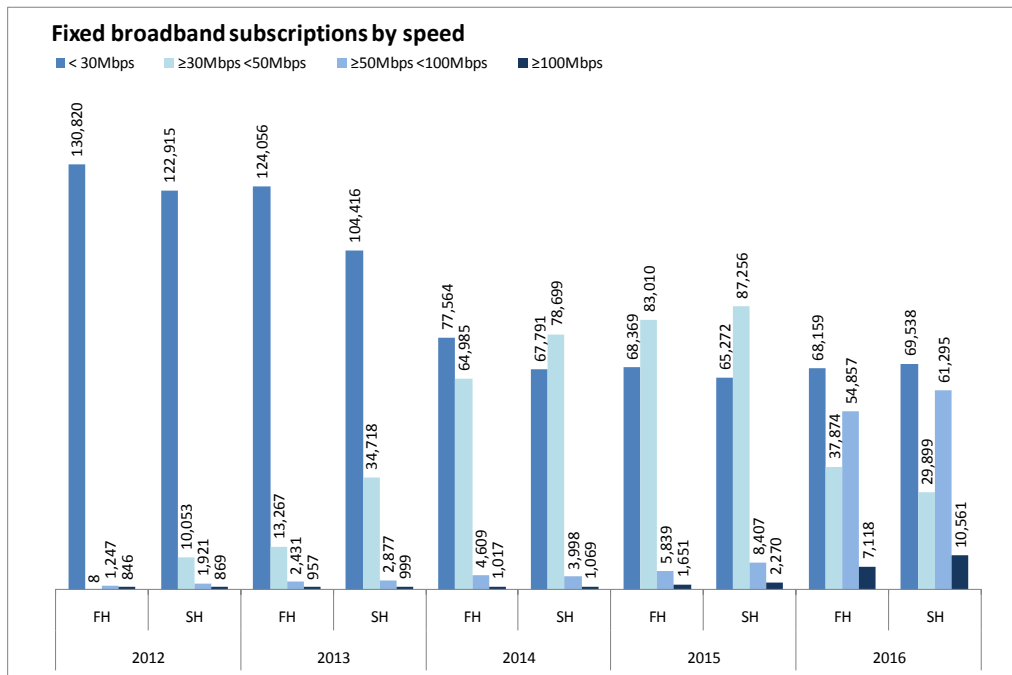


Figure 31: Fixed broadband subscriptions as at end of period, by speed

In fact, the number of fixed broadband subscriptions availing of a download speed of 100Mbps or more increased by 8,291 from 2,270 at the end of 2015 to 10,561 at the end of last year.

6.4. Fixed broadband subscriptions by access technology and download speed

This section provides an overview of how the local fixed broadband subscriber base stratifies in terms of access technology and downloads speed.

Regarding fixed wireless subscriptions reported at the end of 2016, 8.3% of the total allowed for a download speed of less than 20Mbps. The biggest chunk, at 91%, allowed for a download speed of 20Mbps but less than 30Mbps. Just 0.7% of all wireless fixed broadband connections supported superfast download speeds.

Meanwhile, with respect to DSL, 77.5% of all subscriptions on this technology platform allowed for a download speed of less than 30Mbps and 22.5% allowed for a download speed of 30Mbps but less than 50Mbps.

59.7% of all subscriptions registered under the FTTH platform allowed for a download speed of less than 30Mbps, 36.8% allowed for a download speed of 30Mbps but less than 100Mbps and 3.5% allowed for a download speed of 100Mbps or more.

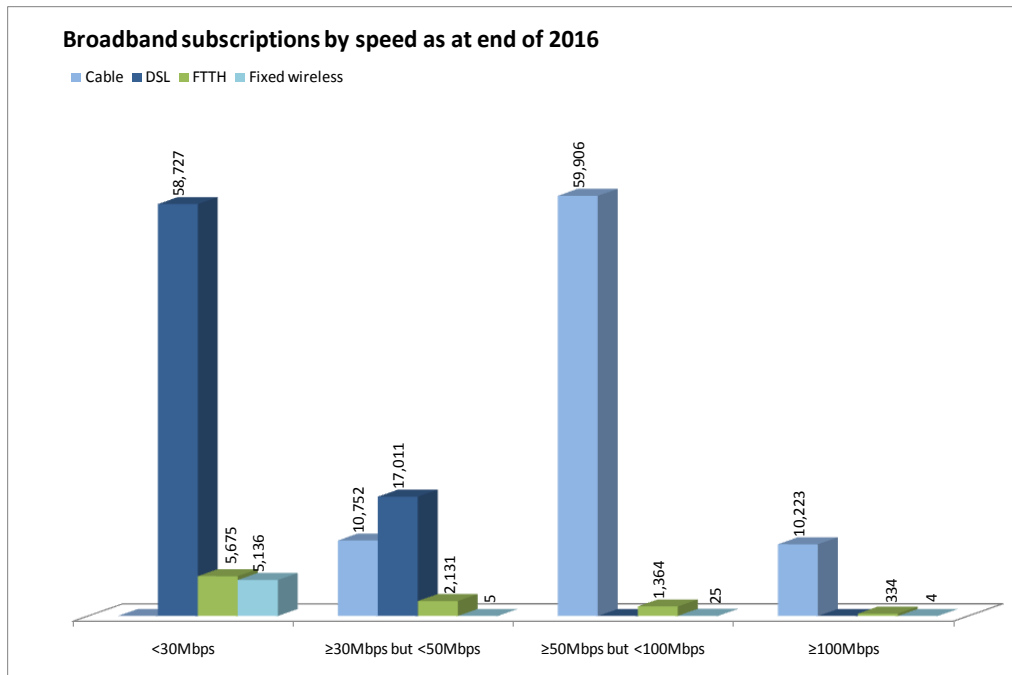


Figure 32: Broadband Internet subscriptions as at end of period - by technology & connection speed

With respect to cable-based fixed broadband subscriptions, Figure 32 illustrates that 13.3% of these allowed for a download speed of 30Mbps but less than 50Mbps, 74.1% allowed for a download speed of 50Mbps but less than 100Mbps and 12.6% allowed for a download speed of 100Mbps or more.

6.5. Fixed broadband ARPU

The average revenue per user (ARPU) for fixed broadband in the second half of 2016 stood at €103.16, up by 13.0% from €91.27 in the same period a year earlier.

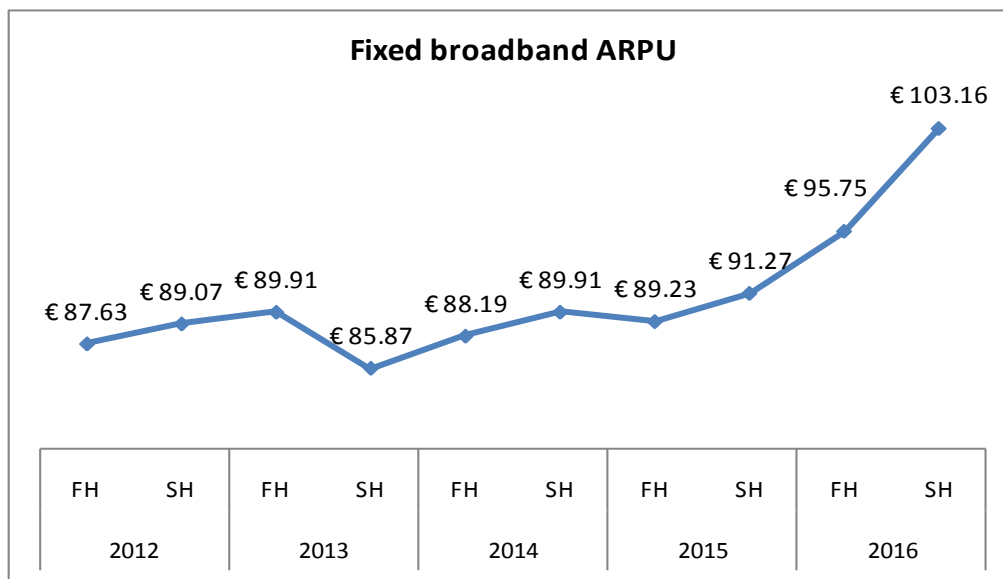


Figure 33: Average revenue per broadband user

This increase in ARPU reflects the ability of local service providers to build returns on their investment in Very Fast Connectivity (VFC) networks and the resulting healthy growth in take-up of fixed broadband connections supporting superfast download speeds. The increase in take-up of superfast fixed broadband connections enabled local service providers to get a higher premium on their sales, notwithstanding the growing number of end-users purchasing fixed broadband in bundled subscriptions and the promotional offers and discounts that come with bundled purchases.

Methodology used in deriving fixed broadband ARPU figures

ARPU for fixed broadband corresponds to the average half-yearly spend by end-users for data access and internet connectivity services provided over fixed access technology. The figures are derived by dividing the total retail revenues of service providers by the total number of subscriptions, during a given period.

The revenue element is composed of the total retail revenues from subscriptions to broadband services, excluding revenues from installation and connection fees.

The average total number of subscriptions takes the sum of the total subscriptions at the start and the end of the quarter under consideration divided by two.

6.6. Average rate per Mbps

The rate that Maltese consumers pay for bandwidth has gone down in the second half of 2016, in line with long-term market developments. An overall trend that emerges is that consumers pay an even lower rate per Mbps for products delivering faster download speeds compared to products delivering slower download speeds.

The average rate per Mbps in the second half of 2016 stood at €1.12, down by almost 26.3% when compared to an average rate of €1.52 in the second half of the previous year²⁷.

Shifting the focus to a specific point in time, namely to the end of 2016, Figure 34 illustrates that, in the case of products supporting download speeds of 10Mbps but less than 20Mbps, the average rate per Mbps was higher than the average rate recorded at the end of 2015. The corresponding rates are €1.54 at the end of 2015 and €1.78 at the end of last year.

On the other hand, the average rate per Mbps was lower for broadband products supporting download speeds of 30Mbps or more²⁸. On a more disaggregated level, the average rate per Mbps for products supporting download speeds of 30Mbps but less than 50Mbps was down by 13.3%, from €1.09 at the end of 2015 to €0.95 at the end of last year. Meanwhile, the average rate per Mbps for products supporting download speeds of 50Mbps but less than 100Mbps fell by 17.9%, from €0.73 to €0.60. Even in the case of broadband products supporting a download speed of 100Mbps or more, the average rate per Mbps was down, this time by 38.3%, from €0.83 to €0.39.

The changes highlighted above mainly reflect the updates in product line-up of the largest service providers in the market, namely GO and Melita, and the launch of a new broadband product by Vodafone. New plans typically featured download speeds of 30Mbps or more. Meanwhile, the second half of 2016 marked a downward adjustment in the monthly access fees for plans supporting speeds of download 50Mbps or more. The introduction of new dual play offers with superfast download speeds further contributed to the fall in the average rate per Mbps.

²⁷ The average rate per Mbps calculation in this report takes into account fixed broadband offers on a stand-alone subscription or on dual play bundled packages.

²⁸ Plans not available nationwide do not feature in this category for the purposes of deriving the average rate per Mbps.

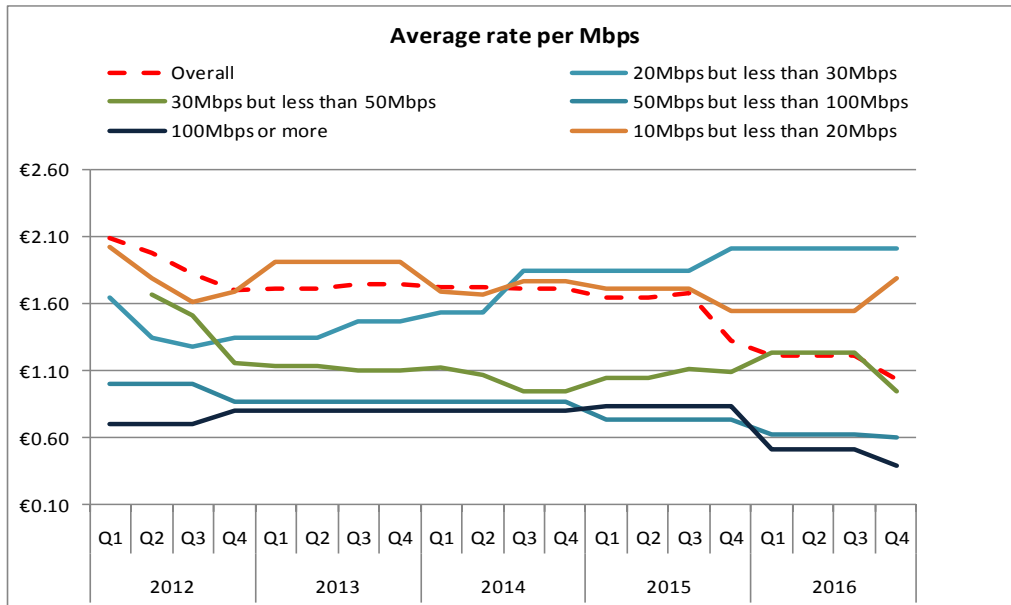


Figure 34: Average price per Mbps of fixed broadband for packages

There has been no change in the average rate per Mbps for broadband products supporting download speeds of less than 10Mbps and download speeds of 20Mbps but less than 30Mbps.

Note

The MCA considers the average advertised rate of fixed broadband per unit of download speed (i.e. per Mbps) as a proxy measure of how pricing for local fixed broadband products develops over time.

Figure 36 illustrates movements in the average advertised rate per Mbps on a more disaggregated level. To this effect seven fixed broadband categories are identified, according to different brackets of headline download speeds, as follows:

- products with a download speed of less than 5Mbps;
- products with a download speed equal to or greater than 5Mbps but less than 10Mbps;
- products with a download speed equal to or greater than 10Mbps but less than 20Mbps;
- products with a download speed equal to or greater than 20Mbps but less than 30Mbps;
- products with a download speed equal to or greater than 30Mbps but less than 50Mbps;
- products with a download speed equal to or greater than 50Mbps but less than 100Mbps; and
- products equal to or greater than 100Mbps.

The calculation of the rate of fixed broadband per unit of download speed for the different products featuring in the above-mentioned categories is derived by dividing the relevant monthly access fee by the supported download speed. The final rate per Mbps figure for each category is based on a simple average of the rate per Mbps figures for the different products involved.

6.7. Take-up and usage of mobile broadband

The term mobile broadband used in this review encompasses data access and internet connectivity services offered over the following devices:

- 3G-enabled mobile handsets, especially smartphones; and
- portable computers and tablets, enabled by USB dongles / keys and built-in broadband cards.

For the sake of consistency, the methodology used to measure the take-up of mobile broadband in Malta corresponds with that adopted by the EU Commission when measuring progress in this area across the EU²⁹. Locally, mobile broadband via 3G-enabled mobile phones can be purchased in a bundle or as an add-on or acquired with other mobile telephony services.

Figure 35 illustrates that the number of users actively accessing mobile broadband services via 3G-enabled mobile subscriptions totalled 308,829 at the end of 2016. This figure is up by 38,744 (or by 14.4%) from 270,055 at the end of 2015.

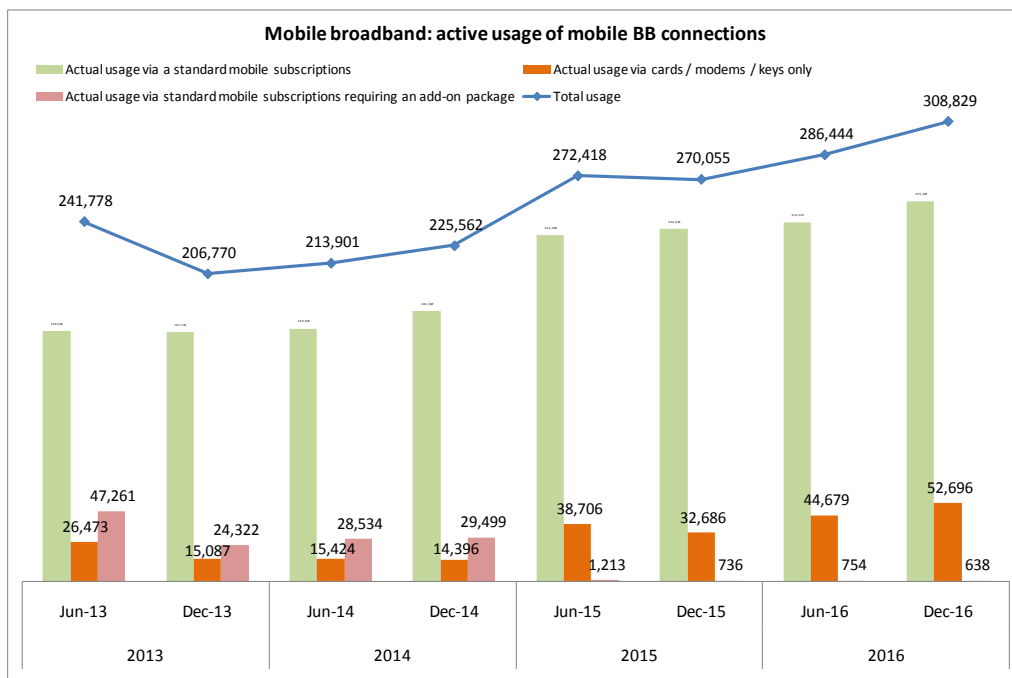


Figure 35: Mobile broadband active connections as at end of period³⁰

The strong increase in take-up of mobile broadband connections via dedicated data service cards/modems/keys gave a boost to the active usage of mobile broadband data services. In fact, the number of active mobile broadband connections via dedicated data service cards/modems/keys was up by 20,010 (or by 61.2%) in the 12-month period to the end of 2016.

²⁹ The EU Commission states that, for the sake of clarity, what is measured for mobile BB is the number of users, and not the number of transactions, since the overall objective is to measure a penetration per 100 population.

³⁰ Data is under review and subject to change.

6.6. Mobile broadband penetration

Malta’s take-up of mobile broadband (or mobile broadband penetration)³¹ remains well below that recorded at an EU level.

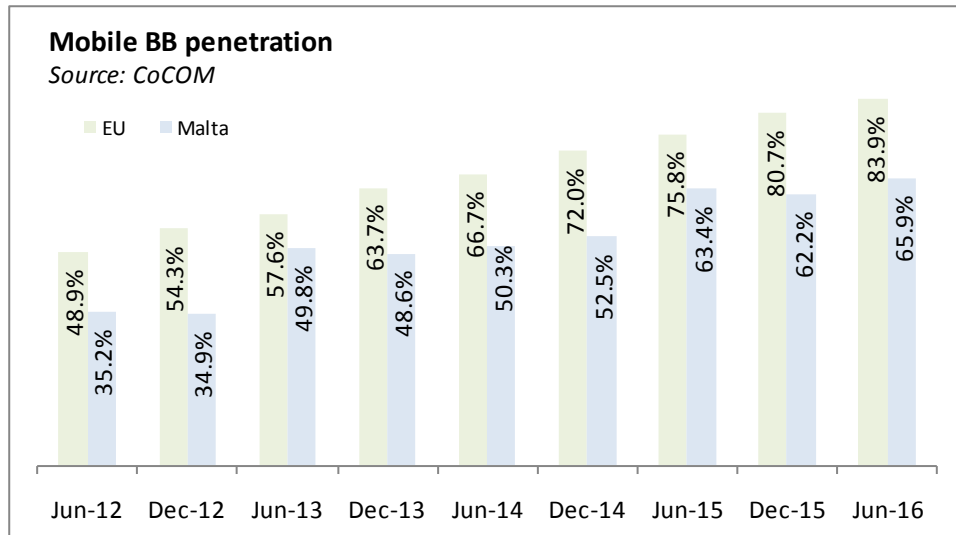


Figure 36: Mobile broadband penetration (active end-users/100 people), as at end of period

Figure 36 illustrates that, according to latest available data from the Digital Agenda Scoreboard, Malta’s mobile broadband penetration rate per 100 people stood at 65.9% at the end of June 2016, compared to an EU average of 83.9%³². It is evident that the gap between Malta’s standing and that of the EU average continues to persist.

³¹ The data is available on the EU Commission’s Digital Agenda Scoreboard.

³² Data beyond June 2016 is currently not available on the Commission’s Digital Agenda Scoreboard.

7. Pay TV

The pay TV sector experienced a contraction in the subscriber base during the second half of 2016, with the number of subscriptions falling by 1,622 year-on-year to 147,756 by the end of December. This drop partly reflects the increasing popularity of online TV platforms and online streaming services in general.

Traditional pay TV services in Malta are currently offered over four different platforms, namely analogue cable (which is no longer marketed and is only offered to existing clients), digital cable, digital terrestrial (DTTV) and Internet Protocol (IPTV). Notably, IPTV continued to outperform all the other segments, with subscriptions for this service increasing by 6,230 (or by 32.3%) in the 12-month period to the end of 2016. Meanwhile, all other segments registered a fall in subscriptions. The number of DTTV subscriptions was down by 5,750 (or by 11.2%), whilst the number of analogue cable and digital cable subscriptions was down by 693 (or by 11.4%) and by 1,409 (or by 1.9%) respectively.

Another significant trend concerning the take-up of pay TV relates to the increase in the number of subscriptions purchased in a bundle with other electronic communications services. As a result, the proportion of pay TV subscriptions in a bundle climbed from 56.0% at the end of 2015 to 60.4% at the end of last year³³.

The demand dynamics of the pay TV market leave an impact on the revenue side, most likely a result of the rise of pay TV subscriptions forming part of a bundle. In fact, pay TV ARPU in the second half of 2016 totalled €82.66, down from €83.38 recorded in the same period a year earlier.

7.1. Pay TV subscriptions

There were 147,756 pay TV subscriptions at the end of last year³⁴, down by 1,622 (or by 1.1%) from 149,378 subscriptions a year earlier.

The proportion of bundled pay TV subscriptions continues to rise. Table 13 shows that the number of bundled pay TV subscriptions totalled 85,926 (corresponding to 60.4% of all digital-based and IP-based pay TV subscriptions) at the end of last year. This figure is up by 5,711 (or by 7.1%) from 80,215 (corresponding to 56.0% of all digital-based and IP-based pay TV subscriptions) at the end of 2015.

Pay TV subscriptions in a bundle	2012		2013		2014		2015		2016	
	FH	SH	FH	SH	FH	SH	FH	SH	FH	SH
Pay TV subscriptions on a dual play contract	15,681	12,301	10,832	9,923	9,731	6,946	6,318	5,841	5,720	5,544
Pay TV + fixed telephony	15,681	12,301	10,832	9,923	9,731	6,946	6,318	5,841	5,720	5,544
Pay TV subscriptions on a triple play contract	9,365	9,794	15,115	21,087	22,165	24,870	26,088	27,386	28,529	30,482
Pay TV + fixed telephony + fixed broadband	9,365	9,794	15,115	21,087	22,165	24,870	26,088	27,386	28,529	30,482
Pay TV subscriptions on a quad play contract	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Pay TV + fixed telephony + fixed broadband + mobile telephony	39,019	40,583	41,339	42,486	44,069	44,429	45,683	46,988	48,075	49,900
Total number of pay TV subscriptions (excl. analogue) in a bundle	64,065	62,678	67,286	73,496	75,965	76,245	78,089	80,215	82,324	85,926
Number of pay TV subscriptions as at end of period	139,213	139,330	141,085	141,410	141,950	141,032	141,694	143,286	142,220	142,357
Percentage of pay TV subscriptions in a bundle	46.02%	44.99%	47.69%	51.97%	53.52%	54.06%	55.11%	55.98%	57.88%	60.36%

Table 13: Pay TV subscriptions on a bundled offer³⁵

³³ These figures correspond to the proportion of bundled pay TV subscriptions to the total digital-based and IP-based pay TV subscriber base, as Melita no longer offers analogue-based pay TV services to new customers.

³⁴ This figure excludes forms of subscriptions to Over-the-Top (OTT) Video-on-Demand (VoD) offerings or internet-only streaming services. No data on take-up of such subscriptions is available to the MCA since these providers are not authorised locally.

³⁵ See footnote 5, page 11.

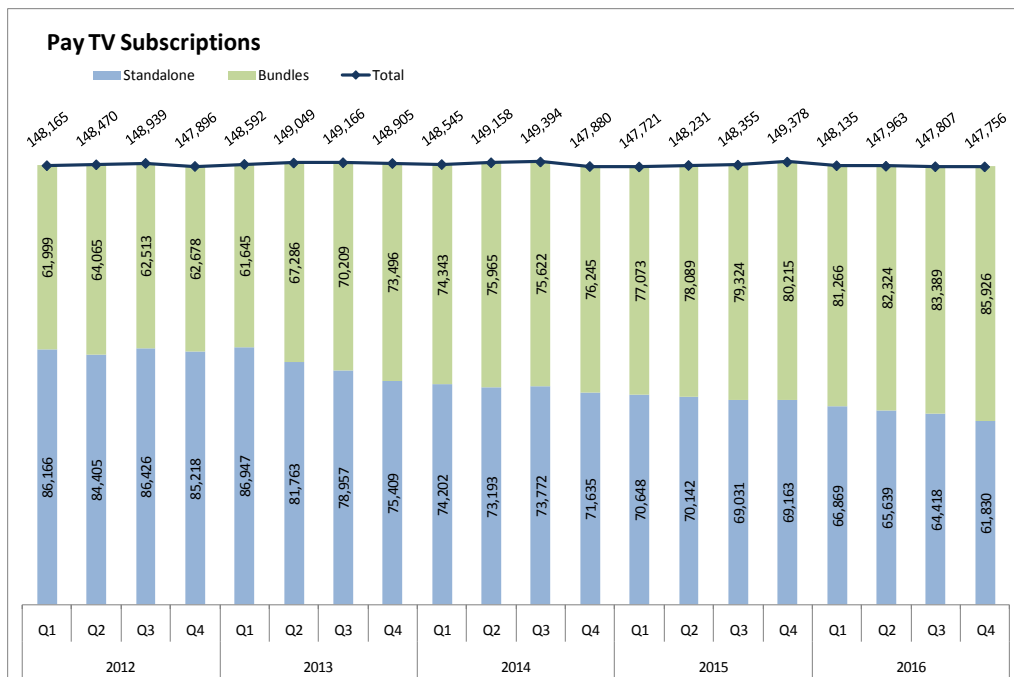


Figure 37: Pay TV subscriptions as at end of period

It is also relevant to underline that analogue cable pay TV subscriptions are no longer offered to new subscribers, either on a stand-alone basis or in a bundle. Table 13 therefore excludes analogue cable pay TV subscriptions from the total number of subscriptions.

7.2. Pay TV subscriptions by technology platform

Local end-users can avail themselves of pay TV services delivered over four technology platforms. These are the digital terrestrial television (DTTV) platform and the Internet Protocol television (IPTV) platform, which are owned by GO, and the analogue cable TV and digital cable TV platforms, which are owned by Melita³⁶.

Figure 38 shows the breakdown of pay TV subscriptions between these platforms. The number of DTTV subscriptions totalled 45,640 at the end of last year, which is down by 5,750 (or by 11.2%) from 51,390 a year earlier.

The analogue cable platform has also registered a decline in subscriptions, in this case by 693 (or by 11.4%), from 6,092 at the end of 2015 to 5,399 at the end of 2016.

Another decline was recorded for digital cable, with the number of subscriptions falling marginally by 1,409 (or by 1.9%), from 72,622 at the end of 2015 to 71,213 at the end of last year.

Meanwhile, the IPTV subscriber base grew at a very fast pace. In this case, subscriptions were up by 6,230 (or by 32.3%), from 19,274 to 25,504.

³⁶ Melita also offers video on-demand services over its IPTV hybrid network, as an add-on to its IP-based digital cable TV.

There are to date no authorised satellite broadcasters or satellite pay TV platforms in Malta.

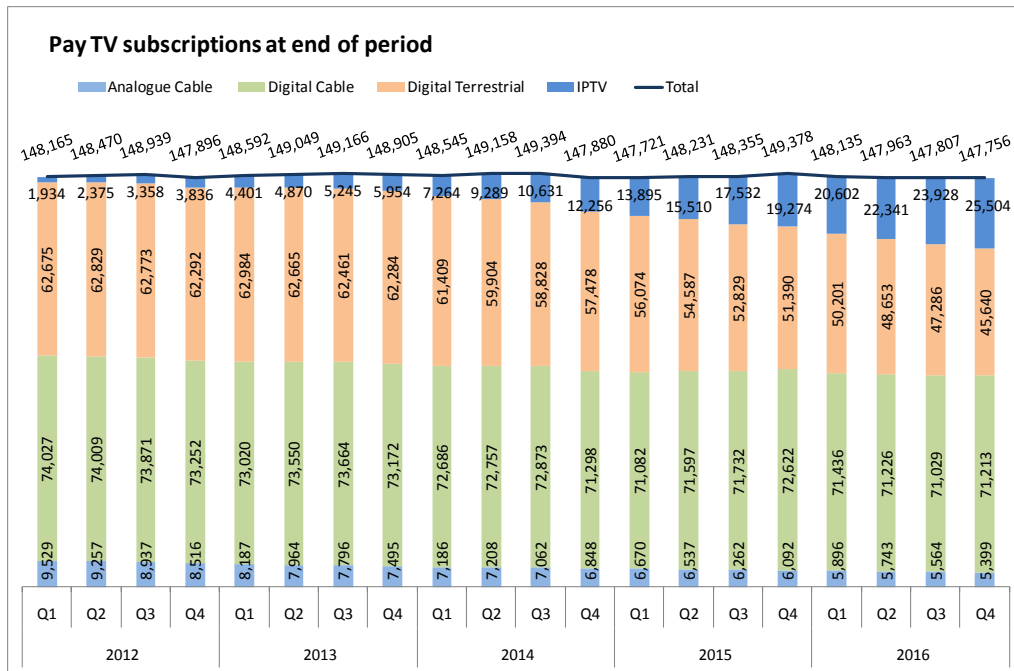


Figure 38: Pay TV subscriptions as at end of period

Regarding market shares by platform, IPTV continued to consolidate its standing with its share rising from 12.9% at the end of 2015 to 17.3% at the end of last year.

In contrast to these gains, the market share of DTTV fell to 30.9%, from 34.4% a year earlier, whilst that for analogue cable TV was down to 3.7% from 4.1%. The market share of digital cable was marginally down to 48.2% from 48.6%.

7.3. Pay TV ARPU

The average revenue per user (ARPU) for pay TV in the second half of 2016 stood at €82.66, down by 0.9% from €83.38 in the same period a year earlier.

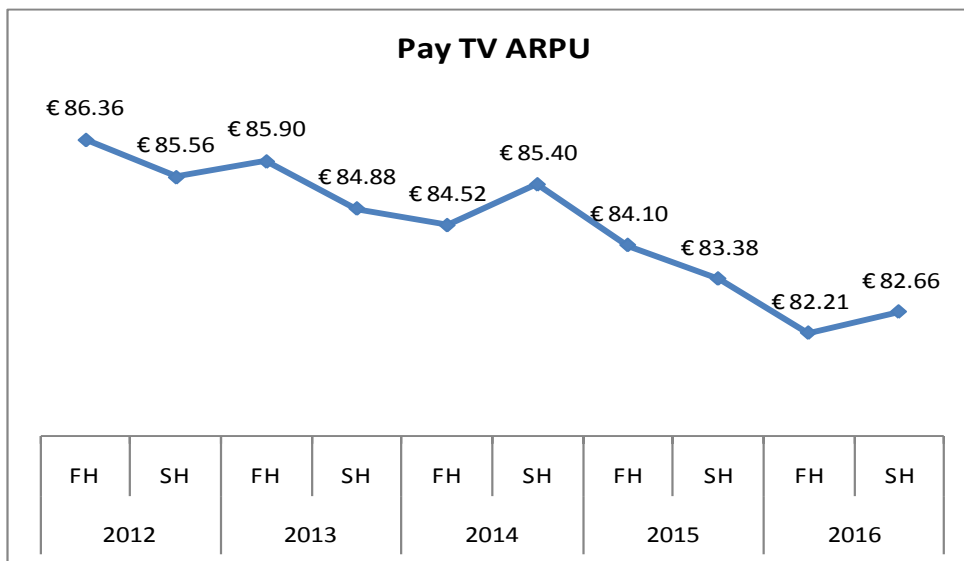


Figure 39: Average revenue per Pay TV user

This downward move in Pay TV ARPU is not surprising in that it tallies with the trend observed in recent years. The reported year-on-year decline in terms of subscriptions did leave a negative impact on the revenue streams for the sector. The increasing take-up of pay TV plans in bundled subscriptions did also influence ARPU, given that such subscriptions come with discounts and promotional offers to the end-user.

Methodology used in deriving pay TV ARPU figures

ARPU for pay TV reflects the average half-yearly spend by users for pay TV services. The figures are derived by dividing the total retail revenues of service providers by the total number of subscriptions, during a given period.

The revenue element is composed of the total retail revenues from pay TV subscriptions, but excludes revenues from premium services³⁷, installations and connections.

To derive the average total number of subscriptions, the MCA sums the total subscriptions at the start and the end of the quarter under consideration and divides the total by two.

7.4. Average advertised rates for Pay TV

This section presents an overview of the average advertised rates (or average advertised monthly access fees) for pay TV services offered in Malta. For ease of reference and practicality, the evaluation seeks to capture price movements for five distinct pay TV categories, with each category bundling plans listing a particular number of channels³⁸.

The average advertised rate paid by end-users for pay TV services in the second half of 2016 was around 5.0% higher to that observed in the second half of the previous year. This is because of a number of changes implemented in Q4 2016 by one of the local service providers, namely GO. This operator stopped offering its Bronze and Gold plans. Given that these two plans were on the lower scale of the product price list, the average advertised rate shifted upwards. There were no other significant changes in the product line-up; however, service providers did update their channel line-ups from time to time. In addition, service providers implemented several promotional offers in the case of bundled pay TV subscriptions. However, the latter changes are not taken into account in the figures presented in Figure 40 below, given that the focus remains on stand-alone pay TV products.

Figure 40 illustrates that, in the case of the pay TV category encompassing packages listing '25 to 49 channels', the average advertised rate stood at €16.49 in the second half of 2016. The average advertised rate for the pay TV category encompassing packages listing '75 to 99 channels' and packages listing '100 channels or more' stood at €23.99 and €32.99 respectively. These average advertised rates were unchanged from the ones prevailing in the second half of 2015.

As already highlighted earlier, GO has stopped offering the Bronze and the Gold pay TV plans, which were the only ones featuring under the pay TV categories encompassing packages listing 'up to 24 channels' and '50 to 74 channels' respectively. This explains why Figure 40 does not report figures for these two categories in Q4 2016.

³⁷ Revenues from premium-related services include revenues from Sports, Movies, and VOD subscriptions.

³⁸ Calculations take into account products offered on a stand-alone basis.

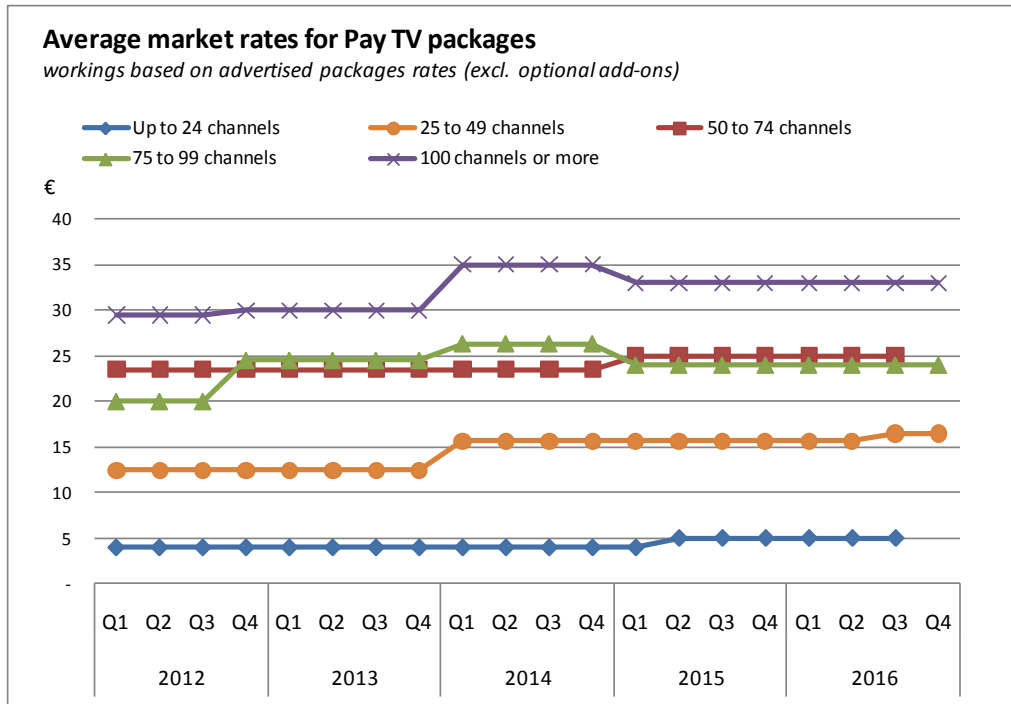


Figure 40: Average market rates for Pay TV packages

It is of note here that the figures presented above do not take into account billing charges i.e. those charges that come into force if the end-user requires paper bills and / or opts not to pay its bills via direct debit.

8. Post

Overall, the volume dynamics of the postal market have been on the downside for several years now. The second half of 2016 was no exception, with postal mail volumes falling by 5.6% when compared to the same period a year earlier. This drop comes as no surprise, particularly as it is becoming all the more evident that the increasing usage of online platforms is constantly eroding demand for traditional mail.

However, not all is bleak for this sector, as evidenced for example by the sustained rise in registered and parcel mail activity. In fact, this activity has seen a rapid rise in volumes along the years, mainly resulting from a more robust eCommerce activity and other related transactions, although the increase was not enough to outweigh the decline in single-piece letter mail volumes and bulk mail volumes.

Malta’s postal rates for a *domestic standard letter* and an *outbound letter within the EU* last year benchmarked well below the EU average, as evidenced by a report published by Deutsche Post highlighting on postal rates in April 2016³⁹.

8.1. Postal mail volumes

Postal mail items delivered by local postal operators⁴⁰ in the second half of 2016 totalled 18.4 million. This figure is down by 1.1 million (or by 5.5%) from 19.5 million postal mail items delivered in the same period a year earlier.

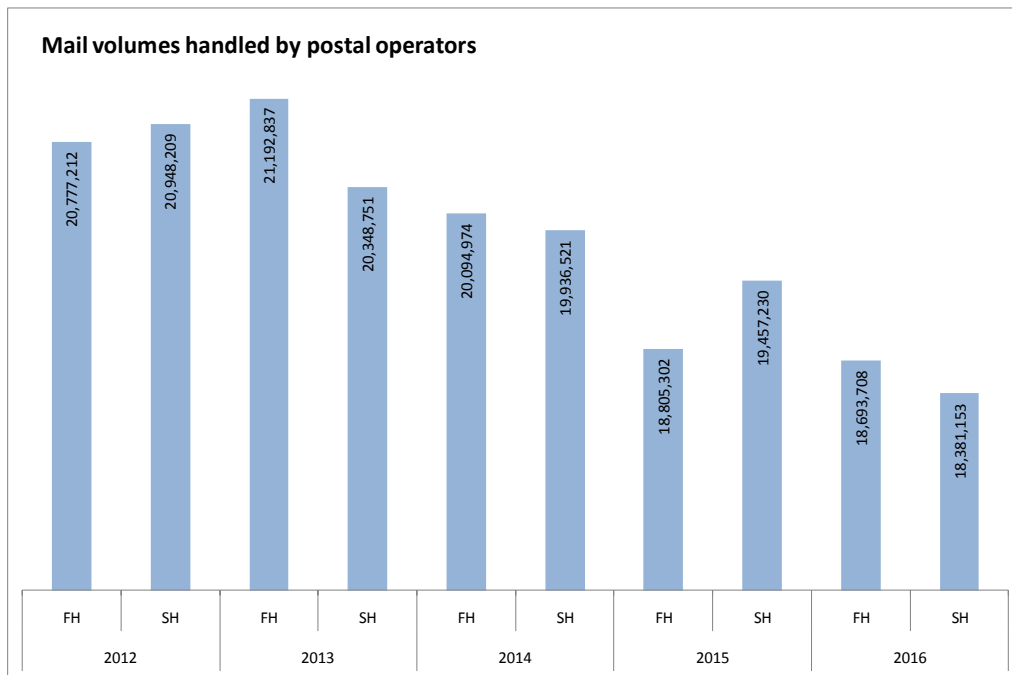


Figure 41: Postal activity - mail volumes handled by local service providers

³⁹ The report states that ‘the only letter products included (in the assessment) were those with quality criteria enabling them to be compared to one another, in particular with regard to transit time’.

⁴⁰ Maltapost plc (the designated Universal Service Provider, hereafter also referred to as “the USP”), DHL International Ltd., and Premiere Post Ltd. provide services within the universal service area. As part of its universal service obligation Maltapost is obliged to provide a set of services, outside the reserved area.

Another 16 postal operators (courier and express services) provide services outside the scope of the universal service area.

Figure 42 illustrates that standard mail volumes account for the lion’s share of all postal activity recorded in Malta. Regarding the composition of postal mail activity in the current reporting period, standard postal mail activity accounted for 96.4% of total postal mail volumes. Express mail activity accounted for the remaining share, at 3.6%.

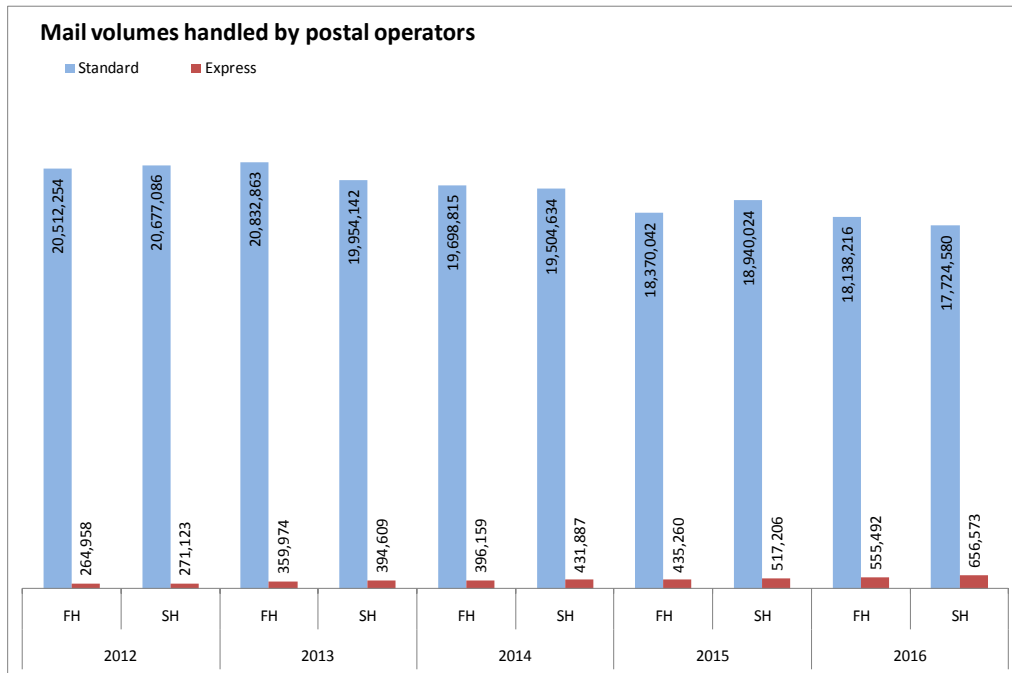


Figure 42: Postal activity - number of handled mail items by type of mail activity⁴¹

The number of standard postal mail items handled in the second half of 2016 totalled 17.7 million, down by 1.2 million (or by 6.4%) when compared to the same period a year earlier.

Meanwhile, the number of express postal mail items delivered in the second half of last year totalled 656,573. This figure is up by 139,367 (or by 27.0%) from 517,206 express mail items delivered in the second half of 2015.

8.2. Postal mail volumes by type of mail

There are four different segments of postal mail. These are single piece letter mail, parcel mail, bulk mail and registered mail⁴².

⁴¹ Reference is made in this document to express mail activity and standard mail activity. The former type of mail activity encompasses the accelerated and secure worldwide delivery of mail items, be it for important letters, documents or parcels, through express mail or courier service providers. The services offered by these providers is characterised throughout by a degree of speed, tracking and managerial control (that exceed that applied to the fastest standard category of the basic universal letter post and parcel services). The distinguishing characteristic of a courier service provider is that it focuses on the delivery of express mail items that are in possession of an employee of the company at all stages of its journey.

Standard mail activity encompasses services related to the delivery of single piece letter mail, bulk mail, registered mail and parcel mail.

⁴² These different types of mail are defined below:

- Single piece letter-post mail (also referred to as ordinary mail) is the ordinary day-to-day correspondence posted by individuals and businesses (other than bulk letter-post mail), at street letterboxes or over the counter at postal outlets.

Single piece letter-post mail accounted for 40.6% of all mail items handled during the current review period. In absolute terms, the number of letter-post items totalled 7.5 million in the second half of 2016, which is down by 0.3 million (or by 4.3%) from volumes registered in the second half of 2015.

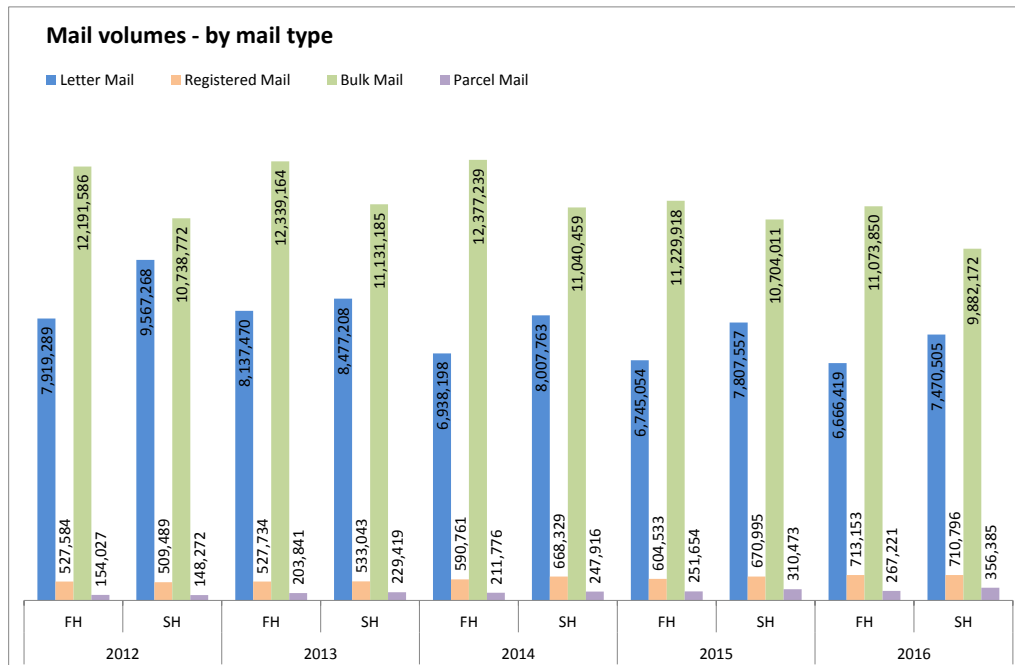


Figure 43: Postal activity - number of handled mail items by type of mail item

The number of registered mail items handled in the second half of 2016 totalled 0.7 million, which is equivalent to 3.9% of all postal mail items handled during the period. When compared with the second half of 2015, registered mail volumes were up by 39,801 items (or by 5.9%).

Bulk mail items totalled 9.9 million in the second half of 2016, which is equivalent to 53.8% of total mail volumes delivered during this period. Compared to volumes recorded in the second half of 2015, bulk mail items were down by 0.8 million items (or by 7.7%).

Parcel mail items totalled 0.3 million in the second half of 2016, which is equivalent to 1.7% of total postal mail volumes recorded in the current review period. Compared to mail volumes recorded in the second half of 2015, parcel mail items were up by 43,013 (or by 15.7%). As already observed in previous CMR publications, these increases are mainly a result of the ongoing growth in online shopping and eCommerce activity.

- Bulk letter-post mail (also referred to as bulk mail) consists of a substantial number of similar letter-post items deposited with MaltaPost at the same place and time, to be transported and distributed to the addressees indicated on each of the postal articles.
- The registered letter-post mail service (also referred to as registered mail) refers to a service providing a flat-rate guarantee against risks of loss, theft or damage and supplying the sender, where appropriate upon request, with proof of the handing in of the postal article or of its delivery to the addressee.

8.3. Postal mail volumes by activity heading

This section distinguishes between three postal mail activity headings according to destination: domestic mail; outbound cross border mail⁴³; and inbound cross border mail⁴⁴.

Domestic mail volumes delivered in the second half of 2016 totalled almost 14.0 million items. This figure is down by 1.1 million (or by 7.3%), from 15.1 million items delivered in the same period a year earlier.



Figure 44: Postal activity - number of handled mail items by destination

Volumes of outbound cross border mail and inbound cross border mail in the second half of 2016 totalled almost 1.3 million items and 3.1 million items respectively. Figure 44 illustrates that, in the case of inbound cross border mail, volumes recorded in the current reporting period were up by 0.1 million items (or by 3.5%), compared to volumes recorded in the second half of 2015. Meanwhile, volumes for outbound cross border mail were however down by 77,203 mail items (or by 5.7%).

8.4. Quality of postal delivery service

The MCA has established a methodology, based on a series of Quality of Service (QoS) targets, to determine whether Maltapost is meeting its universal service obligations for the delivery of different mail items. These QoS targets are set in accordance with the MCA Decision⁴⁵ on the quality performance measurement of postal items delivered within the defined service standard. QoS data corresponds to the full calendar year⁴⁶.

⁴³ These mail items originate locally for delivery to foreign destinations.

⁴⁴ Foreign-originated mail forwarded to Malta.

⁴⁵ Link to MCA Decision concerning the 'Review of Quality of Service Targets and Requirements to be achieved by Maltapost plc': http://www.mca.org.mt/sites/default/files/articles/QoS_Review_-_DN.Nov_10.pdf

⁴⁶ In terms of the MCA Decision Notice on the measurement of MaltaPost's Quality of Service, MaltaPost is required to attain the standards set by the Authority over a given financial year (October to September).

It is however of note that the QoS data presented in this report is adjusted to reflect developments over a standard calendar year, not a financial one.

8.4.1 QoS – Local ordinary mail and bulk mail

The QoS targets for the delivery to destination of local ordinary mail and bulk mail on the next day (D+1) has been set at 95%.

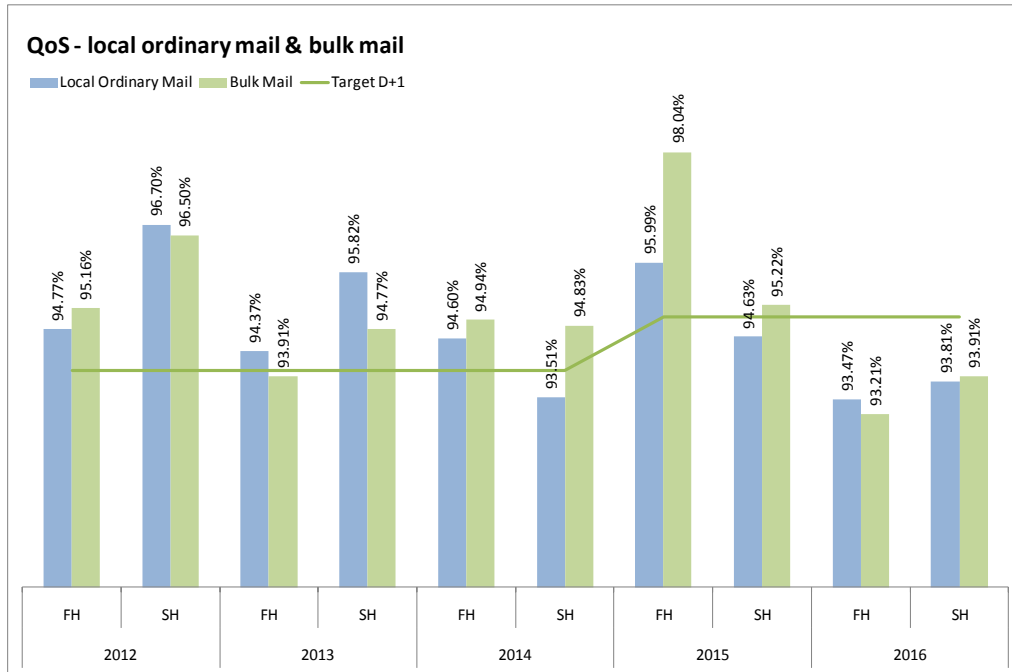


Figure 45: Quality of service - local ordinary and bulk mail

Figure 45 illustrates that Maltapost did not reach the established targets for local ordinary mail and bulk mail in the second half of 2016.

8.4.2 QoS – Local registered mail and priority inbound parcels

The QoS targets for the delivery to destination of local registered mail and priority inbound parcels has been set at 98%.

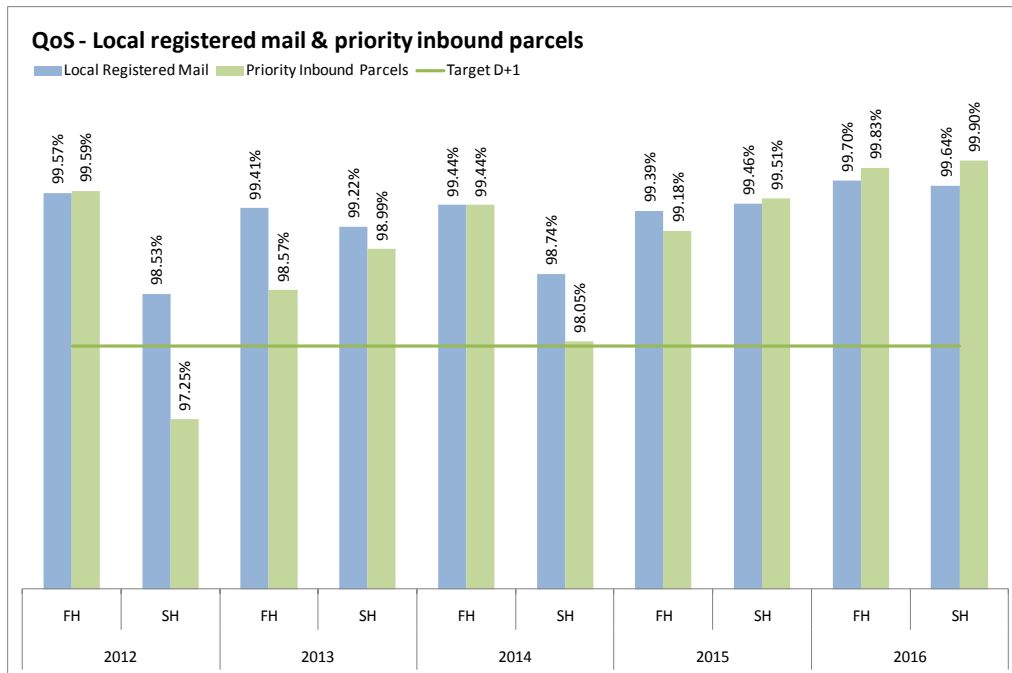


Figure 46: Quality of service - local registered mail and priority inbound parcels

Figure 46 illustrates that, last year, Maltapost has met and exceeded all the set targets for the mail activities under consideration.

8.5. Postal rates: Malta vs EU

The March 2016 publication by Deutsche Post entitled ‘Letter Prices in Europe’ shows that Malta’s nominal prices for a *domestic standard letter* and an *outbound letter within the EU* continue to benchmark at the bottom (or close to the bottom) of the ranking⁴⁷.

The report quotes Malta’s nominal price for a domestic standard letter and for letter mail within Europe at €0.26 and €0.59 respectively. The former rate corresponds to a standard letter mail item weighing up to 50 grams, whilst the latter rate corresponds to an outbound cross-border letter mail item weighing up to 30 grams. Other rates would apply in case of letter mail having higher weight steps.

⁴⁷ Link to March 2016 publication: https://www.google.com/mt/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKewiStsatl8vQAhWka5oKHUmdCpkQFggmMAE&url=https%3A%2F%2Fwww.dpdhl.com%2Fen%2Fmedia_relations%2Fmedia_library%2Fdocuments%2Fletter_price_survey_europe%2F_jcr_content%2Fmainpar%2Fcols2

The publication findings are based on certain considerations that are clearly explained in the document published by Deutsche Post.

The MCA accepts no responsibility or liability whatsoever with regard to material accessed, operated and/or downloaded from the link provided.

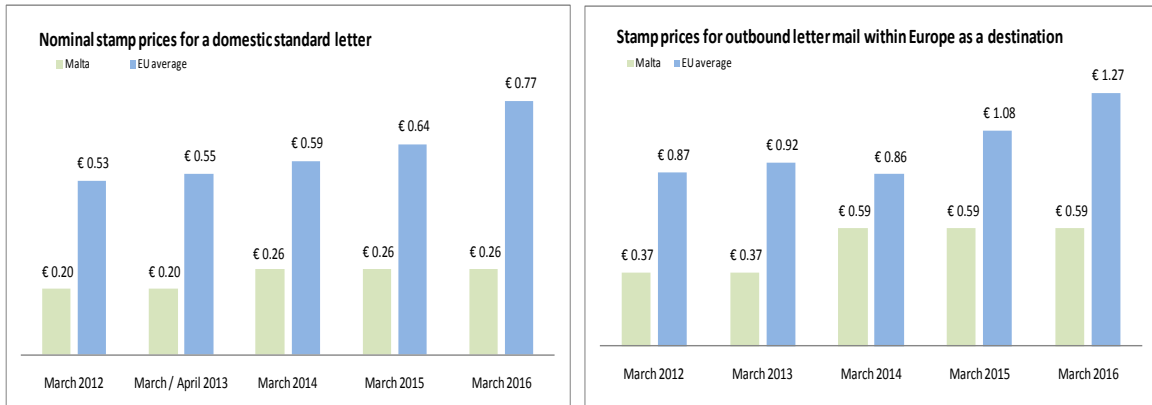


Figure 47: Nominal stamp prices in Malta and the EU

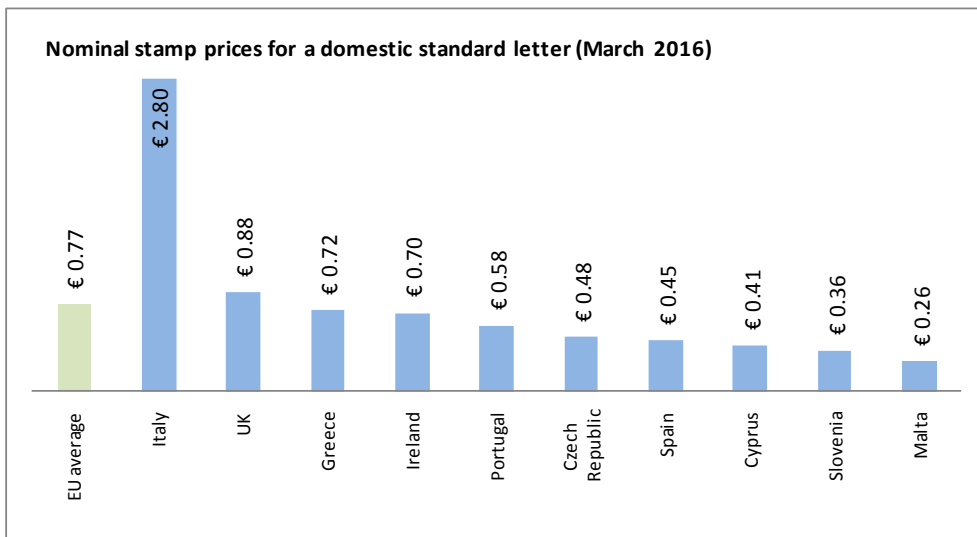


Figure 48: Comparison with selected EU countries

It is relevant to note here that there were no changes in local postage rates for domestic standard mail and outbound letter mail in the second half of 2016. The rates have remained unchanged since 2014.

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11. Glossary of Terms

ARPU	Average revenue per user. Selected revenue items of the operator divided by the average number of active subscriptions during the period.
Broadband	A service or connection to the Internet which is 'always on' and has a speed of more than 128kbps. The number of active broadband subscriptions refers to subscriptions/connections having recorded a transaction within 90 days of the period stipulated.
Dial-up	The number of active dial-up subscriptions refers to those subscriptions/connections which made a call to an Internet number (2188, or 2186) within the last 90 days.
DSL	Digital Subscriber Line. A high-speed transmission technology mainly applied for Internet and video file access service. DSL services allow voice and data to share the same infrastructure and usually require a splitter at the customer's premises to separate voice and data traffic from the line. Forms of DSL include ADSL, HDSL, and VDSL.
DTTV	Digital Terrestrial Television. The term refers to a delivery platform primarily for television programmes in digital format, using the DVB-T standard.
FH	First half of the year, referring to the period January to June.
FNO	Fixed network operator. A provider which owns a fixed line network.
FTF	Fixed-to-fixed traffic.
FTI	Fixed-to-international traffic.
FTM	Fixed-to-mobile traffic.
ISPs	Internet Service Providers. An ISP is a point of access to the Internet for small business and individual users. The ISP provides its customers with access to its router which relays traffic to web servers on the Internet.
Mbps	Megabits per second ("MBit/s") or millions of bits per second. Unit applied to measure the transmission speed of digital information.
MCA	Malta Communications Authority.
MMS	Multimedia Messaging Service. MMS extends the short messaging service ("SMS") to include longer text, graphics, photos, audio clips, video clips, or any combination of the above, within certain size limits.
MNO	Mobile network operator. A provider which owns a mobile network.
MPR	Mobile penetration rate. The MPR is a term used to describe the number of active mobile subscriptions (or SIM cards) as a percentage of total population.
MTM	Mobile-to-mobile traffic.

MTF	Mobile-to-fixed traffic.
MTI	Mobile-to-international traffic.
MVNO	Mobile Virtual Network Operator. An MVNO is a mobile operator that usually would not have a licence to use radio spectrum but would have access to the radio networks of one or more of the current mobile operators and would be able to offer services using that spectrum.
Off-net activity	Activity between two or more connections on different networks.
On-net activity	Activity between two or more connections on the same network.
Pay TV	Television services (generally a channel or set of channels) paid for by the user, by means of subscription or other ways of service payment.
Q	Quarter of the year. Q1 refers to first quarter (January to March), Q2 refers to second quarter (April to June), Q3 refers to third quarter (July to September), Q4 refers to fourth quarter (October to December).
QoS	Quality of Service. A statistical measure of a system or service. May also be used to set varying priorities for traffic.
Service provider	A supplier of electronic communications and postal services, to third parties, either through its own network or through a network of another operator.
SH	Second half of the year, referring to the period July to December.
SMS	Short message service. This refers to short text messages which can be sent from one mobile phone to another, usually up to 160 characters. Such messages can also be sent from the Internet to a mobile phone.
Universal service	The basic level of telecommunications services which should be available to all customers.
USO	Universal Service Obligations. A provision in Maltese law requiring certain operators to provide certain services to all specified persons who may reasonably request them.
VAT	Value Added Tax.

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13. Contact

For any queries, kindly contact via email kevin.r.caruana@mca.org.mt.

Queries may also be posted or faxed to the address below.

Malta Communications Authority

Valletta Waterfront, Pinto Wharf,
Floriana FRN 1913

Malta
Europe

Contact numbers

tel: +356 21 336840

fax: +356 21 336846