



Commission for
Communications Regulation

Irish Communications Market

Quarterly Key Data Report

Data as of Q4 2014

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**Anniversary
15 Year
Anniversary**

Table of Contents

SUMMARY	6
Notes to data:.....	8
1. OVERALL MARKET DATA	10
1.1 Number of Authorisations.....	10
1.2 Overall Electronic Communications Revenues	10
1.3 Overall Call Volumes.....	12
1.4 Communications and the Consumer Price Index.....	13
1.5 Fixed and Mobile Market Retail Voice, Internet and TV Subscriptions.....	13
2. FIXED MARKET DATA.....	15
2.1 Fixed Line Retail Revenues	15
2.1.1 Authorised Operators' Share of Fixed Line Revenues	16
2.2 Fixed Line Access Paths.....	17
2.2.1 Access Paths	17
2.2.2 Indirect Access Paths	18
2.2.3 Fixed Voice Subscriptions.....	19
2.2.4 Fixed Market Retail Subscriptions by Type.....	20
2.3 Fixed Voice Call Volumes	21
2.4 Switching in the Fixed Voice Market	23
2.5 Standalone Fixed Voice Service Pricing Data	24
3. INTERNET AND BROADBAND	30
3.1 Total Internet Subscriptions and provision of broadband services	30
3.2 Provision of DSL Access.....	38
3.3 Provision of VDSL Access.....	39
3.4 Broadband Penetration.....	39
3.5 Wi-Fi Broadband Access	41
3.6 Fixed and Mobile Broadband Pricing Data.....	43
4. MOBILE MARKET DATA	52
4.1 Number of Subscriptions and Penetration Rate	52

4.2 The Profile of Mobile Subscriptions in Ireland	54
4.3 Mobile Volumes	57
4.4 Mobile Revenues.....	62
4.5 Average Monthly Revenue per User	62
4.6 Machine to Machine subscriptions	64
4.7 Competition in the Mobile Market	65
4.8 Switching in the Mobile Market.....	67
4.9 Mobile Pricing Data.....	68
5. BROADCASTING	75
5.1 Overall Broadcasting Market.....	75
6. APPENDIX	79
6.1 15 Years of Irish telecommunications sector monitoring.....	82

Table of Figures

Figure 1.1.1 - Total Number of Authorisations	10
Figure 1.2.1 – Fixed, Mobile & Broadcasting as a % of Total Retail Revenues	11
Figure 1.3.1 - Share of Total Voice Call Volumes (Minutes)	12
Figure 1.3.2 – Total Voice Traffic	13
Figure 1.4.1 – Consumer Price Index and Communications Sub-Component	13
Figure 1.5.1 – Total Subscriptions (Fixed and Mobile), Q4 2011 – Q4 2014.....	14
Figure 2.1.1 – Profile of Fixed Line Retail Revenues	15
Figure 2.1.1.1 – Fixed Retail Revenue Market Shares	16
Figure 2.1.1.2 – Fixed Revenue Market Shares.....	17
Figure 2.2.1.1 – Narrowband Fixed Access Paths and VoB subscriptions	18
Figure 2.2.1.2 – Direct & Indirect Narrowband Fixed Access Paths	18
Figure 2.2.2 – Narrowband Indirect Access Paths	19
Figure 2.2.3 – Fixed Voice subscriptions, Q4 2011 – Q4 2014	20
Figure 2.2.4 – Fixed Market Retail Subscriptions by Type, Q4 2012 – Q4 2014.....	21
Figure 2.3.1 – Fixed Voice Call Volume (Minutes)	22
Figure 2.3.2 – Fixed Voice Call Volume per business subscriber (Minutes).....	23
Figure 2.3.3 – Fixed Voice Call Volume per residential subscriber (Minutes)	23
Figure 2.4.1 – Fixed Numbers Ported	24
Figure 2.5.1 - Residential Standalone Fixed Voice Basket (National comparison)	27
Figure 2.5.2 - Residential Standalone Fixed Voice Basket (International comparison)	27
Figure 2.5.3 - Business Standalone Fixed Voice Basket (National comparison).....	28
Figure 2.5.4 - Business Standalone Fixed Voice Basket (National comparison).....	29
Figure 3.1.1 – Total Number of Active Internet Subscriptions	30
Figure 3.1.2 – Total Broadband Subscriptions	31
Figure 3.1.3 – Quarterly Growth in Total Broadband subscriptions	32
Figure 3.1.4 – Broadband Subscriptions by Platform	33
Figure 3.1.5 – Broadband Subscriptions - Net additions, Q4 2012 – Q4 2014	33
Figure 3.1.6 – Broadband Subscriptions by Subscription Type	34
Figure 3.1.7 – Fixed Broadband Subscriptions by Contracted Download Speeds and Subscription Type	35
Figure 3.1.8 – Fixed Broadband Subscriptions by Contracted Download Speeds and Broadband Platform	35
Figure 3.1.9 – Fixed Broadband Subscriptions by Contracted Download Speeds.....	36
Figure 3.1.10 – Subscription Market Share of Fixed Broadband Market.....	37
Figure 3.1.11 – Subscription Market Share of Mobile Broadband Market	37
Figure 3.2.1 - Provision of DSL Access	38
Figure 3.2.2 – Number of Local Loops Unbundled	39
Figure 3.4.1 – Fixed Broadband Subscriptions per Capita, Q3 2012 – Q3 2014.....	40
Figure 3.4.2 – Household Broadband Subscriptions, 2014.....	41
Figure 3.4.3 – Household Broadband Penetration, 2005 - 2014	41
Figure 3.5.1 – Wi-Fi Hotspots, Access Points and Minutes of Use	43
Figure 3.6.1 - Residential Fixed Broadband Basket (National comparison).....	46
Figure 3.6.2 - Residential Fixed Broadband Basket (International comparison)	47
Figure 3.6.3 - Business Fixed Broadband Basket (National comparison).....	47
Figure 3.6.4 - Business Fixed Broadband Basket (International comparison)	48

Figure 3.6.5 - Residential Mobile Broadband Basket (National comparison)	49
Figure 3.6.6 - Residential Mobile Broadband Basket (International comparison)	49
Figure 3.6.7 - Business Mobile Broadband Basket (National comparison)	50
Figure 3.6.8 - Business Mobile Broadband Basket (International comparison)	51
Figure 4.1.1 – Mobile Subscriptions	52
Figure 4.1.2 – Mobile Subscribers using data services over 3G/4G networks	53
Figure 4.1.3 – Irish Mobile Penetration Rate.....	54
Figure 4.2.1 – Profile of Pre-Paid and Post-Paid Subscriptions	55
Figure 4.2.2 – Mobile Subscriptions by Pre-pay/Post-pay Split, Q4’13 – Q4’14	55
Figure 4.2.3 – Profile of Pre-Paid and Post-Paid Subscriptions by Operator.....	56
Figure 4.2.4 – Profile of Pre-Paid and Post-Paid Mobile Broadband Subscriptions	56
Figure 4.2.5 – Post-Paid Business and Residential Mobile Subscriptions	57
Figure 4.2.6 – Mobile Subscriptions by Network used	58
Figure 4.3.1 – SMS, MMS, Other Data and Call Minute Volumes	59
Figure 4.3.2 – Voice Call Minute Volumes by Type	59
Figure 4.3.3 – Mobile to Mobile Voice Call Minute Volumes by Type.....	60
Figure 4.3.4 – Monthly Mobile Voice Call Minutes per Subscription by Type	61
Figure 4.3.5 – Monthly Mobile Messaging and Data Volumes per Subscription	61
Figure 4.4.1 – Total Mobile Retail Revenues	62
Figure 4.5.1 – Monthly Average Revenue per User by Type.....	63
Figure 4.6.1 – Market Share – Number of Business Subscriptions/Number of M2M Subscriptions	65
Figure 4.7.1 – Market Share – Number of Subscriptions (inc. mobile broadband and M2M) ..	66
Figure 4.7.2 – Market Share – Number of Subscriptions (ex. mobile broadband and M2M)...	66
Figure 4.7.3 – Revenue Market Share	67
Figure 4.8.1 – Gross Subscription Additions and Numbers Ported	68
Figure 4.9.1 – Residential Pre-paid Mobile Phone Services Basket (National comparison).....	70
Figure 4.9.2 – Residential Pre-paid Mobile Phone Services Basket (International comparison)	71
Figure 4.9.3 – Residential Post-paid Mobile Phone Services Basket (National comparison) ...	72
Figure 4.9.4 – Residential Post-paid Mobile Phone Services Basket (International comparison)	72
Figure 4.9.5 – Business Post-paid Mobile Phone Services Basket (National comparison)	73
Figure 4.9.6 – Business Post-paid Mobile Phone Services Basket (International comparison)	74
Figure 5.1.1 – TV Homes by Reception Type	75
Figure 5.1.2 – TV Homes by Reception Method.....	76
Figure 5.1.3 – TV Homes 2010 –2015	77
Figure 5.1.4 – DVD, Broadband, Games Console and PVR Trends	78
Figure 5.1.5 – Pay TV vs Free to Air TV Homes, 2008 - 2015	78
Table A1: Sky Ireland’s distribution of subscriptions by type	79
Table A2: List of Respondents	80

Corrigendum to Q3 2014 Report¹

Note 1: Machine to Machine subscriptions from Q2 2013 to Q3 2014 inclusive have been revised upwards following an operator revision of historically provided information. Machine to Machine subscriptions as well as total mobile subscriptions for this period have been revised upwards for each quarter, with such upward revisions ranging from 9,517 to 39,382 subscriptions. These changes also affect market shares in terms of mobile subscriptions. Hence, these metrics have also been revised.

Note 2: Another operator has revised its subscriber base downwards for Q4 2014 in order to align with the definition of active prepaid users. A revision of total mobile subscriptions in the periods prior to Q4 2014 will be made in the next publication of the Key Quarterly Data Report.

Note 3: Fixed retail broadband revenues from Q4 2013 to Q3 2014 inclusive have been revised downwards, following an operator revision of historically provided information. The revisions range from a minimum of €1.3 million to a maximum of €3.4 million.

Note 4: Fixed voice retail revenues in Q3 2014 were revised downwards by €0.7 million following an operator revision of historically provided information.

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The information and statistics contained within this document are derived from a variety of sources, but are mostly reliant on data obtained from authorised operators.

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¹ ComReg is currently considering the reasons cited by the relevant operators for the reinstatement of historically submitted information.

Summary

During the period Q3 2014 to Q4 2014 overall industry retail revenues increased by 0.8%. Total retail revenues in the twelve months to December 2014 at €3.00 billion were down from over €3.12 billion over the 12 months previous. There were 1,691,619 broadband subscriptions this quarter which was a decrease of 0.1% from Q3 2014, but an increase of 0.2% compared to Q4 2013. Overall voice traffic volumes increased by 2.4% this quarter. Presented below is a tabular summary of the data presented throughout this Quarterly Key Data Report.

Irish Quarterly Communications Market Data Q4 2014				
	Q4'14	Q3'14	Quarterly Change	Annual change
Total Retail Market Revenues ²	€756,417,929	€750,778,811	+0.8%	-2.9%
Fixed Line Retail Revenues ³	€321,163,952	€322,417,363	-0.4%	-5.9%
Mobile Retail Revenues	€393,136,300	€386,838,209	+1.6%	-0.4%
Broadcasting Retail Revenues ⁴	€42,117,677	€41,523,240	+1.4%	-1.8%
Fixed Line Wholesale Revenues	€153,348,673	€151,206,272	+1.4%	+9.0%
Mobile Wholesale Revenues	€77,186,406	€75,263,794	+2.6%	-8.0%
Total Voice Traffic (Minutes)	4,217,132,450	4,117,083,047	+2.4%	+1.6%
Fixed Voice Traffic (Minutes)	1,176,979,209	1,197,902,987	-1.7%	-8.5%
Mobile Voice Traffic (Minutes)	3,040,153,241	2,919,180,060	+4.1%	+6.2%
Total Internet Subscriptions ⁵	1,697,857	1,700,186	-0.1%	+0.01%
Total Broadband Subscriptions	1,691,619	1,693,400	-0.1%	+0.2%
Fixed Broadband Subscriptions	1,258,758	1,240,646	+1.5%	+5.8%
Mobile Broadband Subscriptions (HSDPA and LTE)	432,861	452,754	-4.4%	-13.4%
Fixed Subscriptions ⁶	2,002,760	1,969,079	+1.7%	+1.7%
Fixed Voice Subscriptions	1,587,261	1,580,476	+0.4%	+3.8%
Total Mobile Subscriptions (inc. Mobile broadband and M2M) ⁷	5,782,845	5,798,945	-0.3%	+0.2%

² Mobile and Fixed line wholesale revenues are excluded from this figure.

³ Fixed line retail revenues were revised from Q4 2013 to Q3 2014 inclusive. See notes 3 and 4 within the corrigendum to Q3 2014 on page 5 of this report.

⁴ ComReg only captures Cable/MMDS/IPTV revenues from a number of TV providers for publication under broadcasting revenues in the Quarterly Key Data Report. The collection and publication of licence fee and/or television (advertising) revenues) does not fall within ComReg's remit and therefore is not included in the broadcasting revenue figure.

⁵ The difference between Internet and broadband subscriptions is accounted by the inclusion of narrowband subscriptions in Internet subscriptions.

⁶ Fixed subscriptions to voice, fixed Internet and TV services (both single play and bundled subscriptions).

⁷ Total mobile subscriptions were revised from Q2 2013 to Q3 2014 inclusive. See note 1 within the corrigendum to Q3 2014 on page 5 of this report.

Machine to Machine Subscriptions ⁸	455,745	438,866	+3.8%	+16.7%
Mobile Subscriptions ⁹ (exc. Mobile broadband and M2M)	4,894,239	4,907,325	-0.3%	+0.3%

- Overall electronic communications network and service retail revenues at the end of December 2014 were over €756 million for the quarter. Industry retail revenues increased by 0.8% this quarter, but declined by 2.9% compared to Q4 2013. The quarterly increase in revenues was driven by increases in mobile and broadcasting revenues with fixed revenues having decreased slightly this quarter.
- At the end of December 2014 there were 1,587,261 fixed voice subscriptions in Ireland, an increase of 0.4% since last quarter and an increase of 3.8% since Q4 2013.
- Total voice traffic minutes increased by 2.4% this quarter and were 1.6% higher than in Q4 2013. Mobile minutes form the majority of voice minutes at 72.1%, with fixed minutes representing the remaining 27.9%. Mobile voice minutes increased by 4.1% this quarter while fixed voice minutes fell by 1.7% this quarter.
- Broadband subscriptions (fixed and mobile) decreased by 0.1% this quarter, but were up by 0.2% compared to Q4 2013. Cable (+4,397), VDSL (+30,840) and satellite/fibre (+275) subscriptions increased this quarter while DSL (-13,765), FWA (-3,635) and dedicated mobile broadband (-19,893) subscriptions fell this quarter.
- The estimated fixed broadband household penetration rate¹⁰ was 65.0% in Q4 2014. The fixed broadband per capita penetration rate was 27.3%. The broadband per capita penetration rate (including mobile broadband) was 36.7%.
- Average fixed broadband speeds continue to increase. In Q4 2014 approximately 63.8% of all fixed broadband subscriptions were equal to or greater than 10Mbps up from 53.4% in Q4 2013. 45.4% of all fixed broadband subscriptions were equal to or greater than 30Mbps up from 35.2% in Q4 2013.

⁸ Machine to Machine subscriptions were revised from Q2 2013 to Q3 2014 inclusive. See note 1 within the corrigendum to Q2 2014 on page 5 of this report.

⁹ As of Q2 2013 Machine to Machine (M2M) subscriptions are excluded from mobile voice subscriptions. Therefore, changes in subscriptions are not directly comparable to previous periods. See section 4.6 for a more detailed description of M2M.

¹⁰ This estimate excludes business subscriptions and mobile broadband subscriptions.

- At the end of December 2014 there were 5,782,845 mobile subscriptions (including mobile broadband and M2M) in Ireland, a decrease of 0.3% since last quarter. The mobile penetration rate was 125.3% including mobile broadband and Machine to Machine subscriptions and 106.1% excluding mobile broadband and Machine to Machine subscriptions.
- The number of voice and data subscribers using 3G/4G networks increased to 3,337,147 this quarter, up by 12.8% from Q3 2014 and up by 28.0% compared to Q4 2013.
- There were 577,755 gross additions in the number of mobile subscriptions. Of these, 111,763 were subscriptions with ported numbers. On average, there were 103,405 numbers ported and 544,793 total gross additions per quarter over the last 12 months.
- In Q4 2014 mobile ARPU was €25 per month, down from €26 per month in Q4 2013. Declining mobile ARPU is likely to be a reflection of a number of factors such as those attributable to lower priced mobile plans, increased sales of bundled products (combining mobile with fixed calls, broadband and TV) and reductions in mobile roaming and termination rates, among others.

Notes to data:

- Both Meteor and emobile brands are reported under the umbrella of Eircom Group Mobile.
- Following the completion of the Three's acquisition of O2, Three, O2 and 48 brands are reported under the umbrella of the Three Group as of Q2 2014.
- As of Q3 2013 ComReg gathers information from additional mobile operators¹¹ (including Lycamobile). Hence, information since that quarter is not strictly comparable with data published in previous periods.
- As of Q4 2014 a more precise breakdown of business versus residential fixed subscriptions (fixed voice and fixed broadband subscriptions) is available following an operator upgrade of its reporting systems.
- Sky Ireland does not provide public information on TV subscriptions and TV revenues. Thus, information based on actual data from Sky is not included in the report. Sky Ireland's distribution of subscriptions by type (single play, double play or triple play) is instead estimated using the percentage distribution of Sky

¹¹ Historical data on mobile subscriptions in Q1 and Q2 2013 was also updated.

Ireland's subscriptions as obtained from market survey data conducted by RED C Research & Marketing Ltd on behalf of ComReg. For more details on survey method, see the Appendix on page 80.

- From Q4 2014 an Irish population estimate¹² of 4,614,200 is used, with this being obtained from the Central Statistics Office (CSO) QNHS survey. From Q4 2014, an estimated household number of 1,690,300 is used with this being obtained from the Central Statistics Office (CSO) QNHS survey.
- A number of external sources are used for international comparisons. These include the CSO, Analysys Mason, and Strategy Analytics (Teligen).
- In most cases data has been rounded to one decimal place in this report.
- Not all charts in this report may sum exactly to 100% due to rounding.
- While quarter on quarter comparisons are made in the report, definitive conclusions with regard to trends cannot be drawn from this and year on year comparisons are used to improve the reliability of the analysis.
- Further explanations and descriptions of data supplied in this report can be found in the accompanying explanatory memorandum 14/27a.
- Extracts of data used in this report can be downloaded at www.comstat.ie
- Data previously published may have been amended since publication. Any such amendments are noted in the corrigendum notice on page 5 of this report.

¹² Estimates based on Quarterly National Household Survey (QNHS).

1. Overall Market Data

Data presented in this report is based on questionnaires completed by authorised operators for the period from 1 October to 31 December 2014. The report is based on submissions from 52 active operators¹³.

1.1 Number of Authorisations

Figure 1.1.1 - Total Number of Authorisations

Total Authorisations	December 2014
No. of fixed and wireless authorisations	436
No. of mobile telephony authorisations	11
No. of broadcasting authorisations (incl. Cable TV, MMDS)	63
Total Number	510

Before providing networks or services to third parties, operators are required to submit a notification to ComReg which is added to a central register of authorised operators. At the end of Q4 2014 there were 510 authorised undertakings in Ireland up from 504 at the end of Q3 2014.

It should be noted that the list above refers to the number of general authorisations granted by ComReg under the European Framework for Authorisations, and does not necessarily reflect the total number of commercially active organisations or entities currently operating in the market. The total includes a number of undertakings who are authorised to use licence-exempt spectrum for the provision of services.

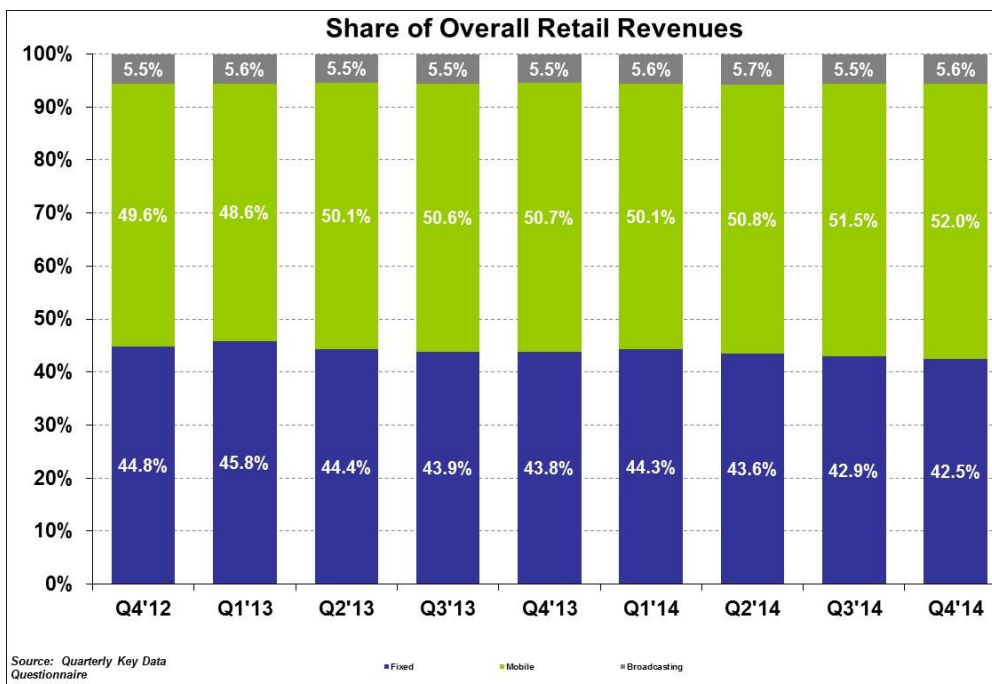
1.2 Overall Electronic Communications Revenues¹⁴

Figure 1.2.1 shows the proportion of industry retail revenue attributable to the provision of fixed line, mobile and certain TV broadcasting services.

¹³ See table A2 in the Appendix for the list of respondents submitting information to ComReg.

¹⁴ Further detail on terms and definitions - ComReg Doc. 14/27a Explanatory Memorandum.

Figure 1.2.1 – Fixed, Mobile & Broadcasting as a % of Total Retail Revenues



According to CSO, Ireland’s Gross National Product for Q3 2014¹⁵ was approximately €38 billion. Based on the Q3 2014 retail revenue data reported to ComReg by operators in the Irish communications sector, these revenues were approximately 2.0% of GNP in that quarter.

Overall electronic communications network and service retail revenues for Q4 2014 were €756 million. This was a 0.8% increase on the previous quarter. Comparing Q4 2013 to Q4 2014, industry retail revenues have decreased by 2.9%. Over the twelve months to December 2014, total retail revenues were over €3.00 billion.

This quarter, mobile retail revenues increased by 1.6%, but decreased by 0.4% when compared to Q4 2013. Fixed line retail revenues decreased by 0.4% this quarter and decreased by 5.9% when compared to Q4 2013. Broadcasting (Cable/MMDS/IPTV) retail revenues increased by 1.4%, but declined by 1.8% compared to Q4 2013. The broadcasting network retail revenues in this report only captures Cable/MMDS/IPTV revenues and thus, exclude Sky Ireland’s satellite revenues and all content related revenues.¹⁶

¹⁵ Q3 2014 is the latest period for which GNP data is available.

¹⁶ ComReg captures Cable/MMDS/IPTV revenues from a number of TV providers for publication in the Quarterly Report under broadcasting revenues. The collection and publication of licence fee and/or television advertising revenues does not fall within ComReg’s remit and therefore is not included in the broadcasting revenue figure.

1.3 Overall Call Volumes

Figure 1.3.1 - Share of Total Voice Call Volumes (Minutes)¹⁷

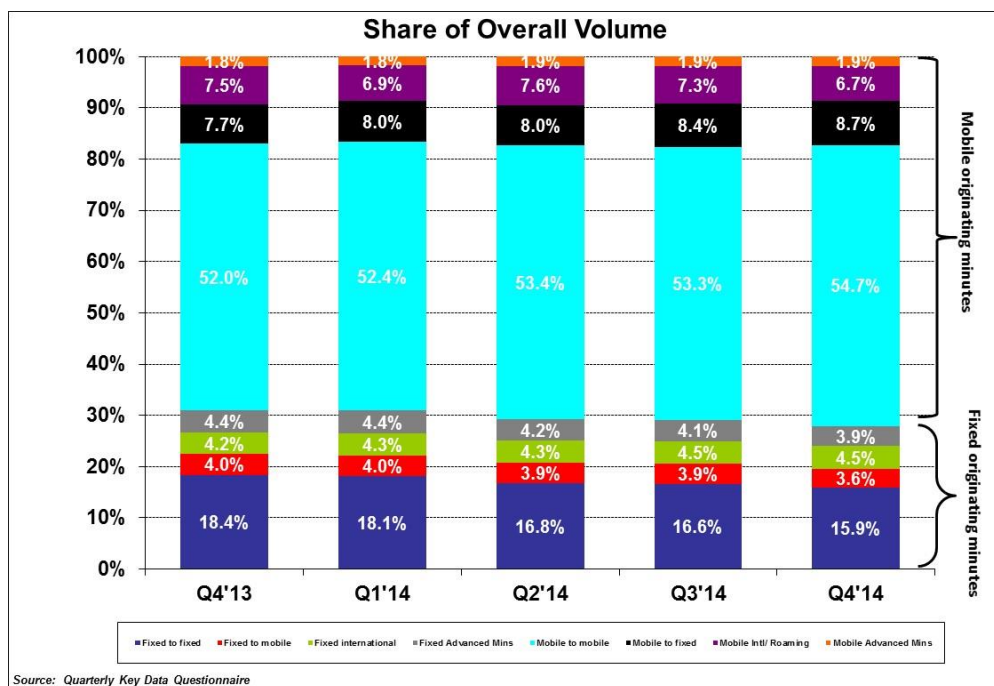


Figure 1.3.1 profiles volumes of originating voice calls by call type on both fixed and mobile networks on a quarterly basis. There was an increase in total voice minutes this quarter. Voice minutes for Q4 2014 totalled 4.22 billion minutes and there were 16.6 billion minutes in the twelve months to the end of December 2014. Total voice minutes increased by 2.4 % from the previous quarter and increased by 1.6% since Q4 2013.

It should be noted that managed VoB minutes are included with calls originating from fixed networks in figure 1.3.1, and are split according to the same call categorisations (i.e. domestic, international, mobile, other).

Mobile originating voice minutes (up 6.2% on Q4 2013) accounted for 72.1% of all voice minutes in Q4 2014 (compared to 69.0% in Q4 2013) while traffic originating on fixed line networks (down 8.5% on Q4 2013) accounted for the remaining 27.9% of all voice minutes (compared to 31.0% in Q4 2013). Figure 1.3.2 shows total voice traffic in Ireland at the end of Q4 2014.

¹⁷ Fixed advanced minutes include premium rate services minutes, freephone minutes, payphone minutes, operator services minutes, national and international virtual private network minutes. Mobile advanced minutes include premium rate services minutes and other mobile minutes such as voicemail, DQ, call completion minutes etc.

Figure 1.3.2 – Total Voice Traffic

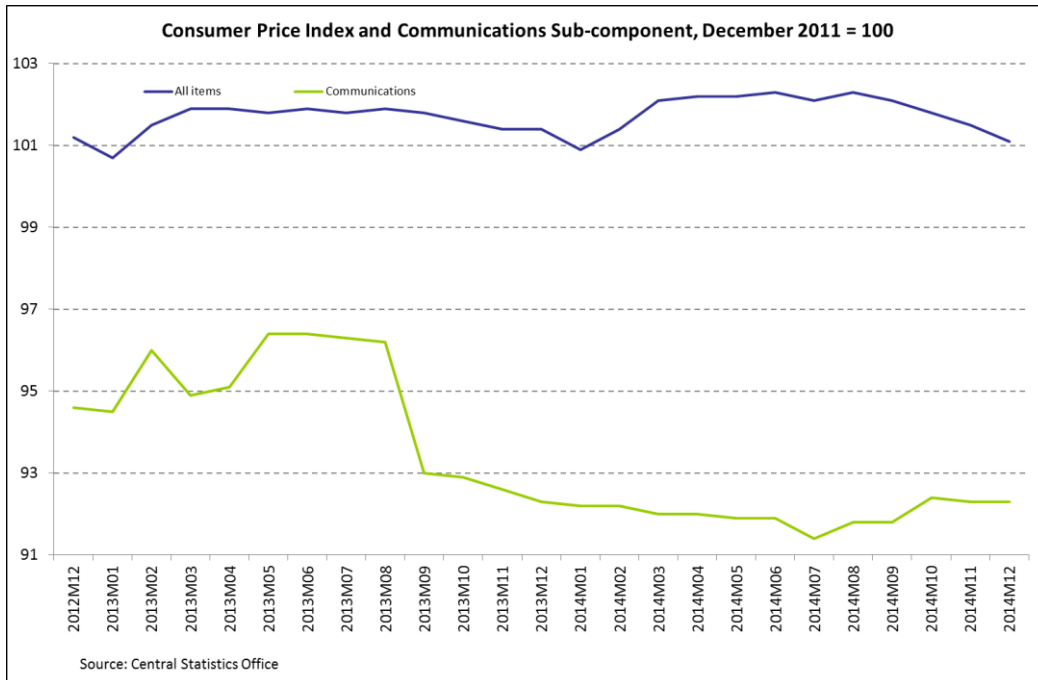
	Q4'14 Mins	Q3'14 – Q4'14 Growth	Q4'13 – Q4'14 Growth
Fixed voice minutes	1,176,979,209	-1.7%	-8.5%
Mobile voice minutes	3,040,153,241	+4.1%	+6.2%
Total voice minutes	4,217,132,450	+2.4%	+1.6%

1.4 Communications and the Consumer Price Index

Figure 1.4.1 shows the monthly change in the Consumer Price Index (CPI) and the communications sub-component from December 2012 to December 2014. In January 2014, the CSO has revised its weighting for the communications basket to 2.932% of the total CPI, down from 3.133% previously.¹⁸

Using December 2011 as the base period, communications prices have been generally stable over the last 12 months. Communication prices have remained at the same level since December 2013, compared to a decrease in the overall CPI of 0.3 base points in the same period.

Figure 1.4.1 – Consumer Price Index and Communications Sub-Component



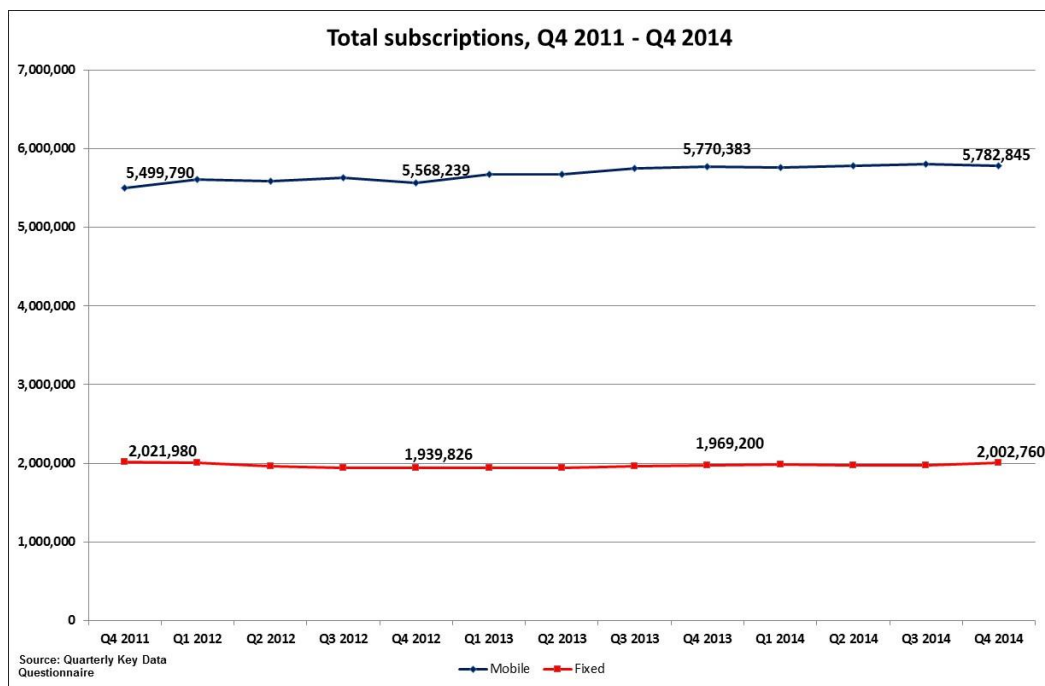
¹⁸ <http://www.cso.ie/en/releasesandpublications/er/cpi/consumerpriceindexjanuary2014/#.U2zgsnC-rK0>

1.5 Fixed and Mobile Market Retail Voice, Internet and TV Subscriptions

Figure 1.5.1 shows the total number of mobile voice and data subscriptions (also reported in section 4.1) and the estimated number of fixed subscriptions to voice, internet and TV services (both single play and bundled subscriptions) in Ireland.

Customers purchasing either a single fixed service or more than one service (as part of a bundle) are included in the fixed subscriptions category. Total mobile subscriptions¹⁹ have decreased by 0.3% since Q3 2014, while total fixed subscriptions increased by 1.7% over the same period. It should be noted that it is possible that a customer may have more than one subscription, particularly where a mobile customer has more than one SIM card or in the case of a business customer with multiple fixed line subscriptions across several offices.

Figure 1.5.1 – Total Subscriptions (Fixed and Mobile), Q4 2011 – Q4 2014



¹⁹ Mobile subscriptions were revised from Q2 2013 to Q3 2014 inclusive. See note 1 within the corrigendum to Q3 2014 on page 5 of this report.

2. Fixed Market Data

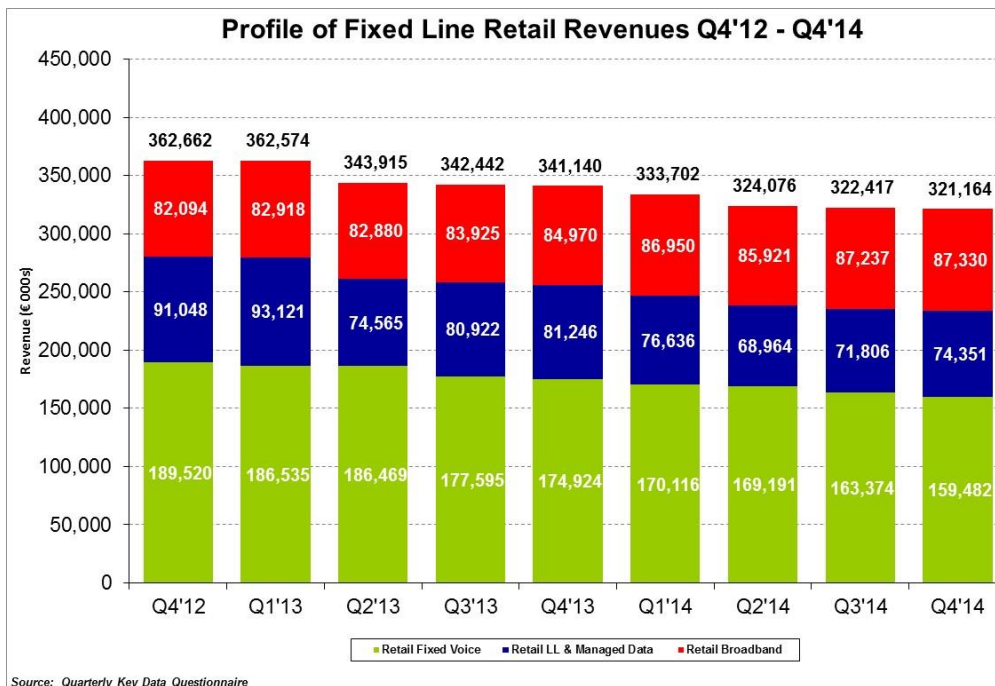
2.1 Fixed Line Retail Revenues

Figure 2.1.1 shows the profile of fixed line retail revenues in Ireland over the last two years. Total fixed line revenues for Q4 2014 were over €321 million. This was a decrease (0.4%) on Q3 2014 revenues and a 5.9% decrease on Q4 2013 revenues.

Retail fixed voice revenues (-8.8%) as well as retail leased lines, managed and other data services revenues (-8.5%) have fallen since Q4 2013, but retail broadband revenues have increased by 2.8%.

Comparing Q4 2013 to Q4 2014, the proportion of retail fixed line revenues attributable to retail leased lines, managed data and other advanced data services decreased by 0.6 percentage points and retail broadband revenues' share increased by 2.3 percentage points. The proportion of retail fixed voice revenues has fallen by 1.6 percentage points, to 49.7% of overall fixed line retail revenues.

Figure 2.1.1 – Profile of Fixed Line Retail Revenues



Fixed line wholesale revenues were over €153 million in Q4 2014, the majority of which were related to interconnect and wholesale fixed narrowband access revenues, followed by wholesale leased lines, managed and other data services revenues and wholesale broadband access revenues. Wholesale revenues increased by 1.4% compared to Q3 2014 and were up by 9.0% since Q4 2013.

2.1.1 Authorised Operators’ Share of Fixed Line Revenues

Figure 2.1.2.1 below outlines the revenue shares for the fixed retail market (comprising narrowband, broadband, leased line, managed and other data revenues) held by the incumbent fixed line operator (Eircom), other authorised operators (OAOs) having at least a 2% market share, and all other OAOs with market share less than 2%.

In Q4 2014, Eircom had the highest retail revenue share in the fixed retail market with 46.4% market share. UPC had 13.2%, followed by Vodafone²⁰ (fixed only) with 13.1%, BT (6.4%), Sky Ireland (3.0%) and Verizon (2.7%). Other OAOs accounted for the remaining 15.1%.

Figure 2.1.1.1 – Fixed Retail Revenue Market Shares

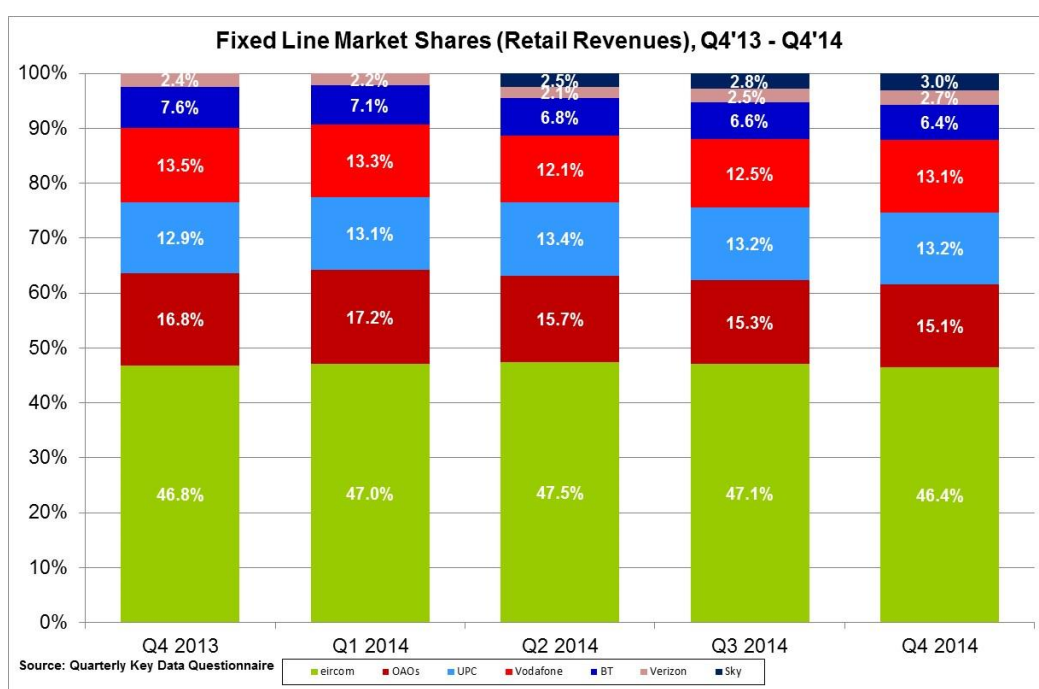
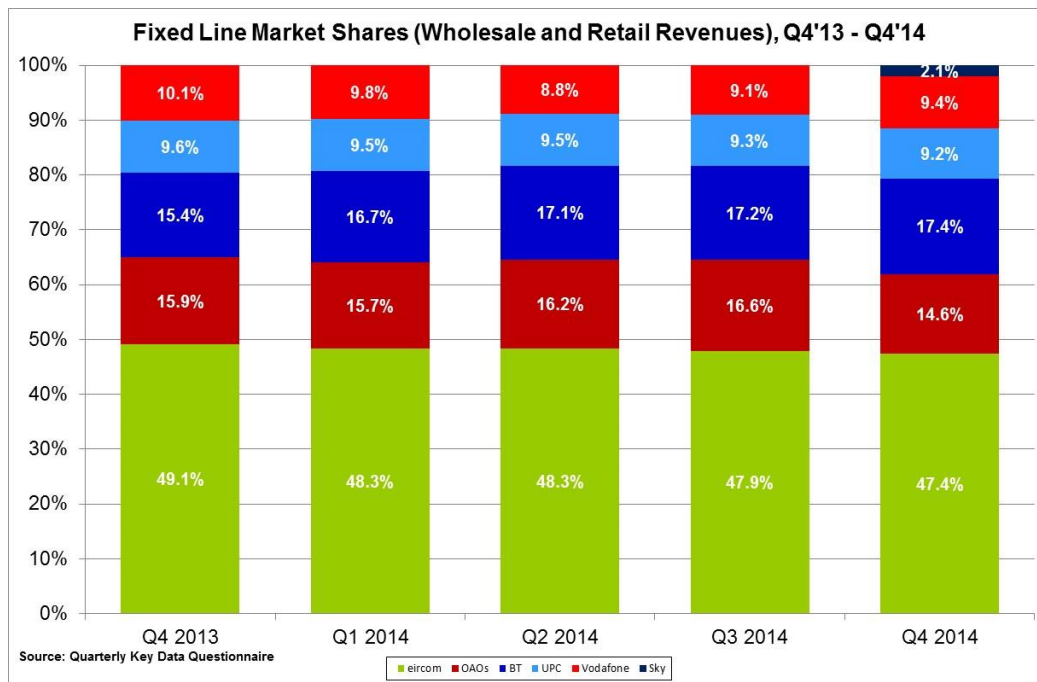


Figure 2.1.1.2 below outlines the revenue shares of the fixed market (comprising fixed line retail and wholesale revenues). When making comparisons, it is important to note that the market shares presented below are based on shares across all fixed wholesale and retail revenue streams and some operators may not offer products and services across all segments of the market.

In Q4 2014, Eircom had the highest revenue share in the market with 47.4% market share. ComReg estimates that the next four largest operators (BT, Vodafone (fixed only), UPC and Sky Ireland) contribute a further 38.1% of total (retail and wholesale) industry revenue, while OAOs account for the remaining 14.6%.

²⁰ As of Q4 2013 Vodafone’s revenues include revenues of the acquired companies (Cable & Wireless, Complete Telecom and Interfusion).

Figure 2.1.1.2 – Fixed Revenue Market Shares

2.2 Fixed Line Access Paths²¹ and subscriptions

2.2.1 Access Paths and VoB subscriptions

Figure 2.2.1.1 presents the total number of narrowband copper fixed access paths (PSTN and ISDN) and Voice over Broadband (VoB) subscriptions. PSTN and ISDN access paths are usually used for voice services and internet access. There were over 1.59 million direct and indirect PSTN and ISDN access²² paths in the Irish market in Q4 2014. This represents an increase of 0.2% on last quarter, but a decline of 2.8% since Q4 2013. The number of PSTN access paths decreased by 1.1% from last quarter and declined by 2.2% since Q4 2013. The number of ISDN access paths has increased by 4.6% since Q3 2014, but decreased by 4.9% since Q4 2013. At the same time, the number of VoB subscriptions has increased by 2.4% since Q3 2014 and by 14.0% since Q4 2013.

²¹ Access paths are not synonymous with access lines as for example in the case of ISDN paths, there may be more than one path provided via a single ISDN line.

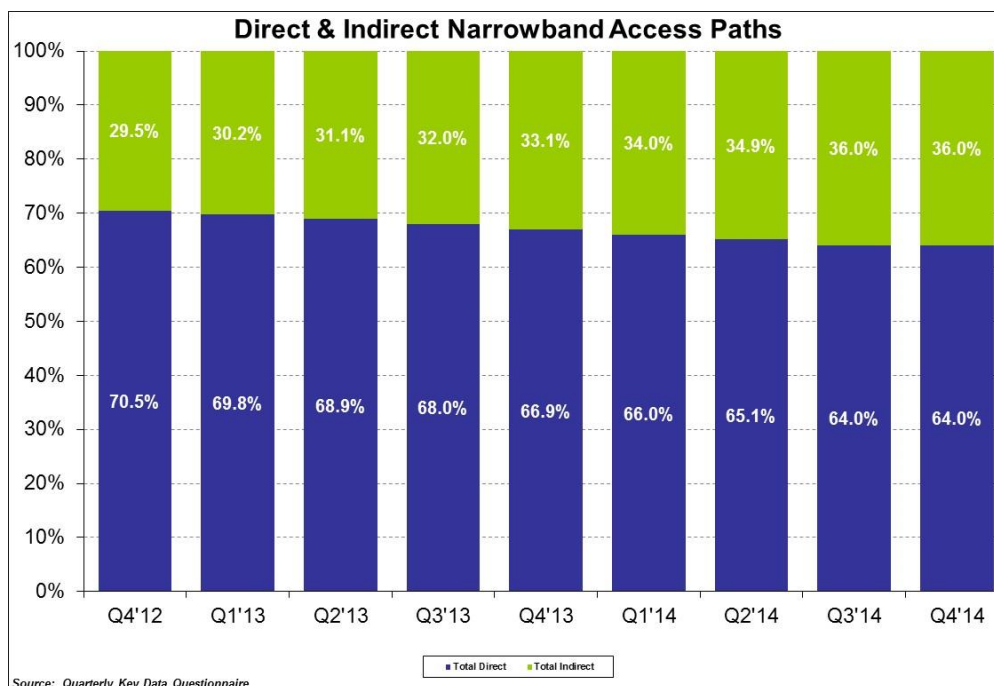
²² Indirect access paths relate to telephone lines provided to customers by means of Carrier Pre-select (CPS), Wholesale Line Rental (WLR) or Switchless Voice (SV). CPS allows the user to receive all or a portion of calls from one provider and line rental from another provider (usually Eircom). SB-WLR (also known as Single Billing-WLR) allows the user to receive every aspect of telephone service, including all calls and line rental from one single supplier. SV also known as White Label Access-Voice Access (WLA-(Voice)) is a switchless voice service which allows an operator to purchase end-to-end call services without the need to have its own interconnection infrastructure.

Figure 2.2.1.1 – Narrowband Fixed Access Paths and VoB subscriptions

	Q4'14	Q3'14 – Q4'14 Growth	Q4'13 – Q4'14 Growth
PSTN	1,233,735	-1.1%	-2.2%
ISDN Basic	131,872	-0.8%	-5.5%
ISDN Fractional	65,088	+11.9%	+9.7%
ISDN Primary	166,260	+6.6%	-9.2%
Total ISDN	363,220	+4.6%	-4.9%
Total PSTN and ISDN	1,596,955	+0.2%	-2.8%
VoB subscriptions	375,797	+2.4%	+14.0%

Figure 2.2.1.2 presents the total number of narrowband fixed access paths broken out by direct and indirect access. In Q4 2014, indirect access accounted for 36% of all access paths in the fixed line market. While this chart shows the number of narrowband only access paths in Ireland, fixed voice can also be supplied by other means such as broadband. Details on the broadband market in Ireland can be found in chapter 3 of this report.

Figure 2.2.1.2 – Direct & Indirect Narrowband Fixed Access Paths



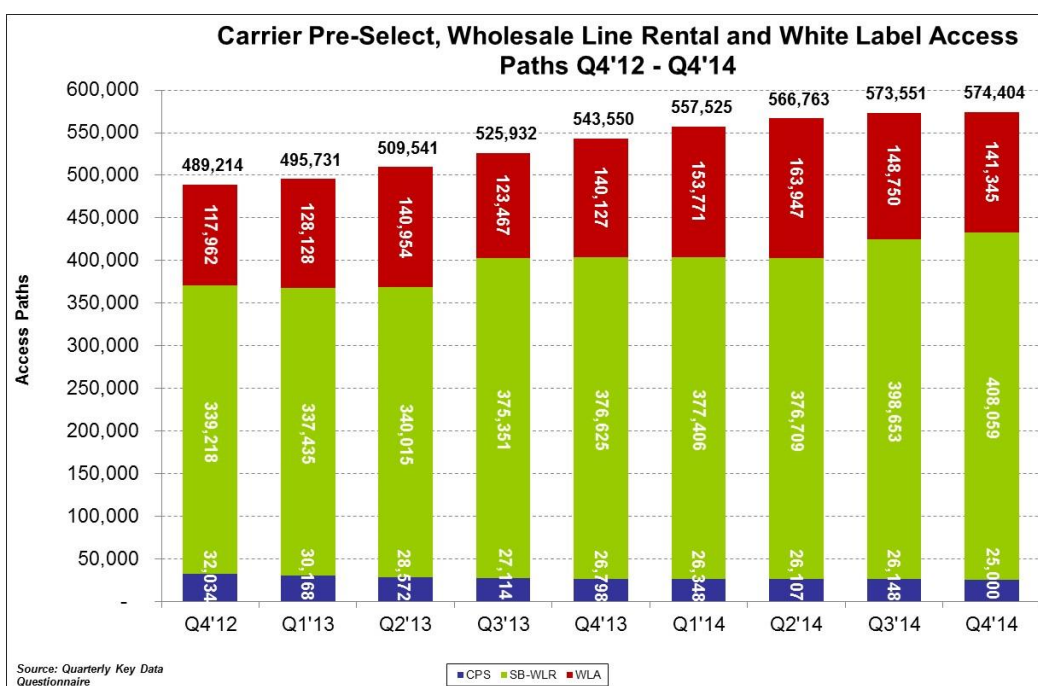
2.2.2 Indirect Access Paths

Figure 2.2.2 illustrates the overall number of indirect PSTN and ISDN paths provided by means of either Carrier Pre-Selection (CPS) only, Single Billing Wholesale Line Rental (SB-WLR) and White Label Voice Access (WLA). In Q4 2014, there were 574,404 indirect access paths in Ireland. The number of indirect access paths increased by 0.1% this

quarter and rose by 5.7% in the year to Q4 2014 due to an increase in SB-WLR, as CPS only access paths continue to decline.

The data indicates that OAOs continue to migrate their customer base to single-bill services, i.e. SB-WLR or WLA rather than CPS only (i.e. a calls only service, excluding line rental). SB-WLR used by OAOs now accounts for 71.0% of indirect access paths compared to 69.3% in Q4 2012. WLA paths account for 24.6% of total indirect access paths compared to 24.1% in Q4 2012. The share of CPS only indirect access paths has declined by 2.1 percentage points in the last two years and now accounts for 4.4% of overall indirect access paths.

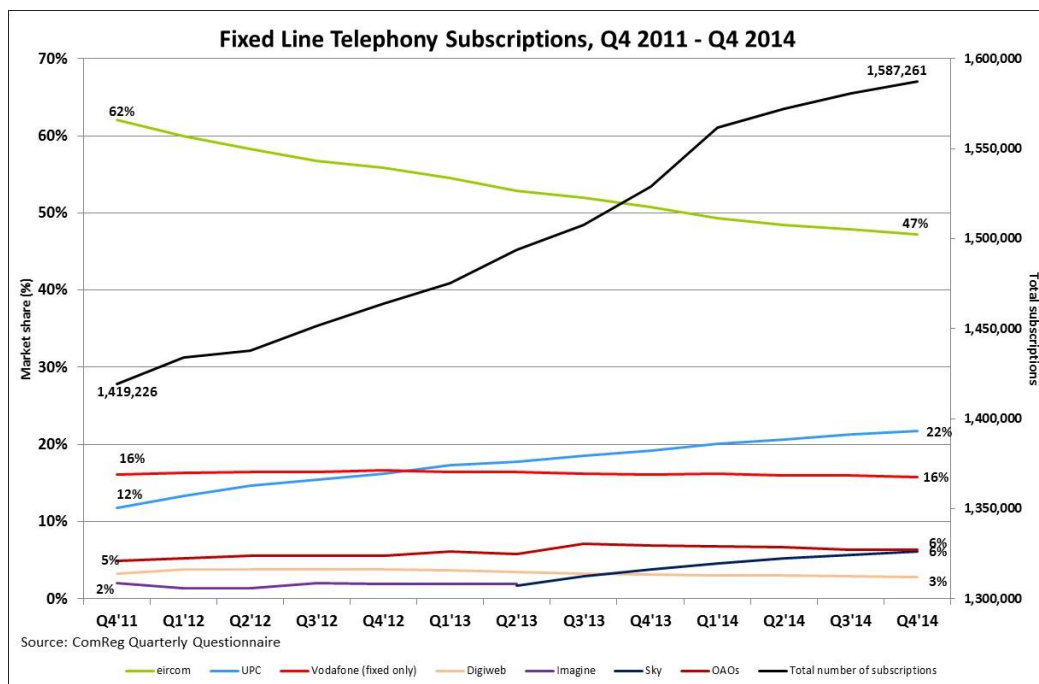
Figure 2.2.2 – Narrowband Indirect Access Paths



2.2.3 Fixed Voice Subscriptions

Figure 2.2.3 shows the estimated number of retail customers/subscriptions to fixed voice services (either standalone or as part of a bundle) and operators' market shares based on these subscriptions. At the end of Q4 2014 there was 1,587,261 fixed voice subscriptions (an increase of 0.4% on Q3 2014 and an increase of 3.8% on Q4 2013). Fixed voice subscriptions have been increasing quarter on quarter since Q1 2011. As of Q4 2014 Eircom had 47% of all fixed voice subscriptions followed by UPC (22%), Vodafone (16%) and Sky (6%).

Figure 2.2.3 – Fixed Voice subscriptions, Q4 2011 – Q4 2014²³



2.2.4 Fixed Market Retail Subscriptions by Type

Figures 2.2.4 shows the estimated proportion of retail customers/subscriptions to fixed line services (mobile is excluded from single play subscriptions but included when part of a bundle e.g. double/triple/quad play) broken out by those with a single service and those taking a bundle of two or more services as of Q4 2014 (subscriptions mean a customer with at least one contract with an electronic communications service provider).²⁴ Single play subscriptions include fixed line services only (including standalone cable TV and IPTV services) which means that standalone mobile voice, standalone mobile broadband and standalone satellite TV subscriptions are excluded from this figure.

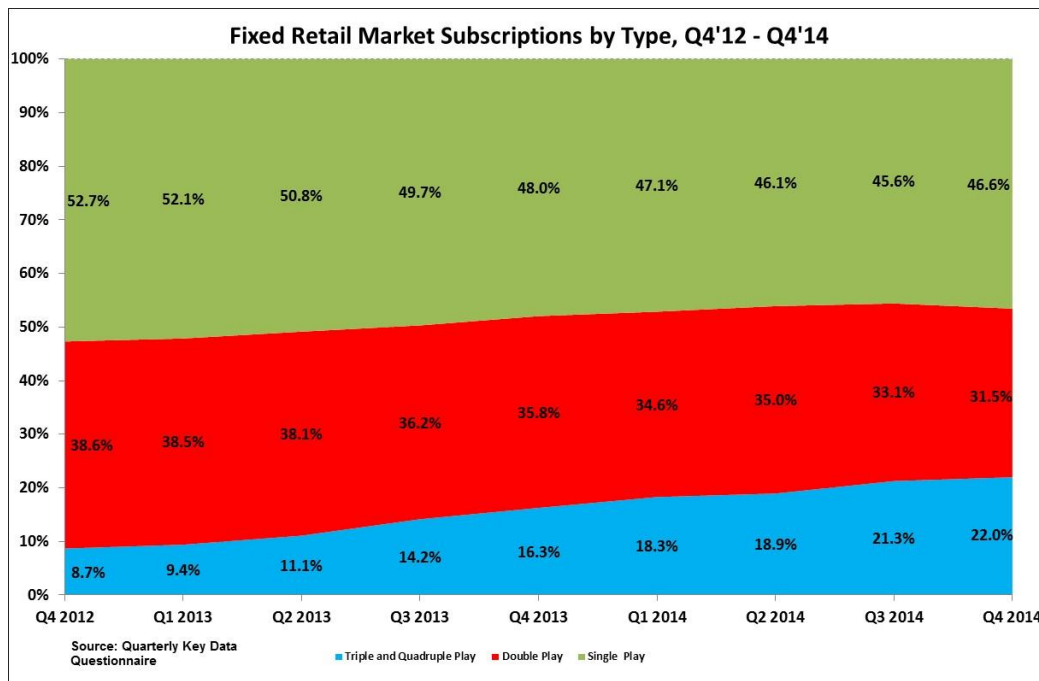
It is estimated that there were 2,002,760 fixed market retail subscriptions in Q4 2014 across both business and residential customers (a business customer may have multiple subscriptions). In Q4 2014 the increase in single play subscriptions (largely driven by the increase in standalone broadband subscriptions) and triple and quadruple play subscriptions was observed when compared to Q3 2014. In Q4 2014 46.6% of fixed market retail subscriptions were single play compared to 48.0% in Q4 2013, 31.5% of

²³ In Q2 2013 Sky reached the 2% market share publication threshold, while Imagine’s market share fell below it.

²⁴ Double play subscriptions can refer to either fixed telephony and internet or television or mobile telephony; television and the internet; mobile telephony and internet or television subscriptions. Triple play subscriptions can refer to fixed telephony and internet and television; fixed telephony and mobile telephony and internet; fixed telephony and mobile telephony and television; or, mobile telephony and internet and television subscriptions. Quadruple play subscriptions refer to fixed telephony, internet, television and mobile subscriptions.

subscriptions were double play (a bundle of two services) compared to 35.8% in Q4 2013 and 22.0% were triple play (a bundle of three services) and quadruple play (a bundle of four services) compared to 16.3% in Q4 2013.

Figure 2.2.4 – Fixed Market Retail Subscriptions by Type, Q4 2012 – Q4 2014²⁵



2.3 Fixed Voice Call Volumes

Fixed voice traffic in Q4 2014 was over 1.17 billion minutes, which was a 1.7% decrease on Q3 2014 and a fall of 8.5% since Q4 2013. Fixed voice traffic has fallen consecutively quarter on quarter since Q1 2011.

Managed voice over broadband (VoB) minutes account for approximately 11.9% of total fixed voice minutes up from 11.6% in Q4 2013.

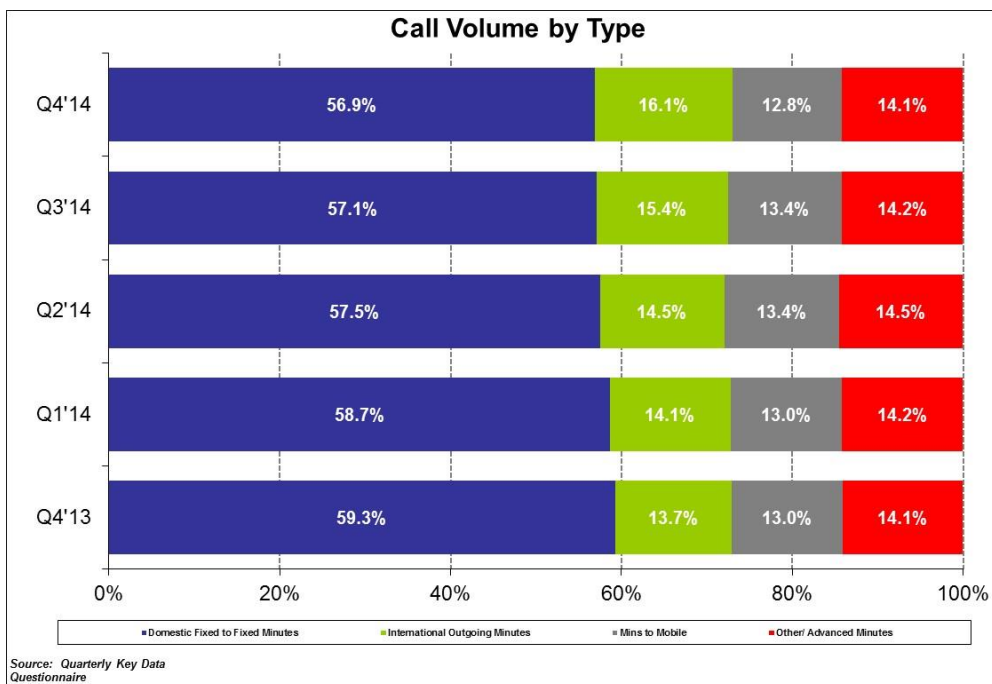
The numbers quoted in this report represent managed VoB data only (for example by Eircom, UPC and other providers such as Blueface) and do not include unmanaged or over the top VoB services by providers such as Skype.

It should be noted that the split of managed VoB minutes by category (i.e. domestic, international, mobile, other) is placed into those respective fixed minutes categories in figures 2.3.1, 2.3.2 and 2.3.3.

²⁵Sky Ireland do not provide information on TV subscriptions. Sky Ireland’s distribution of subscriptions by type (single play, double play or triple play) is estimated using the percentage distribution of Sky Ireland’s subscriptions obtained from the market survey data conducted by RED C Research & Marketing Ltd on behalf of ComReg. For more details on the survey method, see the Appendix on page 71.

Figure 2.3.1 shows that domestic fixed to fixed minutes accounted for 56.9% of all fixed voice traffic in Q4 2014. International outgoing minutes accounted for 16.1% of all fixed voice traffic. The share of fixed to mobile minutes was 12.8% while other/advanced minutes (which include premium rate minutes) represented 14.1% of all fixed voice traffic.

Figure 2.3.1 – Fixed Voice Call Volume (Minutes)²⁶



Figures 2.3.2 and 2.3.3 show the change in the average monthly fixed voice call minutes per business and residential subscribers respectively. In Q4 2014 the average business subscriber originated 767 minutes of voice calls. The average residential subscriber usage was 158 minutes per month. As noted on page 8 above, a more precise breakdown of business and residential fixed voice subscriptions is available. Hence, in Figures 2.3.2 and 2.3.3 call volumes in Q4 2014 are not directly comparable to call volumes in previous periods.

²⁶ Domestic Calls include local & national calls. Advanced service and other minutes include minutes to premium rate numbers, freephone numbers, callsave, operator services, VPN minutes, payphones and other services.

Figure 2.3.2 – Fixed Voice Call Volume per business subscriber (Minutes)

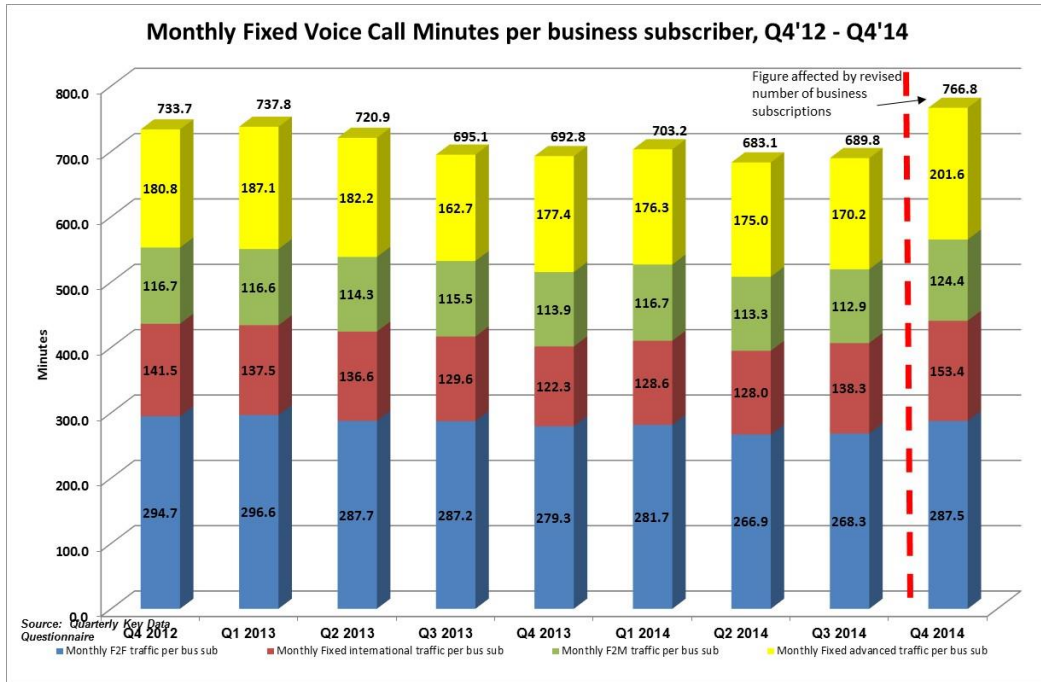
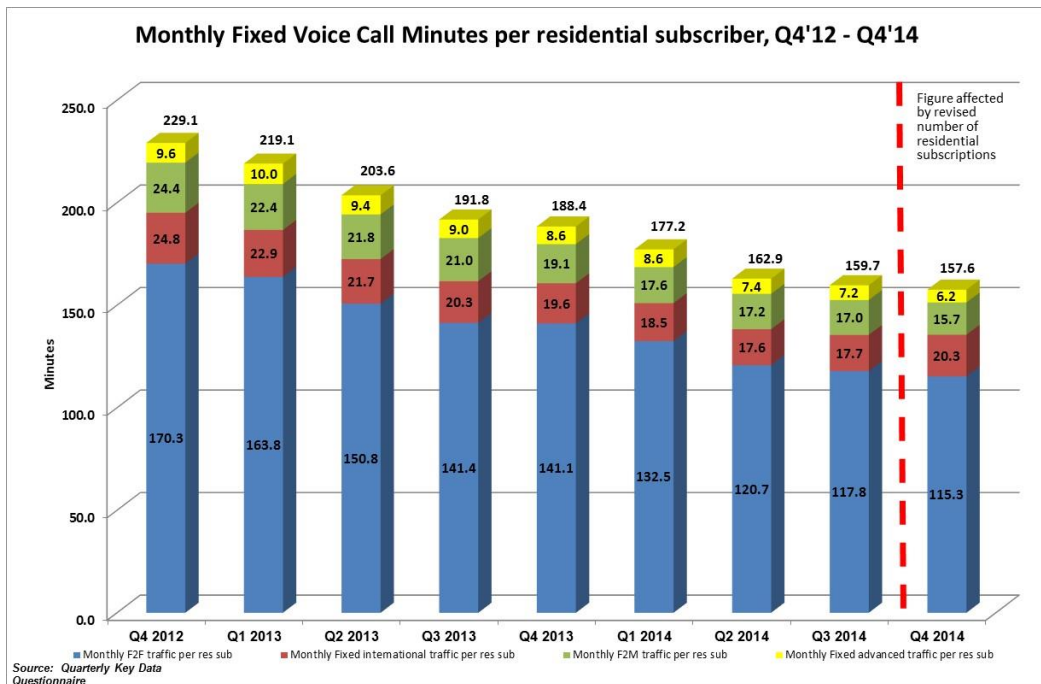


Figure 2.3.3 – Fixed Voice Call Volume per residential subscriber (Minutes)

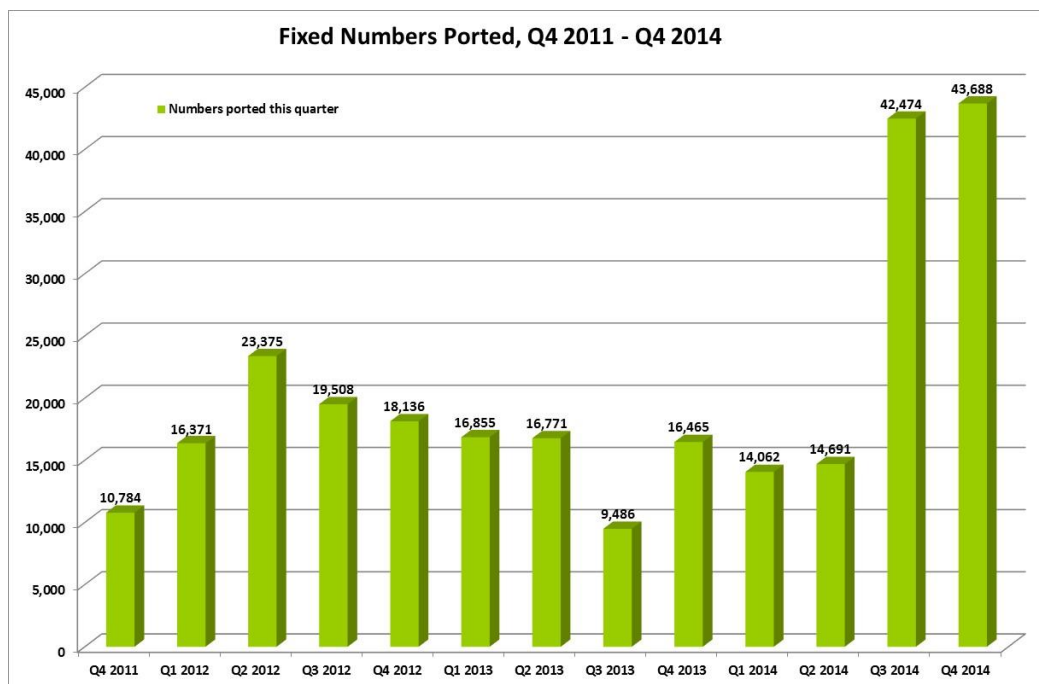


2.4 Switching in the Fixed Voice Market

Figure 2.4.1 illustrates the number of fixed numbers (geographic and non-geographic) ported between Irish fixed voice service providers since Q4 2011. Fixed Number Portability (FNP) allows consumers to switch fixed voice provider while retaining their fixed number.

In the quarter to December 2014, 43,688 numbers²⁷ were ported between operators (112,403 numbers in the twelve months to December 2014). Over the last 12 months, an average of 28,101 numbers has been ported each quarter. ComReg notes that a significant increase in the number of ported numbers is due to an audit of the central reference database which records porting activity of fixed numbers. The audit began in August 2014 and was finished in January 2015. Operators have updated the central reference database as a consequence of this audit.

Figure 2.4.1 – Fixed Numbers Ported



2.5 Standalone Fixed Voice Service Pricing Data

ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific fixed voice usage baskets of national and international telecoms services for both residential and business users. The pricing data used for international comparisons currently includes pricing information for selected countries, namely Germany, Denmark, Spain, Netherlands and the United Kingdom²⁸.

For national comparisons, the prices advertised²⁹ by the largest operators (in terms of number of subscribers to standalone fixed voice services³⁰) during Q4 2014 were

²⁷ Non geographic number ports constitute less than 5% of total ports in a quarter.

²⁸ In future Quarterly Key Data Reports ComReg may expand the analysis and include more countries for international price comparisons.

²⁹ The pricing analysis is based on a review of operators' advertised prices in the period Q4 2014.

analysed³¹ for selected usage baskets. In this Quarterly Key Data Report, standalone fixed voice service prices advertised by Eircom, Sky, Digiweb and Pure Telecom were analysed. Thus, the pricing analysis does not necessarily present the lowest prices available in the whole market, but rather the lowest prices offered by the operators having the largest number of subscribers.

For international comparisons, the prices advertised³² by three largest operators (in terms of number of subscribers to standalone fixed voice service) in each of the respective countries during Q4 2014 were analysed³³ for selected usage baskets³⁴ (with an average per country price presented based on the average of these three operators). In order to enable international comparisons, prices are presented in Euro Purchasing Power Parities (PPPs) and exclude VAT charges. PPPs provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services.

The presented national and international comparison analysis incorporates discounts offered by operators. Nonrecurring charges (e.g. charges for the installation of a service) are discounted/amortised over five years. Fixed recurring monthly costs such as line rental and any other additional recurring charges are included. Calls to fixed, mobile and international destinations are included in the baskets.

The OECD basket methodologies are reviewed and revised periodically, with the latest revision made in early 2010³⁵. For more detailed information on basket methodologies see ComReg's accompanying Memorandum, document 14/27a.

The following baskets are presented in this report³⁶:

³⁰ Standalone fixed voice services are voice services not sold as part of a bundle or other services.

³¹ The subscribers of these operators jointly account for over 93% of all standalone fixed voice subscribers.

³² The pricing analysis is based on a review of operators' advertised prices in the period Q4 2014.

³³ The subscribers of these operators jointly account for over 80% of all standalone fixed voice subscribers in each of the respective countries.

³⁴ The same basket was applied to each respective country in order to make the international comparison.

³⁵ See <http://www.oecd.org/sti/broadband/48242089.pdf>

³⁶ In future Quarterly Key Data Reports ComReg may expand the analysis and present price comparisons based on additional and/or different usage baskets.

Residential and Business Standalone Fixed Voice Service Baskets

Type of basket	Basket
Residential	60 calls (190 minutes)
Business	260 calls (606 minutes) basket

These baskets were selected given they most closely related to the fixed voice usage patterns presented in figures 2.3.2 and 2.3.3 above. ComReg notes that these baskets reflect usage patterns of an average user and do not necessarily reflect prices of tariffs that are geared towards customers having different usage profiles.

ComReg notes that comparisons are based on the prices of advertised tariffs³⁷ only and the analysis does not take into consideration other potentially important factors such as quality of the network, level of customer care, additional units of consumption available after having accounted in the analysis for the units in the OECD usage basket, minimum contract term etc.

OECD Residential Standalone Fixed Voice Service Basket

Figure 2.5.1 compares tariffs advertised by standalone fixed voice service providers for residential customers based on a basket of 60 calls (190 minutes)³⁸. Pure Telecom offers the cheapest tariff for this particular basket at €36.77, followed by Digiweb (€40.49) and Eircom (€43.08).

³⁷ Tariffs publically advertised during Q4 2014.

³⁸ Basket assumes the usage of 150 fixed to fixed minutes, 25 fixed to mobile minutes and 15 international minutes.

Figure 2.5.1 - Residential Standalone Fixed Voice Basket (National comparison)

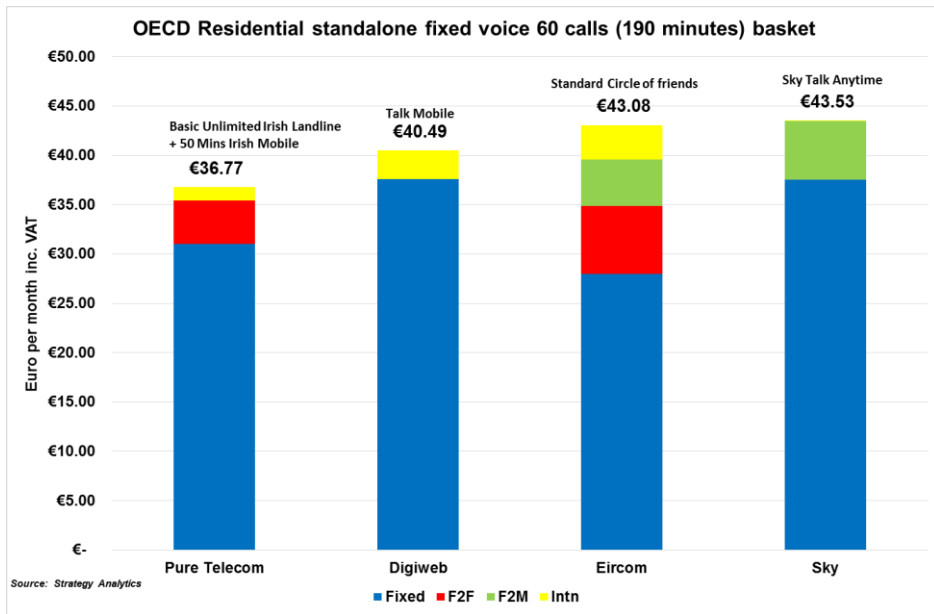
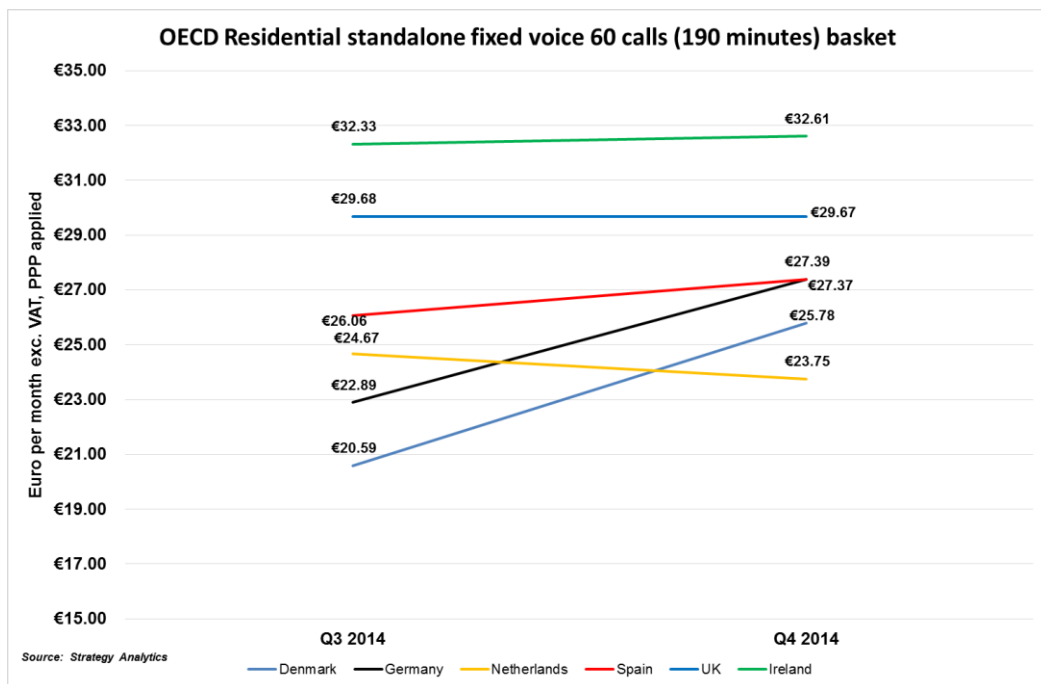


Figure 2.5.2 illustrates Ireland’s ranking alongside five other Western European countries. In Q4 2014 Ireland ranked in sixth place with an average price of €32.61³⁹ for this particular basket. The average price in Ireland is 17% more expensive than the average price⁴⁰ for all of the countries included in the analysis.

Figure 2.5.2 - Residential Standalone Fixed Voice Basket (International comparison)



³⁹ As noted previously, average prices used for international comparisons exclude VAT charges.

⁴⁰ The average of prices presented in Figure 2.5.2. Prices include line rental.

OECD Business Standalone Fixed Voice Service Basket

Figure 2.5.3 compares tariffs advertised by standalone fixed voice service providers⁴¹ for business customers based on a basket of 260 calls (606 minutes)⁴². Vodafone offers the cheapest tariff for this particular basket at €37.99.

Figure 2.5.3 - Business Standalone Fixed Voice Basket (National comparison)

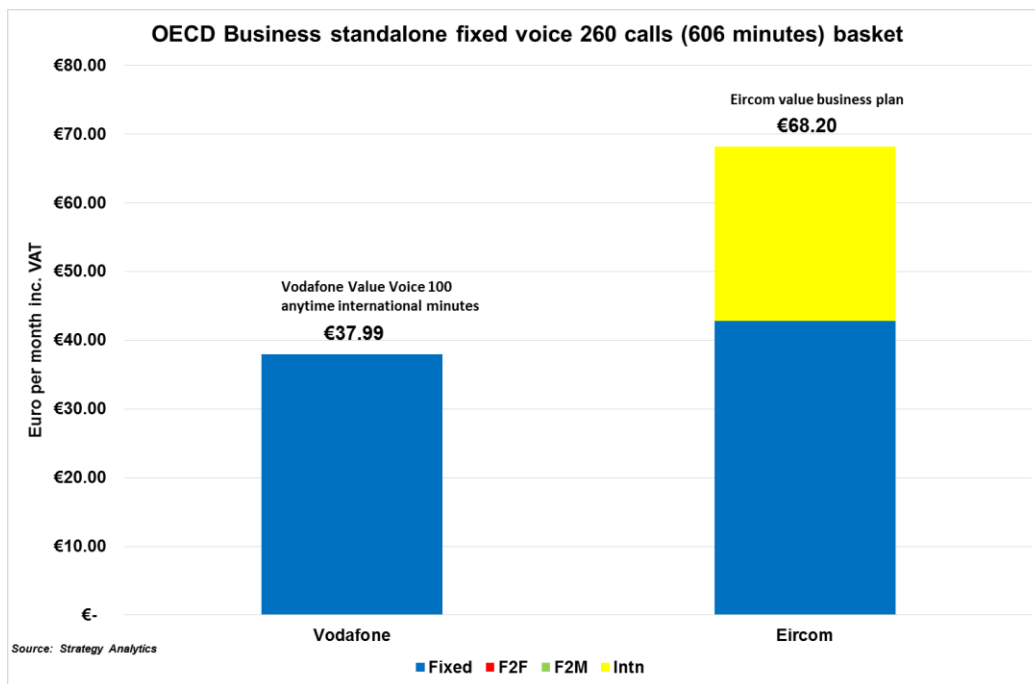


Figure 2.5.4 shows that Ireland (€43.17⁴³) ranks in the second place. The average price in Ireland is 22% cheaper than the average price⁴⁴ for all of the countries included in the analysis.

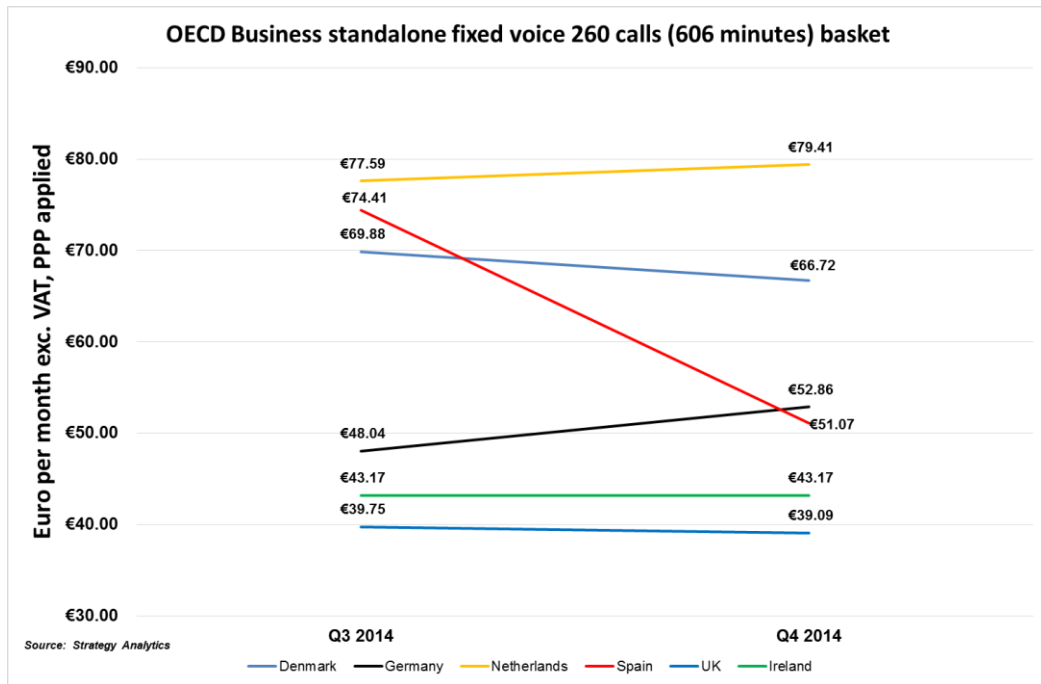
⁴¹ In this Quarterly Key Data Report only tariffs advertised by Vodafone and Eircom were analysed for business customers. This can arise for reasons such as operators not offering fixed voice services to business customers or not advertising prices publicly. ComReg may expand the analysis and include additional operators in the future Quarterly Key Data Reports.

⁴² Basket assumes the usage of 402 fixed to fixed minutes, 116 fixed to mobile minutes and 88 international minutes.

⁴³ As noted previously, average prices used for international comparisons exclude VAT charges.

⁴⁴ The average of prices presented in Figure 2.5.4. Note that figures exclude VAT/equivalent taxes.

Figure 2.5.4 - Business Standalone Fixed Voice Basket (National comparison)



3. Internet and Broadband

3.1 Total Internet Subscriptions and provision of broadband⁴⁵ services

Figure 3.1.1 shows the total number of narrowband and broadband internet subscriptions in Ireland as of Q4 2014. At the end of December 2014, there were 1.70 million active internet subscriptions in Ireland. This was a decrease of 0.1% on the previous quarter, but a 0.01% increase on December 2013.

In Q4 2014, there were 1,691,619 broadband subscriptions in Ireland⁴⁶. This is a decrease of 0.1% since Q3 2014, but an increase of 0.2% since Q4 2013. There was an increase in total fixed line broadband subscriptions this quarter (up by 18,112), but mobile broadband subscriptions fell again this quarter (down by 19,893 subscriptions). ComReg reports active mobile broadband subscriptions and does not include internet access over mobile handsets (such as smartphones) within these numbers.

Cable (up by 1.2%) and VDSL⁴⁷ (up by 18.1%) and 'other' (up by 2.4%) subscriptions showed positive growth this quarter. FWA (down by 7.0%), mobile broadband (down by 4.4%) and DSL⁴⁸ (down by 2.1%) subscriptions fell this quarter. It is likely that some or all of the DSL reductions are accounted for by consumers switching to VDSL based broadband services.

Figure 3.1.1 – Total Number of Active Internet Subscriptions

Subscription Type	Q4'14 Subs	Quarterly Growth Q3'14 – Q4'14	Year-on-Year Growth Q4'13 – Q4'14
Narrowband	6,238	-8.1%	-27.2%
DSL Broadband	630,546	-2.1%	-10.1%
VDSL Broadband⁴⁹	201,633	+18.1%	+170.5%
Cable Broadband	366,554	+1.2%	+7.4%

⁴⁵ ComReg notes that the data provided in this section relates to active subscriptions reported by operators. It takes into account multiple active subscriptions to broadband offerings by individual subscribers.

⁴⁶ The difference between this and the total internet subscriptions is accounted for by narrowband internet subscriptions.

⁴⁷ VDSL refers to very-high-bit-rate digital subscriber line. These lines are typically utilised in the provision of next generation broadband services. Since Q3 2013 VDSL lines are reported in the separate category. In Q2 2013 report VDSL lines were included in DSL category.

⁴⁸ DSL refers to a digital subscriber line, the means by which broadband speeds (i.e. in excess of 144k downstream) are delivered over the copper telecoms network.

FWA Broadband	48,486	-7.0%	-19.8%
Other Broadband⁵⁰	11,539	+2.4%	-3.8%
Total Fixed broadband	1,258,758	+1.5%	+5.8%
Mobile Broadband	432,861	-4.4%	-13.4%
Total Broadband	1,691,619	-0.1%	+0.2%
Total Internet Subscriptions	1,697,857	-0.1%	+0.01%

Figure 3.1.2 profiles internet subscriptions in Ireland using the subscription type classifications of outlined in Figure 3.1.1.

Figure 3.1.2 – Total Broadband Subscriptions⁵¹

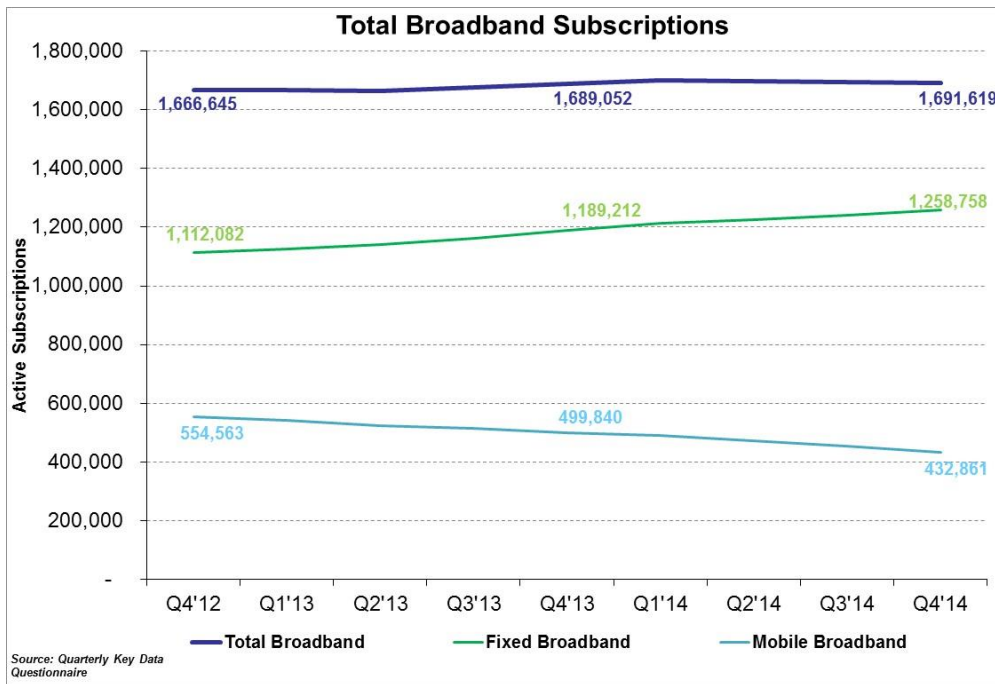
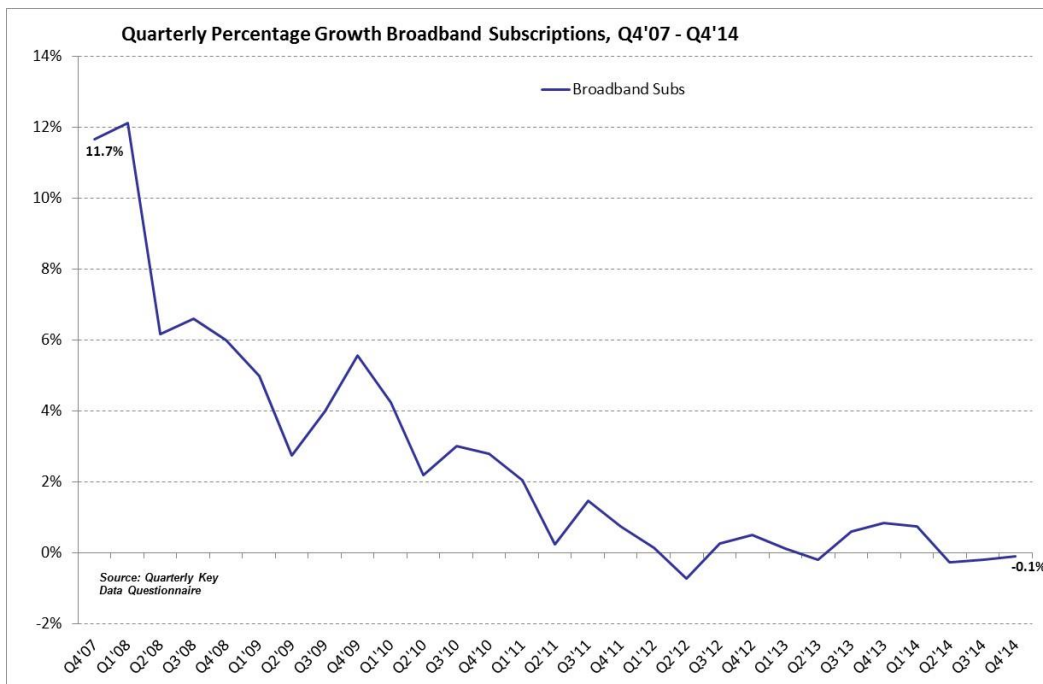


Figure 3.1.3 shows the quarterly percentage change in broadband subscriptions since Q4 2007. In general, there has been a continual slowdown in the rate of growth of broadband subscriptions over the period. The growth in broadband subscriptions picked up again in Q3 2013. However, there was minor negative growth in total broadband subscriptions this quarter. It should be noted that ComReg reports on active broadband subscriptions and the mobile broadband numbers reported by ComReg do not include internet access over mobile handsets (such as smartphones).

⁵⁰ Other Broadband includes fibre and satellite broadband subscriptions.

⁵¹ The number of total internet subscriptions and total internet subscriptions growth will be removed in the next publication of the Key Quarterly Data Report as the number of narrowband subscriptions has become negligible.

Figure 3.1.3 – Quarterly Growth in Total Broadband subscriptions



DSL subscriptions account for the largest share of broadband subscriptions (37.3%), but its share has decreased by 4.2 percentage points over the last year. VDSL accounted for 11.9% of all broadband subscriptions in Q4 2014 up from 4.4% in Q4 2013. Mobile broadband subscriptions share has declined again this quarter, now accounting for 25.6% of all broadband subscriptions down from 29.6% in Q4 2013. Cable has a 21.7% share of all broadband subscriptions up from 20.2% in Q4 2013. FWA has a 2.9% share of broadband subscriptions down from 3.6% in Q4 2013. 'Other' (satellite/fibre) broadband subscriptions represent the remaining 0.7% of broadband subscriptions in Q4 2014 (same as in Q4 2013).

Figure 3.1.4 illustrates the split by type of broadband subscriptions in the Irish market since Q4 2013, while Figure 3.1.5 shows the net additions to broadband subscriptions by each platform. While the net total number of broadband subscriptions decreased this quarter, there was growth in VDSL, cable and 'other' broadband subscriptions.

Figure 3.1.4 – Broadband Subscriptions by Platform

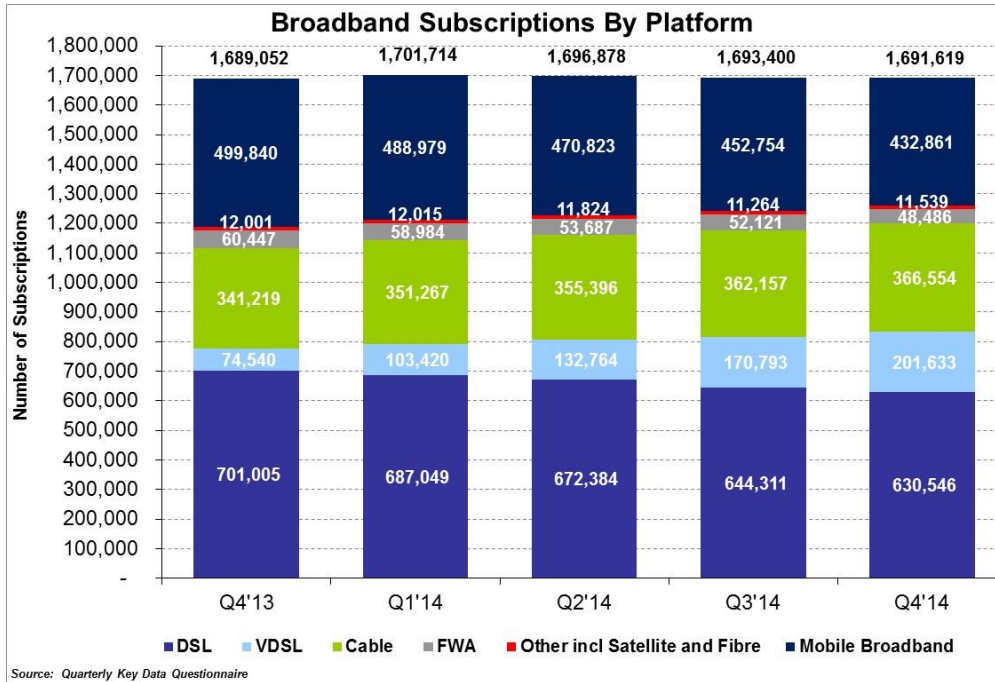


Figure 3.1.5 – Broadband Subscriptions - Net additions, Q4 2012 – Q4 2014

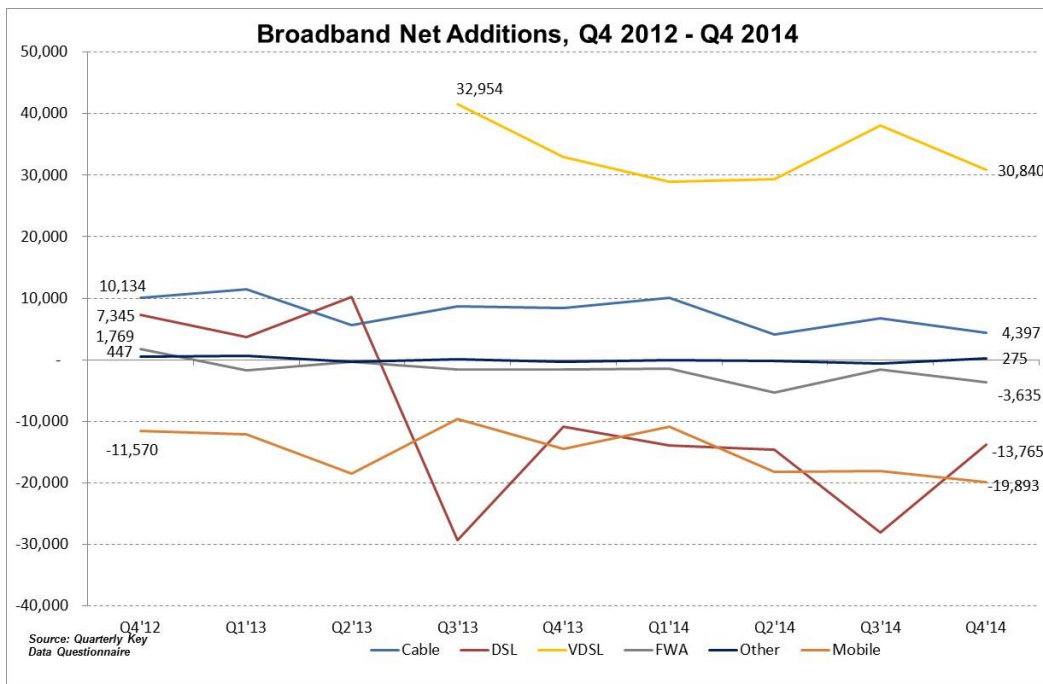


Figure 3.1.6 provides an estimate of the proportion of business and residential subscriptions to DSL, VDSL, cable, FWA, mobile broadband, fibre and satellite broadband services. In Q4 2014, 83.5% of broadband subscriptions on all platforms were classed as residential broadband subscriptions. The platform with the highest

percentage of residential vis-à-vis business subscriptions is cable broadband, while the mobile broadband category has the highest percentage of business customers.

Figure 3.1.6 – Broadband Subscriptions by Subscription Type⁵²

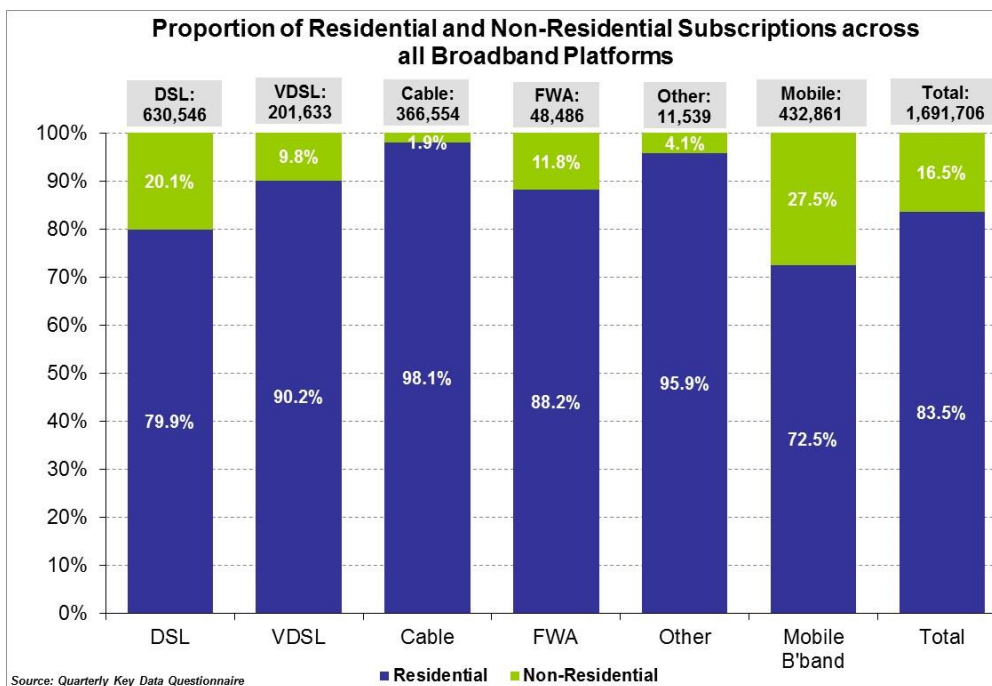


Figure 3.1.7 illustrates the breakdown of broadband subscriptions by contracted speed across all fixed broadband platforms (mobile broadband is excluded). In total, approximately 63.8% of broadband subscriptions were ≥ 10 Mbps (with 45.4% ≥ 30 Mbps). This equates to approximately 68.8% (49.6% ≥ 30 Mbps) of residential subscriptions and 29.3% (16.7% ≥ 30 Mbps) of business subscriptions.

The data suggests that most business users subscribe to broadband services with download speeds of between 2Mbps - 10Mbps while most residential users subscribe to broadband services with speeds ≥ 30 Mbps. This may be due in part to UPC primarily serving the residential market rather than business market as evidenced in Figure 3.1.6 above. Many larger business users access their broadband services over dedicated leased lines. Leased lines are not included in these charts. Leased line speeds can range up to speeds in excess of 1 gigabyte per second.

⁵² This figure is affected by revised breakdown of fixed and residential subscriptions. See page 8 for more details.

Figure 3.1.7 – Fixed Broadband Subscriptions⁵³ by Contracted Download Speeds and Subscription Type

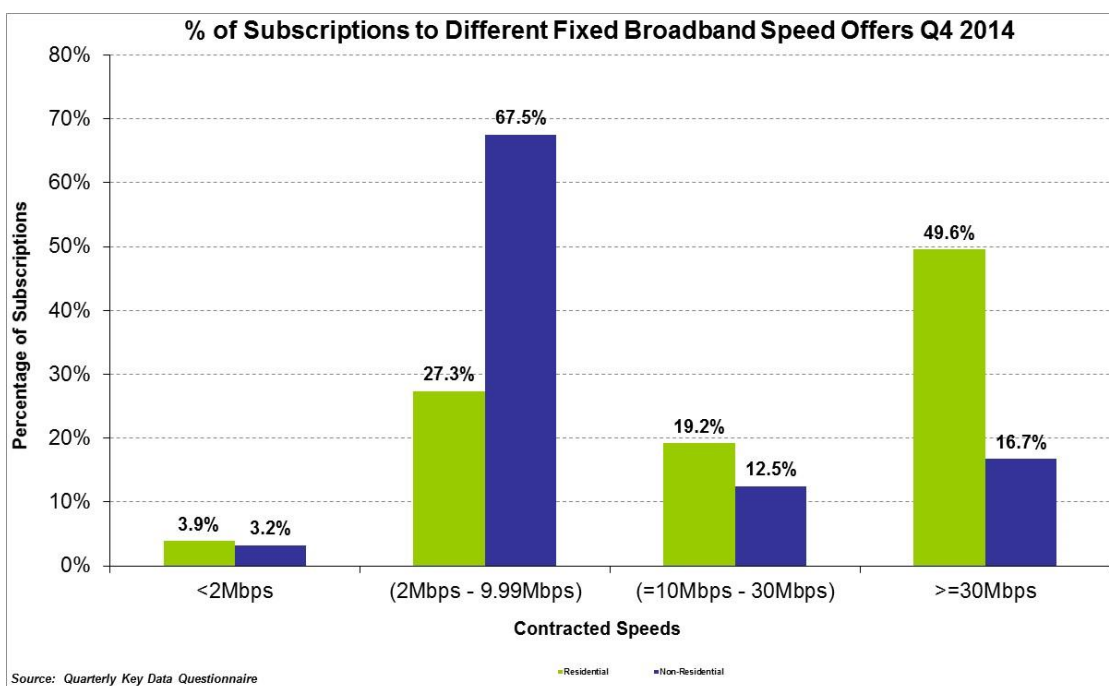
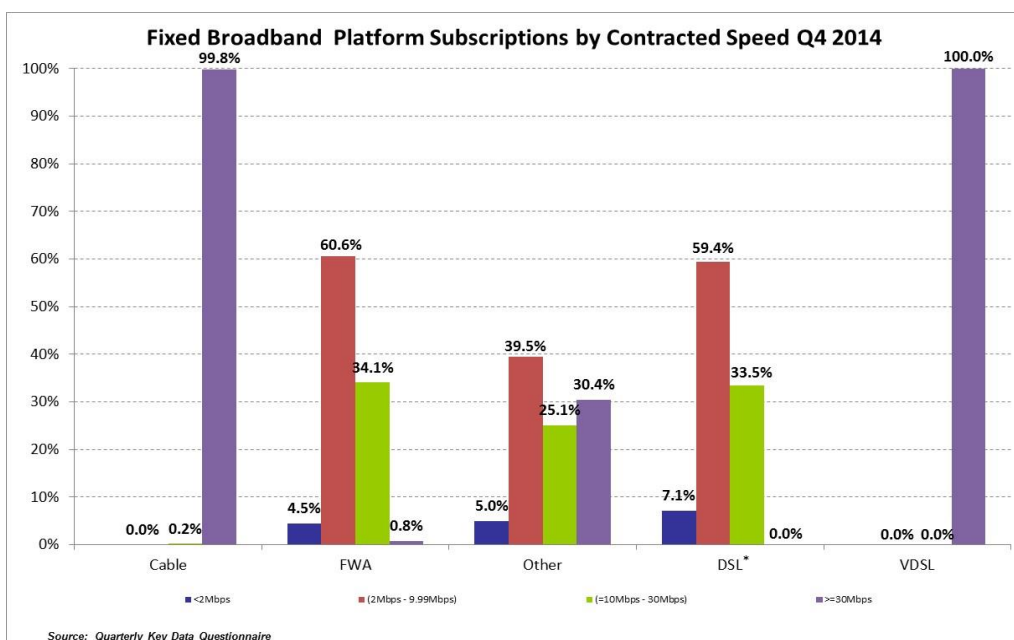


Figure 3.1.8 shows broadband subscriptions by contracted speed and the type of broadband platform subscribed to.

Figure 3.1.8 – Fixed Broadband Subscriptions by Contracted Download Speeds and Broadband Platform⁵⁴



⁵³ As of Q2 2013 mobile broadband subscriptions are excluded from the overall broadband subscriptions in the broadband speed analysis. This figure is affected by revised breakdown of fixed and residential subscriptions. See page 8 for more details.

⁵⁴ *Estimate percentage split.

Figure 3.1.9 shows the change in fixed broadband subscriptions by contracted download speeds between Q4 2012 and Q4 2014. Over the entire period, growth in broadband speeds has been mainly in the $\geq 30\text{Mbps}$ category, which has increased from 20.4% to 45.4%. Cable subscriptions represented approximately 64% of total subscriptions $\geq 30\text{Mbps}$ down from 67% last quarter.

Figure 3.1.9 – Fixed Broadband Subscriptions by Contracted Download Speeds

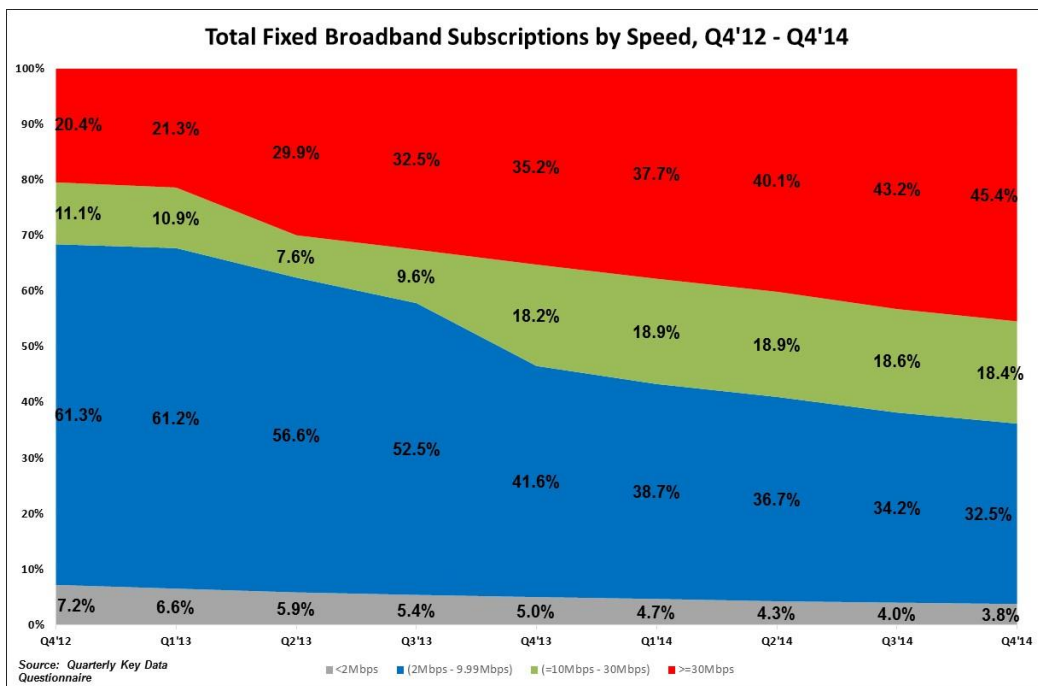


Figure 3.1.10 provides the market shares of fixed broadband operators by number of subscriptions. DSL, VDSL cable modem, FWA, satellite and fibre subscriptions are used to calculate fixed broadband market shares.

Operators with a market share of 2% or more are shown in the chart below. All those operators with less than 2% of total fixed broadband subscriptions are grouped together under the heading 'OAOs'.

According to the data received from operators for Q4 2014, Eircom had 36.5% of total fixed broadband subscriptions, followed by UPC who had 28.9% of subscriptions. Vodafone had 17.2% (excluding mobile broadband subscriptions), Sky Ireland had 7.4%, Imagine had 2.0%, and Digiweb also had 2.0% market share. All other operators combined accounted for the remaining 5.9% share of fixed broadband subscriptions.

Figure 3.1.10 – Subscription Market Share of Fixed Broadband Market

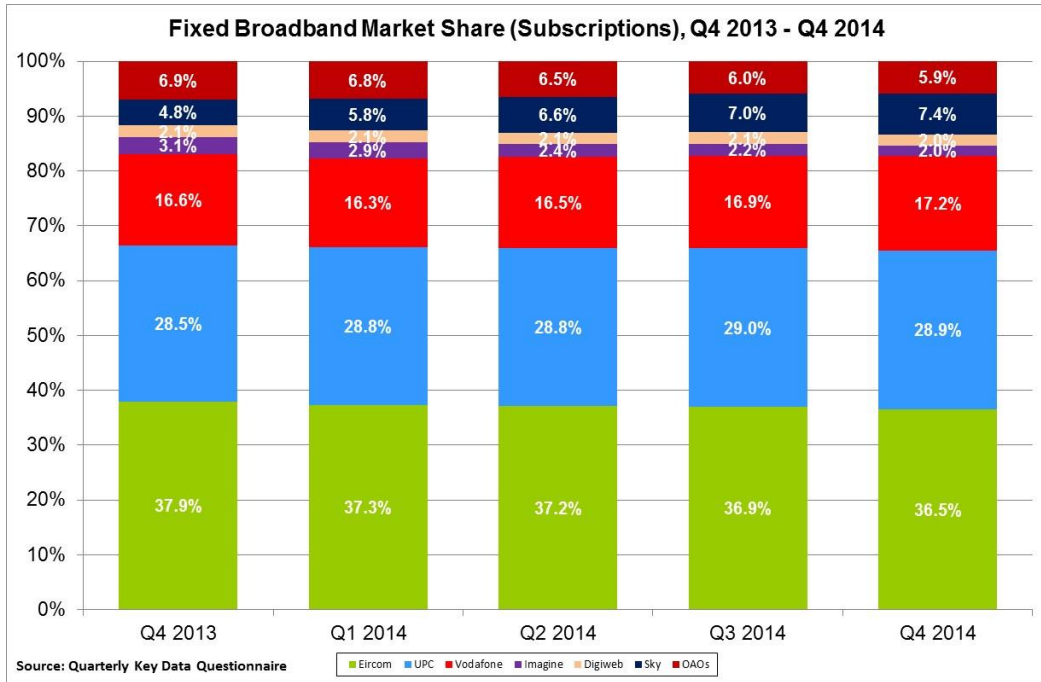
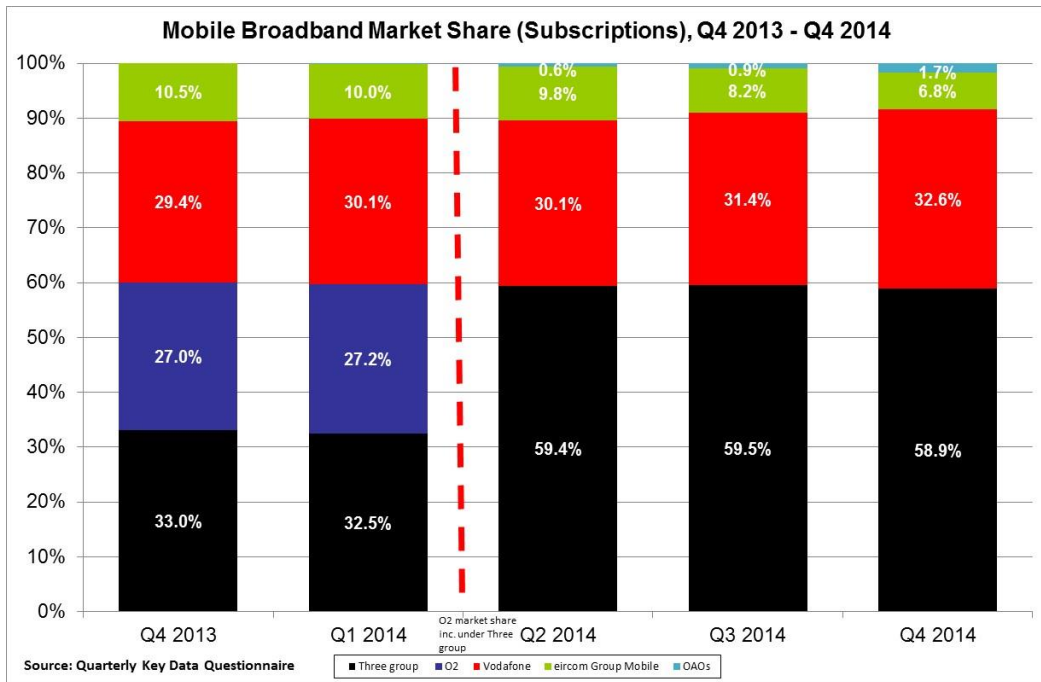


Figure 3.1.11 shows the market share of mobile broadband operators by subscriptions. As of Q3 2014, Three Group had the largest share with 58.9%⁵⁵. Vodafone’s market share was 32.6%, up from 29.4% in Q4 2013. Eircom Group Mobile had a market share of 6.8% down from 10.5% in Q4 2013 while OAOs accounted for the remaining 1.7%.

Figure 3.1.11 – Subscription Market Share of Mobile Broadband Market



⁵⁵ As of Q2 2014 O2 data is included under Three Group umbrella. For more details see note on page 8 of this report.

3.2 Provision of DSL Access

Figure 3.2.1 examines the provision of DSL access. DSL broadband services are provided to consumers by operators using three alternative methods of access. DSL may be provided directly to the consumer by Eircom using direct access to its network; this accounted for 50.7% of all DSL subscriptions in Q4 2014. Eircom’s market share of retail DSL lines has declined by 5.6 percentage points over the last year. Retail DSL may also be provided by alternative operators (OAOs) who use either wholesale bitstream, which enables OAOs to resell another operator’s DSL service, or by offering DSL-based broadband using local-loop unbundling (LLU).

In Q4 2014, 36.0% of all DSL lines were provided by OAOs using wholesale bitstream. In absolute terms there were 226,805 wholesale bitstream lines in Q4 2014, an increase of 0.1% since Q4 2013. The remaining 13.3% of DSL lines were provided to subscribers by OAOs using local-loop unbundling. In Q4 2014 there were 84,089 unbundled local loops, up from 80,037 in Q4 2013, but down from 84,529 in Q3 2014.

Figure 3.2.1 - Provision of DSL Access

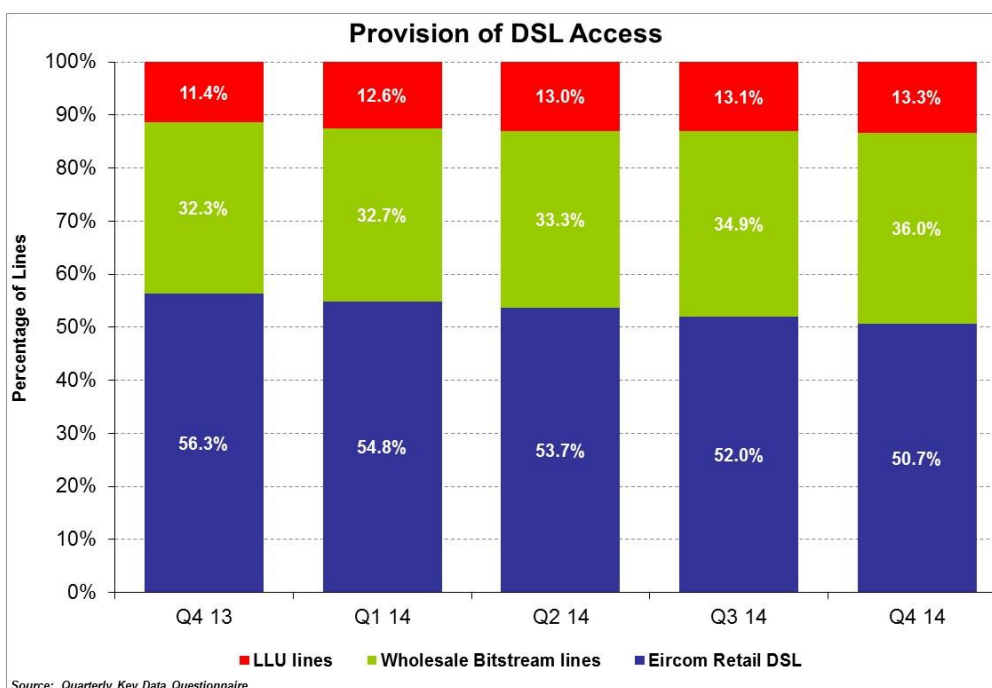
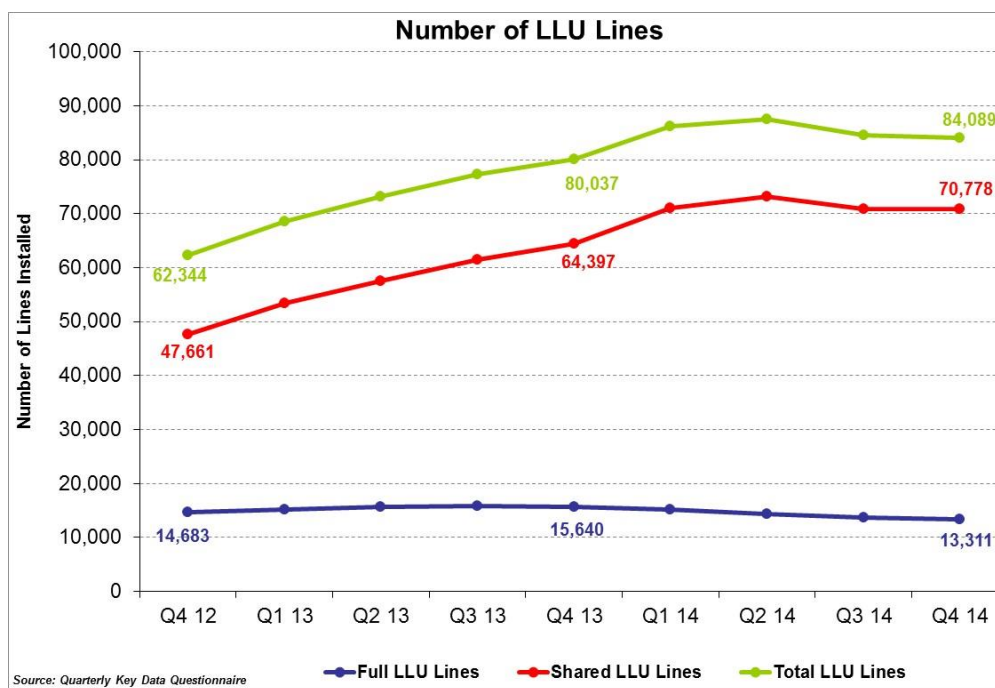


Figure 3.2.2 shows the number of unbundled lines according to their shared and full⁵⁶ unbundling status. Between Q4 2013 and Q4 2014 the total number of LLU lines increased by 5.1%, but declined by 0.5% since Q3 2014. Full LLU lines have decreased

⁵⁶ Full LLU and shared LLU are two ways a copper loop may be unbundled. While full LLU assigns the entire copper loop to the leasing operator, shared LLU enables other operators and the incumbent to share the same line. With shared access consumers can acquire voice and data services from an operator or alternatively data services alone while retaining the voice services of the incumbent.

by 14.9% since Q4 2013 and declined by 2.8% since Q3 2014. Shared LLU lines rose by 9.9% since Q4 2013, but declined by 0.1% since Q3 2014.

Figure 3.2.2 – Number of Local Loops Unbundled



3.3 Provision of VDSL Access

VDSL broadband services are provided to consumers by operators using three alternative methods of access. VDSL may be provided directly to the consumer by Eircom using direct access to its network; this accounted for 69.5% of all VDSL subscriptions in Q4 2014. Retail VDSL may also be provided by alternative operators (OAOs) who use either wholesale bitstream, which enables OAOs to resell another operator’s VDSL service, or by offering VDSL-based broadband using virtual unbundled access (VUA).

3.4 Broadband Penetration

The total number of broadband subscriptions in Ireland for Q4 2014 was 1,691,619. Using fixed residential broadband subscriptions only, 1,098,684 (i.e. excluding business subscriptions and mobile broadband subscriptions), the estimated fixed broadband household penetration rate (there were 1,690,300 households in Ireland using CSO Q3 2014 estimate) as of Q4 2014 was 65.0%.

Based on the total number of broadband subscriptions in Ireland for Q4 2014, the broadband per capita penetration rate (including mobile broadband) was 36.7%. When

mobile broadband is excluded, the penetration rate was 27.3%.⁵⁷ These figures are based on a population of 4,614,200 from Central Statistics Office (CSO) Q3 2014 estimate⁵⁸.

Figure 3.4.1 shows fixed broadband subscriptions per capita among 28 EU countries in Q3 2012 and Q3 2014⁵⁹. Based on this data, Ireland’s fixed broadband per capita penetration rate (26.4%) remains behind the benchmarked EU28 average of 29.2%.

Figure 3.4.1 – Fixed Broadband Subscriptions per Capita, Q3 2012 – Q3 2014

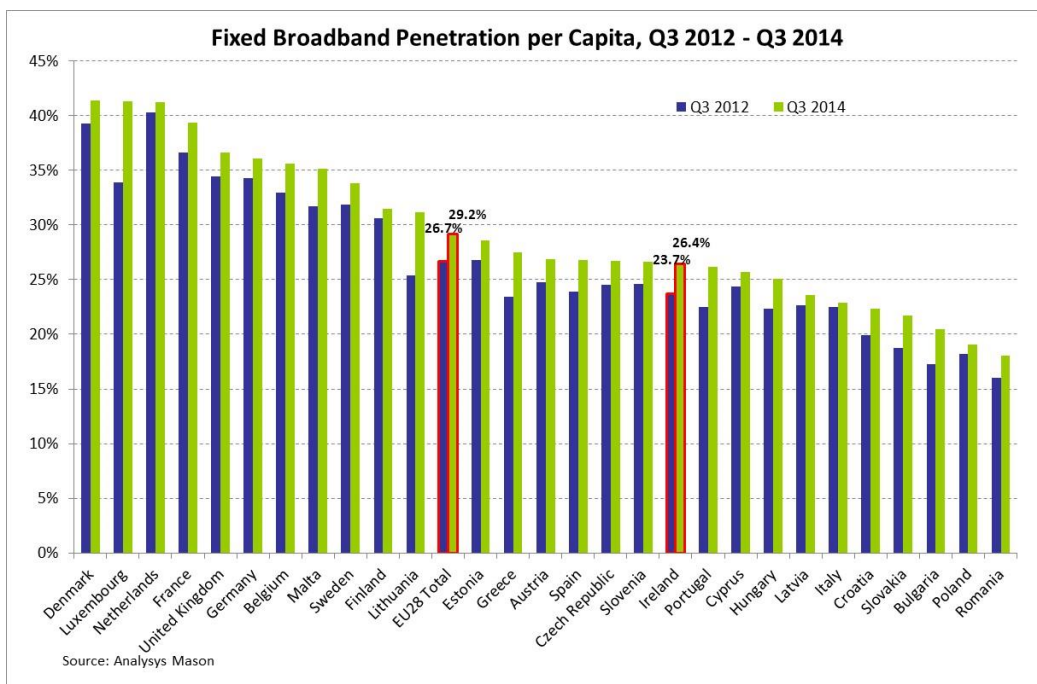


Figure 3.4.2 shows the proportion of households with broadband connections from 2010 to 2014. Both fixed and mobile broadband⁶⁰ are included. Ireland’s household broadband penetration rate, at 80%, is higher than the EU28 average of 78%. Penetration has increased by 22 percentage points since 2010 while the EU28 penetration has increased by 17 percentage points. Figure 3.4.3 presents broadband penetration rates in Ireland and EU since 2005.

⁵⁷ It should be noted that ComReg reports dedicated mobile broadband subscriptions (i.e. on the basis of mobile dongles/datacards) only. Subscriptions with Internet access over a handset are not included. Therefore, the total number of mobile broadband users (i.e. dedicated mobile broadband and handset subscriptions with internet access) will be higher than stated in this report. On the other hand, a broadband subscriber may have both a fixed and mobile broadband subscription and therefore, a broadband penetration rate based on both mobile and fixed subscriptions may overestimate the penetration rate.

⁵⁸ Estimates based on Quarterly National Household Survey (QNHS).

⁵⁹ Q3 2014 is the latest quarter for which this information is available.

⁶⁰ Households with at least one member aged 16–74. Broadband connection includes: DSL, VDSL, wired fixed (cable, fibre, Ethernet, PLC), fixed wireless (satellite, WiFi, WiMax) and mobile wireless (3G/UMTS).

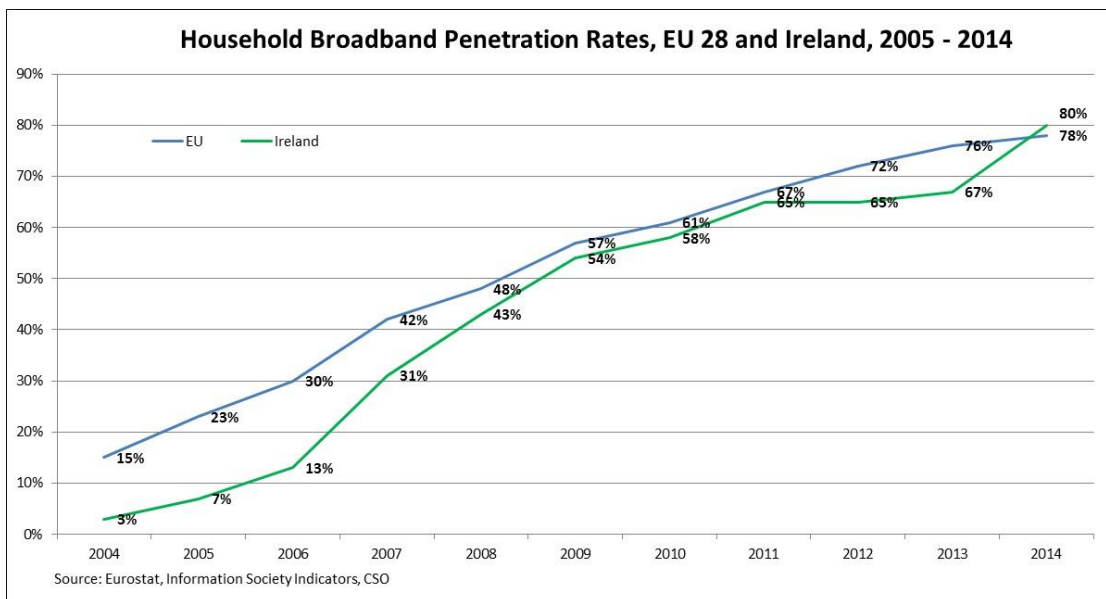
Figure 3.4.2 – Household Broadband Subscriptions, 2014

	Broadband internet connections		
	2010	2012	2014
AT	64	77	79
BE	70	75	81
BG	26	51	56
CY	51	62	69
CZ	54	63	76
DE	75	82	87
DK	80	85	85
EE	64	73	81
EL	41	51	65
ES	56	65	73
EU-28	61	72	78
FI	76	85	89
FR	66	77	77
HU	52	68	74
HR	49	60	68
IE	58	65	80
IT	49	55	71
LT	54	60	65
LU	70	68	93
LV	53	67	73
MT	69	77	80
NL	80	84	95
PL	57	67	71
PT	50	60	63
RO	23	50	58
SE	83	87	87
SI	62	73	75
SK	49	72	76
UK	75	86	88

(u) data is not reliable

Source: Eurostat⁶¹

Figure 3.4.3 – Household Broadband Penetration, 2005 - 2014



⁶¹ (online data code [isoc_bde15b_h](#))

3.5 Wi-Fi Broadband Access

While Wi-Fi originally emerged as an alternative to share broadband connectivity in the home and to provide access to nomadic laptop users in airports and other public places, it is now being used by a broader range of service providers with different business models and services which include in home connectivity, outdoor access for nomadic users, and off-loading and coverage alternative for mobile operators.

ComReg presents data on the Wi-Fi market based on the number of public Wi-Fi hotspots and access points located nationally. Internet hotspots are typically public wireless access points where a computer, usually a laptop, or other portable device such as an iPhone or tablet can connect to the internet. A Wi-Fi hotspot can be made up of one or more Wi-Fi access points⁶². Wi-Fi hotspots tend to be found in airports, hotel lobbies and cafés and restaurants. In most cases, the user pays for high-speed internet access at an access point, based either on a vouchered payment for a specific amount of time online or a recurring monthly subscription. There are a number of providers of these services in Ireland including Bitbuzz, Eircom, Sky Ireland and BT Ireland.

Comparing Q4 2013 to Q4 2014, the number of Wi-Fi hotspots and access points have increased by approximately 23.9% and 20.5% respectively. Wi-Fi minutes increased by 122.1% over this period. This may be a reflection of the increasing take up of smartphones and tablet devices among Irish consumers, as well as changes in Wi-Fi operators' conditions of access. It should be noted that due to changes in policy by some Wi-Fi operators towards termination of a session (i.e. in the past a user's session was terminated if they dropped of the network for a short period of time. However, a user can now be off the network for longer periods before the session is terminated) the number of Wi-Fi minutes has increased as a result.

A breakout of the data by operators' percentage shares in Q4 2014 is also provided below.

⁶² Hotspots are typically public locations at which broadband internet access can be obtained. At these hotspots, users with a computer (usually a laptop) can wirelessly connect to the internet either for free or on payment of a fee. Typical locations for such hotspots include cafes and restaurants, hotels and airports. In general terms, more than one access point can be found at a hotspot.

Figure 3.5.1 – Wi-Fi Hotspots, Access Points and Minutes of Use

	Q4 2014	Q4'13-Q4'14 Growth	Q3'14-Q4'14 Growth
Wi-Fi Hotspots	3,407	23.9%	0.8%
Wi-Fi Access Points	5,745	20.5%	3.6%
Wi-Fi Minutes of Use	645,767,010	122.1%	4.0%

% Share - Q4 2014	Bitbuzz	Eircom	BT	OAOs
Wi-Fi Hotspots	12.9%	82.1%	3.5%	1.6%
Wi-Fi Access Points	39.9%	56.7%	2.5%	0.9%
Wi-Fi Minutes of Use	35.4%	52.5%	11.2%	0.9%

3.6 Fixed and Mobile Broadband Pricing Data

ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific fixed broadband and mobile broadband usage baskets of national broadband services and broadband services in other selected countries for both residential and business users. The pricing data used for international comparisons includes pricing information for selected countries, namely Germany, Denmark, Spain, Netherlands and the United Kingdom⁶³.

For national comparisons, the prices advertised⁶⁴ by the largest operators (in terms of number of subscribers to fixed broadband services and separately number of subscribers to mobile broadband services) during Q4 2014 were analysed⁶⁵ for selected OECD usage baskets. In this Quarterly Key Data Report standalone fixed broadband service prices advertised by Eircom, UPC, Vodafone, Sky, Digiweb and Imagine were analysed. For mobile broadband service, prices advertised by O2⁶⁶, Three Group, Vodafone, Meteor,

⁶³ In future Quarterly Key Data Reports ComReg may expand the analysis and include more countries for international price comparisons.

⁶⁴ The pricing analysis is based on a review of operators' advertised prices in the period Q4 2014.

⁶⁵ The subscribers of these operators jointly account for over 94% of all fixed broadband subscribers and 100% of all mobile broadband subscribers. For fixed broadband, tariffs based on broadband services provided over DSL, Fibre (incl. VDSL), Cable and FWA were analysed. For mobile broadband, tariffs on broadband services provided over 3G and 4G networks were analysed.

⁶⁶ O2 tariffs that were advertised during Q4 2014.

eMobile and Tesco were analysed. Thus, the broadband pricing analysis does not necessarily present the lowest prices available in the entire market, but rather the lowest prices offered by the operators having the largest number of subscribers. It should also be noted that some of the operators included in the analysis do not offer their services nationally⁶⁷. In addition, some operators only offer broadband services bundled with another service (e.g. fixed voice services which can include line rental, sometimes also with an inclusive amount of call minutes). In these instances, the analysis is based on the cost of the bundle excluding any voice related usage patterns. i.e., only broadband usage related factors are taken into account⁶⁸ in the analysis.

For international comparisons, prices advertised⁶⁹ by the three largest operators (in terms of the number of subscribers to fixed broadband services and separately number of subscribers to mobile broadband services) operators in each of the respective countries during Q4 2014 were analysed⁷⁰ for selected usage baskets⁷¹ (with an average per country price presented based on the average of these three operators). In order to enable international comparisons, prices are presented in Euro Purchasing Power Parities (PPPs) and exclude VAT charges. PPPs provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services.

The presented analysis accounts for the fact that broadband services differ in terms of advertised download/upload speeds to ensure that a meaningful comparison can be made between packages in terms of contracted download speeds offered. Packages which limit usage through speed restrictions when usage exceeds inclusive allowances are excluded. The presented analysis also incorporates discounts offered by operators. Nonrecurring charges (e.g. charges for the installation of a service) are discounted/amortised over three years and other recurring fixed costs such as line rental (in case of fixed broadband) are included and any other additional broadband related charges are included in the baskets.

The OECD basket methodologies are reviewed and revised periodically, with the latest revision made in early 2010⁷² for fixed broadband baskets and 2012⁷³ for mobile

⁶⁷ For example, UPC offers fixed broadband services only in the areas where its cable network has been rolled out.

⁶⁸ In other words, the broadband pricing analysis does not take account of fixed voice call usage.

⁶⁹ The pricing analysis is based on a review of operators' advertised prices in the period Q4 2014.

⁷⁰ The subscribers of these operators jointly account for over 80% of all fixed broadband subscribers and 80% of all mobile broadband subscribers in each of the respective countries.

⁷¹ The same basket was applied to each respective country in order to make the international comparison.

⁷² See <http://www.oecd.org/sti/broadband/48242089.pdf>

broadband baskets. Further information on the composition of the broadband basket can be found in the Explanatory Memorandum which accompanies this report.

The following baskets are presented in this report⁷⁴:

OECD Residential and business fixed and mobile broadband baskets

Type of basket	Basket
Fixed Broadband Residential	18GB basket
Fixed Broadband Business	33GB basket
Mobile Broadband Residential	5GB basket
Mobile Broadband Business	10GB basket

These baskets were selected given their closeness to the national broadband usage patterns observed having regard to the data provided by fixed and mobile broadband operators to ComReg for the purpose of the Quarterly Key Data Report. See Figure 4.3.5 below for mobile broadband data usage patterns. ComReg notes that these baskets reflect usage patterns of an average user and do not necessarily reflect prices of tariffs that are geared towards customers having different usage profiles.

ComReg notes that comparisons are based on the prices of advertised tariffs only⁷⁵ and the analysis does not take into consideration other important factors such as quality of the network, levels of customer care, additional units of consumption available after having accounted in the analysis for the units in the OECD usage basket, minimum contract term etc.

OECD Residential Fixed Broadband Service Basket

Figure 3.6.1 compares the cheapest residential tariffs advertised by fixed broadband providers (whether standalone broadband or broadband sold as part of a bundle) for

⁷³

See <http://www.oecd-ilibrary.org/docserver/download/5k92wd5kw0nw.pdf?expires=1417540956&id=id&accname=guest&checksum=F27F571EC7CA723CF50FE9183C21AEE4>

⁷⁴ In future Quarterly Key Data Reports ComReg may expand the analysis and present price comparisons based on additional and/or different usage baskets.

⁷⁵ Tariffs publically advertised during Q4 2014.

residential customers based on an OECD 18GB monthly data usage basket. For fixed broadband where the advertised download speed of the broadband service does not exceed 30Mbps, Imagine offers the cheapest tariff⁷⁶ for this particular usage profile at €23.17, followed by Digiweb⁷⁷ (€30.78) and Eircom (€35.84). For fixed broadband where advertised download speed of broadband service exceeds 30Mbps, Vodafone offers the cheapest tariff (€35.00), followed by Digiweb (€36.31) and UPC (€37.00).

Figure 3.6.1 - Residential Fixed Broadband Basket (National comparison)

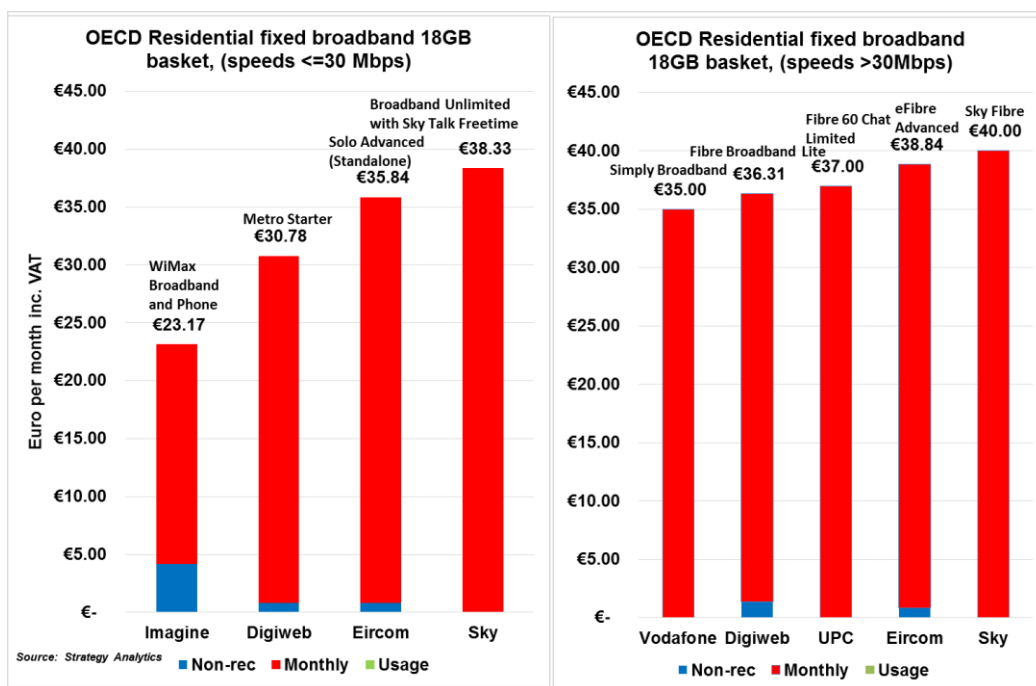


Figure 3.6.2 illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in fourth place with an average price of €29.35⁷⁸ for this particular residential basket. The average price in Ireland is 10% cheaper than the average price⁷⁹ for all of the countries included in the analysis.

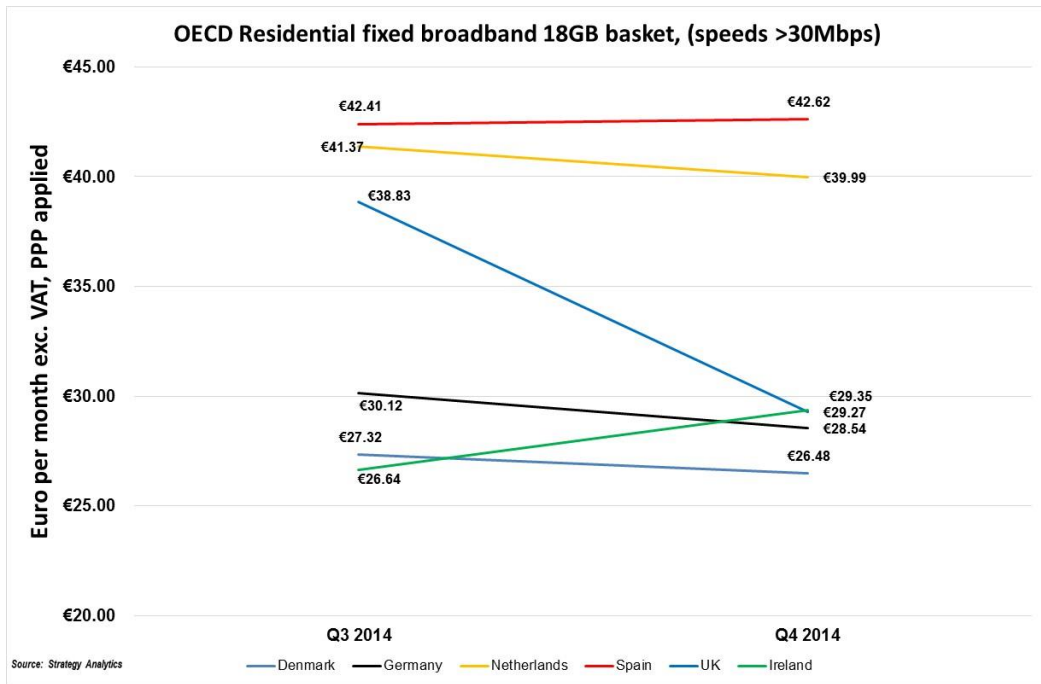
⁷⁶ This tariff is based on Imagine’s fixed wireless access (FWA) broadband service.

⁷⁷ This tariff is based on Digiweb’s fixed wireless access (FWA) broadband service.

⁷⁸ As noted previously, average prices used for international comparisons exclude VAT charges.

⁷⁹ The average of prices presented in Figure 3.6.2.

Figure 3.6.2 - Residential Fixed Broadband Basket (International comparison)



OECD Business Fixed Broadband Service Basket

Figure 3.6.3 compares business tariffs advertised by fixed broadband service providers (whether standalone broadband or broadband sold as part of a bundle) for business customers based on a 33GB monthly data usage basket. Vodafone offers the cheapest tariff (€41.14) followed by Digiweb (€50.36) and Eircom (€52.00).

Figure 3.6.3 - Business Fixed Broadband Basket (National comparison)

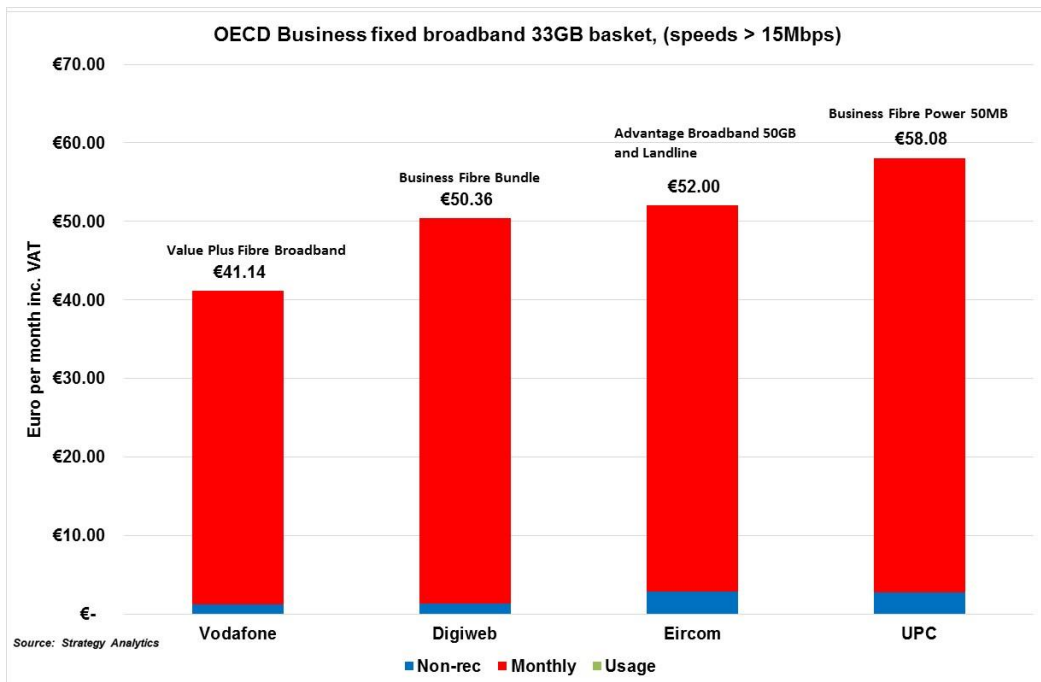
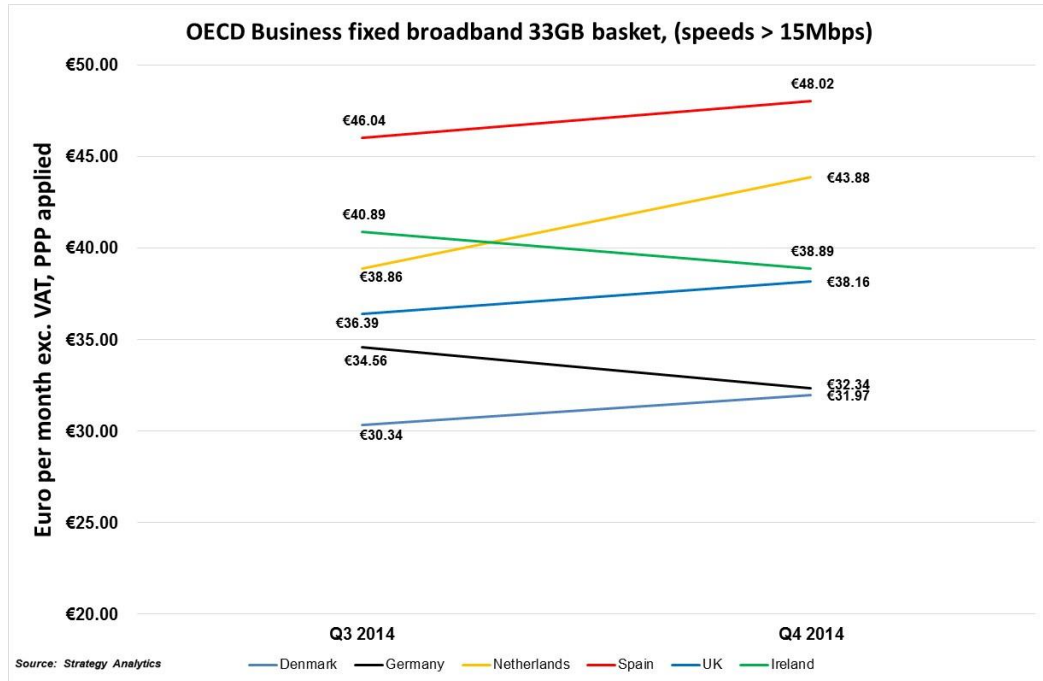


Figure 3.6.4 shows that in an international comparison context Ireland (€38.89⁸⁰) ranks in fourth place. The average price in Ireland is 0.03% more expensive than the average price⁸¹ for all of the countries included in the analysis.

Figure 3.6.4 - Business Fixed Broadband Basket (International comparison)



OECD Residential Mobile Broadband Service Basket

Figure 3.6.5 compares pre-paid and post-paid tariffs advertised by mobile broadband service providers for residential customers based on an OECD 5GB monthly mobile data usage basket. Tesco offers the cheapest tariff (€10) followed closely by Meteor (€10.17) and eMobile (€18.62).

⁸⁰ As noted previously, average prices used for international comparisons exclude VAT charges.

⁸¹ The average of prices presented in Figure 3.6.4.

Figure 3.6.5 - Residential Mobile Broadband Basket (National comparison)

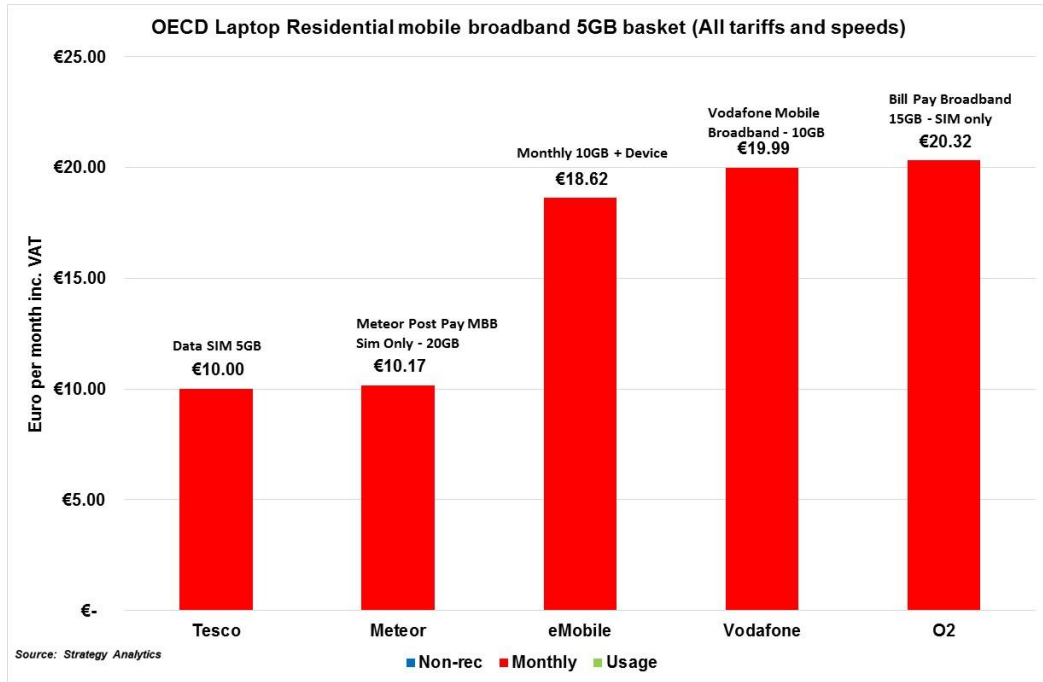
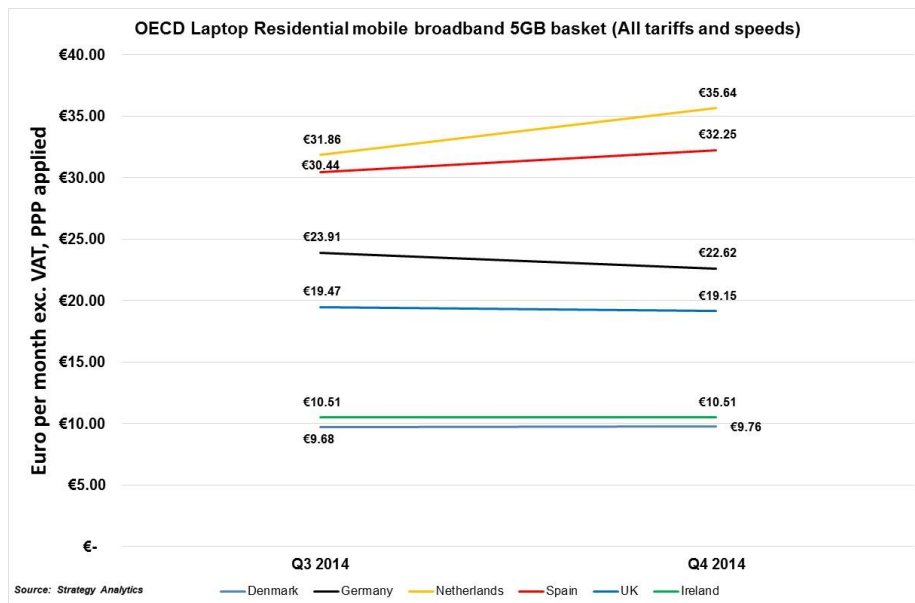


Figure 3.6.6 below illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in second place with an average price of €10.51⁸² for this particular basket. The average price in Ireland is 51% cheaper than the average price⁸³ for all of the countries included in the analysis.

Figure 3.6.6 - Residential Mobile Broadband Basket (International comparison)



⁸² As noted previously, average prices used for international comparisons exclude VAT charges.

⁸³ The average of prices presented in Figure 3.6.6.

OECD Business Mobile Broadband Service Basket

Figure 3.6.7 compares post-paid tariffs advertised by mobile broadband service providers⁸⁴ for business customers based on an OECD 10GB monthly data usage basket. Vodafone (€19.99) offers the cheapest tariff followed by eMobile (€20.32) and O2 (€21.17).

Figure 3.6.7 - Business Mobile Broadband Basket (National comparison)

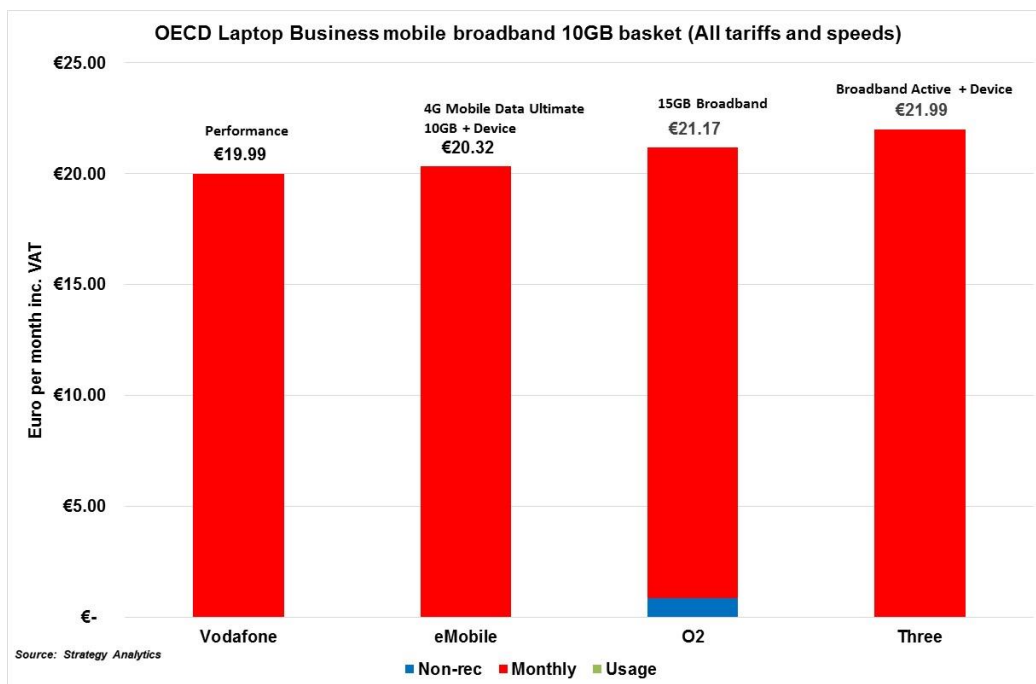


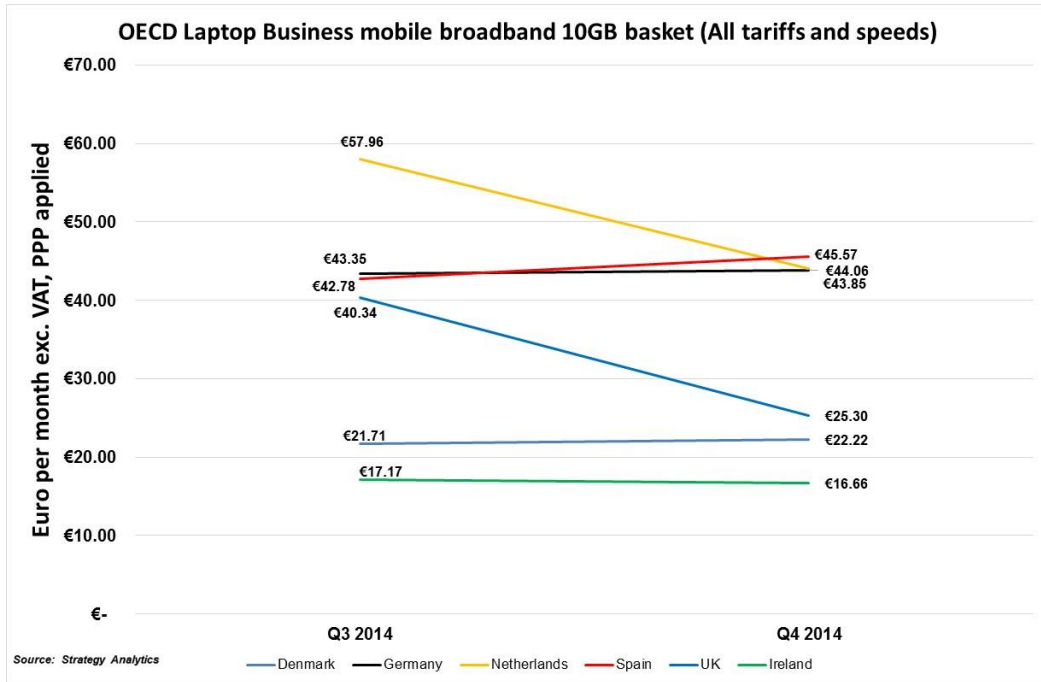
Figure 3.6.8 shows that, from an international comparison perspective, Ireland (€16.66⁸⁵) ranks in first place. The average price in Ireland is 49% cheaper than the average price⁸⁶ for all of the countries included in the analysis.

⁸⁴ Only tariffs advertised by Vodafone and Three were analysed for business customers. Some operators do not offer mobile broadband service to business customers. ComReg will expand the analysis and include additional operators such as eMobile in the future Quarterly Key Data Reports.

⁸⁵ As noted previously, average prices used for international comparisons exclude VAT charges.

⁸⁶ The average of prices presented in Figure 3.6.8.

Figure 3.6.8 - Business Mobile Broadband Basket (International comparison)



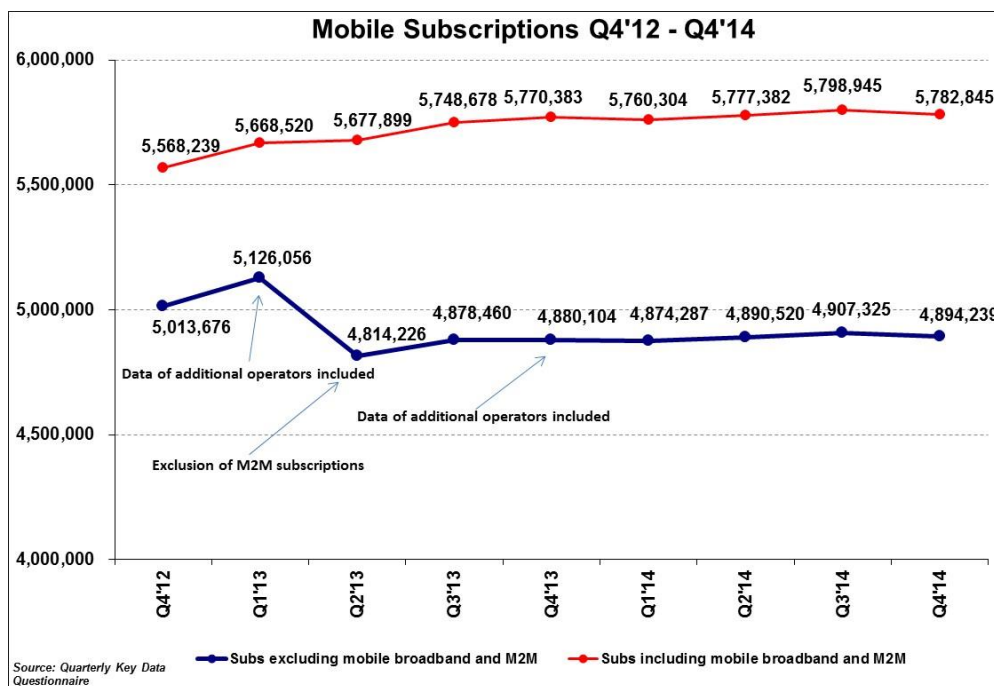
4. Mobile Market Data

4.1 Number of Subscriptions and Penetration Rate

ComReg notes the number of subscriptions from Q2 2013 to Q3 2014 has been revised upwards following an operator revision of historically provided information ⁸⁷. Furthermore, mobile subscriptions from additional mobile operators (including Lycamobile) was, for the first time, incorporated into the mobile market data set in Q1 2013 and separately in Q4 2013. Therefore, information on the mobile market prior to Q4 2014 is not strictly comparable with information from previous periods.

At the end of December 2014 there were 5,782,845 mobile subscriptions in Ireland, including mobile broadband and Machine to Machine ('M2M')⁸⁸ subscriptions. If mobile broadband subscriptions (432,861) and M2M subscriptions (455,745) are excluded, the total number of mobile subscriptions in Ireland was 4,894,239.

Figure 4.1.1 – Mobile Subscriptions



In Q4 2014 there were 3,337,147 mobile voice and data subscribers using 3G/4G networks in Ireland. This figure can be taken as an indication of the number of smartphone users accessing advanced data services such as web/internet content, online multiplayer gaming content, Video on Demand (VoD) or other equivalent

⁸⁷ See note 1 within the corrigendum to Q3 2014 on page 5 of this report. Please also see note 2 which relates to another operator's revision of its Q4 2014 subscriber base and the revision of total mobile subscriptions in the periods prior to Q3 2014 that will be made in the next publication of the Key Quarterly Data Report.

⁸⁸ As of Q2 2013 M2M subscriptions are excluded from mobile voice subscriptions. Therefore, changes in subscriptions are not directly comparable to previous periods.

advanced data services (excluding SMS and MMS)⁸⁹. This represents approximately 68.2% of all mobile subscriptions (excluding dedicated mobile broadband and M2M) in Q4 2014.

Figure 4.1.2 below shows the breakdown of total active subscribers, total standard mobile voice and data subscribers using 3G/4G networks and dedicated mobile broadband subscribers from Q4 2013 to Q4 2014.

Figure 4.1.2 – Mobile Subscribers using data services over 3G/4G networks

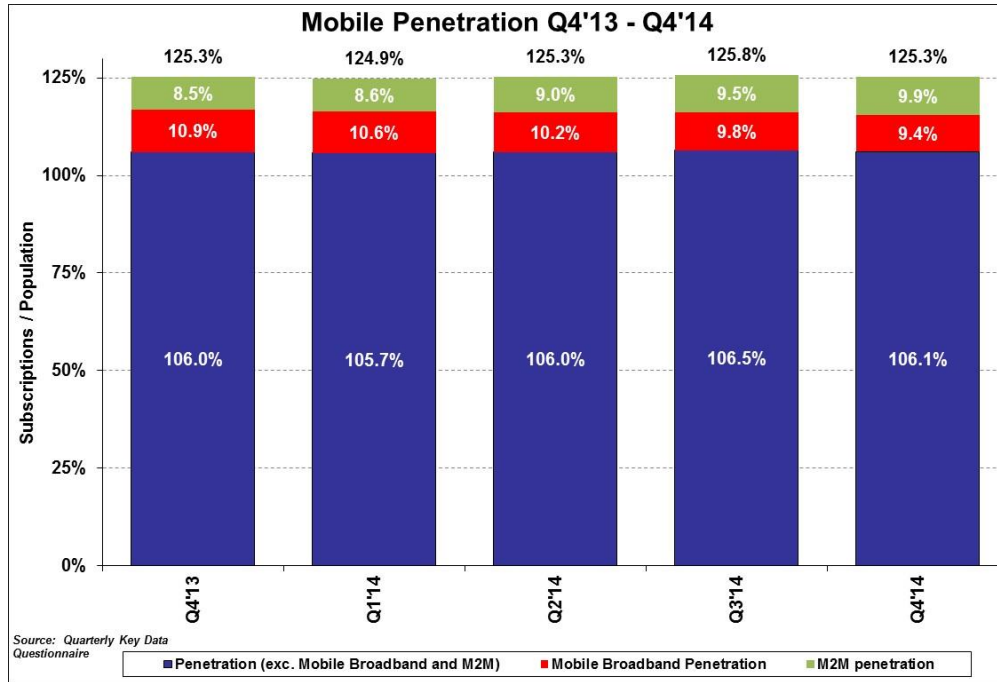
	Q4'14	Q4'13	Quarterly Change (Q3'14 – Q4'14)	Annual Change (Q4'13 – Q4'14)
Total active subscriptions	5,782,845	5,770,383	-0.3%	+0.2%
Mobile voice and data subscribers using 3G and 4G networks	3,337,147	2,607,507	+12.8%	+28.0%
Dedicated mobile broadband subscribers	432,681	499,840	-4.4%	-13.4%

Figure 4.1.3 charts mobile penetration since Q4 2013 and shows that at the end of December 2014, mobile penetration, based on a population of 4,614,200 (using CSO Q3 2014 estimate), was 125.3% including mobile broadband and M2M and 106.1% excluding mobile broadband and M2M. Mobile penetration is recognised as the standard metric internationally to measure the adoption of mobile services, and is calculated based on the number of active SIM cards per 100 of the population.

Given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of actual individual mobile penetration using this metric. ComReg's calculation of mobile subscriptions includes active SIMs bundled with mobile broadband data cards and USB modems for internet access via laptops/PCs, SIMs that enable the flow of data between Machines as well as SIM cards used in mobile phones for voice and data services.

⁸⁹The overall penetration of smartphones is likely to be higher as this figure excludes standard voice and data subscribers that use 2G networks only.

Figure 4.1.3 – Irish Mobile Penetration Rate



4.2 The Profile of Mobile Subscriptions in Ireland

Mobile users pay for their mobile service by either purchasing pre-paid credit, or by receiving a monthly bill from their mobile operator, described in this report as a post-paid payment option.

Figures 4.2.1 and 4.2.2 illustrate the mobile subscription base (including mobile broadband and M2M) in Ireland classified by the proportion of pre-paid and post-paid subscriptions on 2G, 3G and 4G networks at the end of December 2014. Post-paid subscriptions are increasing, accounting for 47.9% of subscriptions in Q4 2014, up from 44.5% one year previously at the expense of a decline in pre-paid subscriptions. The majority of both pre-paid and post-paid subscriptions include broadband/data packages while all M2M subscriptions are post-paid.

Figure 4.2.1 – Profile of Pre-Paid and Post-Paid Subscriptions

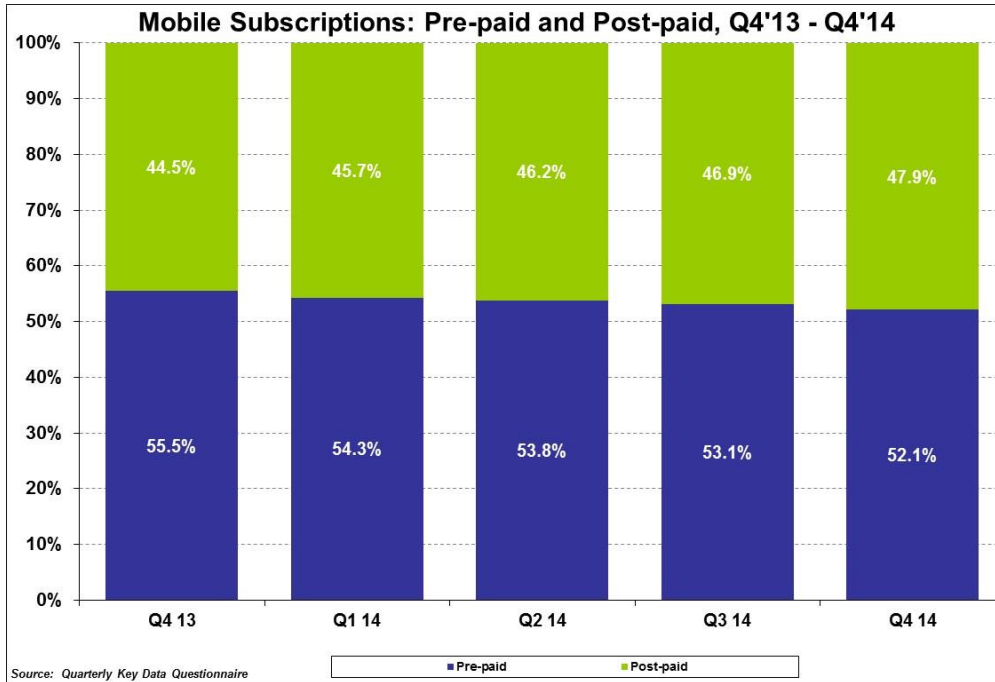


Figure 4.2.2 – Mobile Subscriptions by Pre-pay/Post-pay Split, Q4'13 – Q4'14

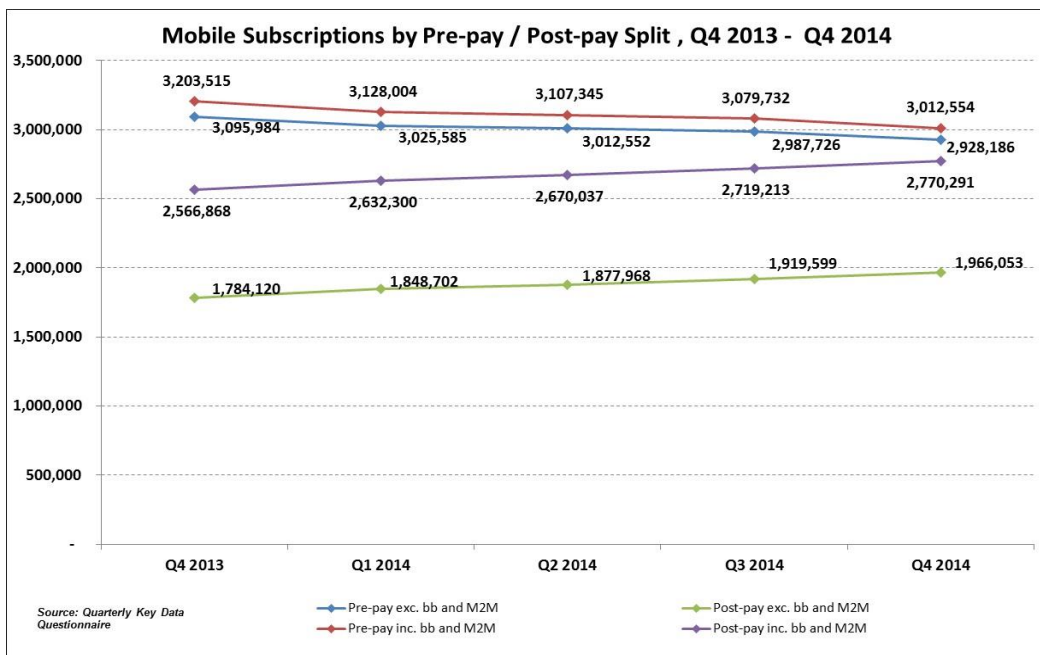


Figure 4.2.3 shows the pre-paid and post-paid subscription profile for each of the mobile operators in the Irish market. Mobile broadband and M2M subscriptions are included in this data. As of Q4 2014, the mobile operator with the highest proportion of post-paid subscriptions was Three Group (56.1%), while 98.7% of other authorised mobile operators' subscriptions are pre-paid.

Figure 4.2.3 – Profile of Pre-Paid and Post-Paid Subscriptions by Operator

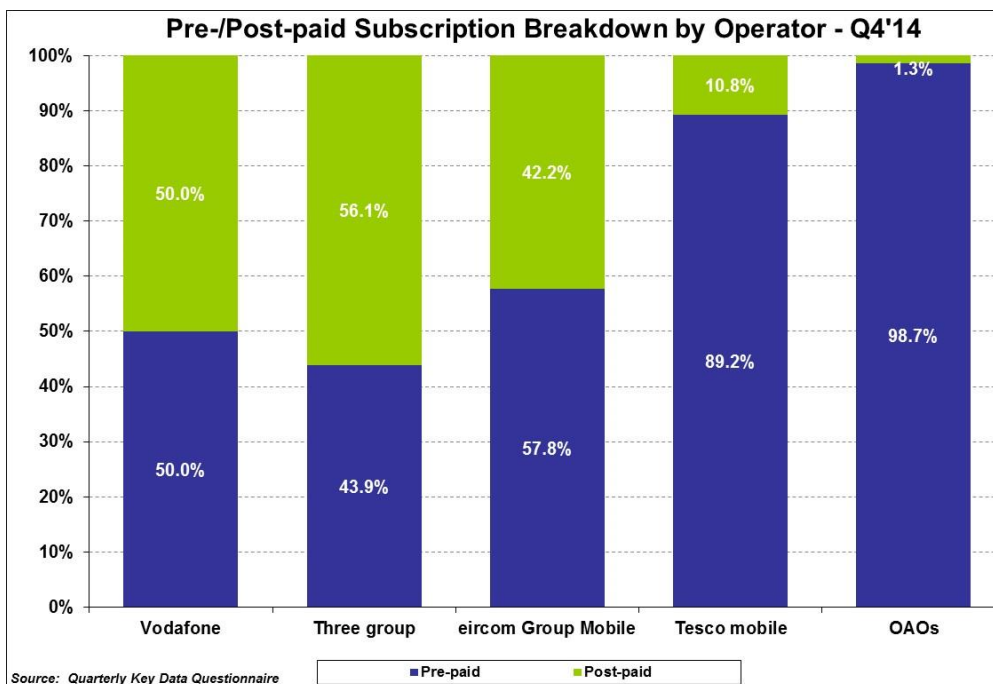


Figure 4.2.4 shows the split between pre-paid and post-paid mobile broadband subscriptions between Q4 2013 and Q4 2014. 80.5% of all mobile broadband subscriptions were post-paid at the end of December 2014, up from 78.5% one year previously.

Figure 4.2.4 – Profile of Pre-Paid and Post-Paid Mobile Broadband Subscriptions

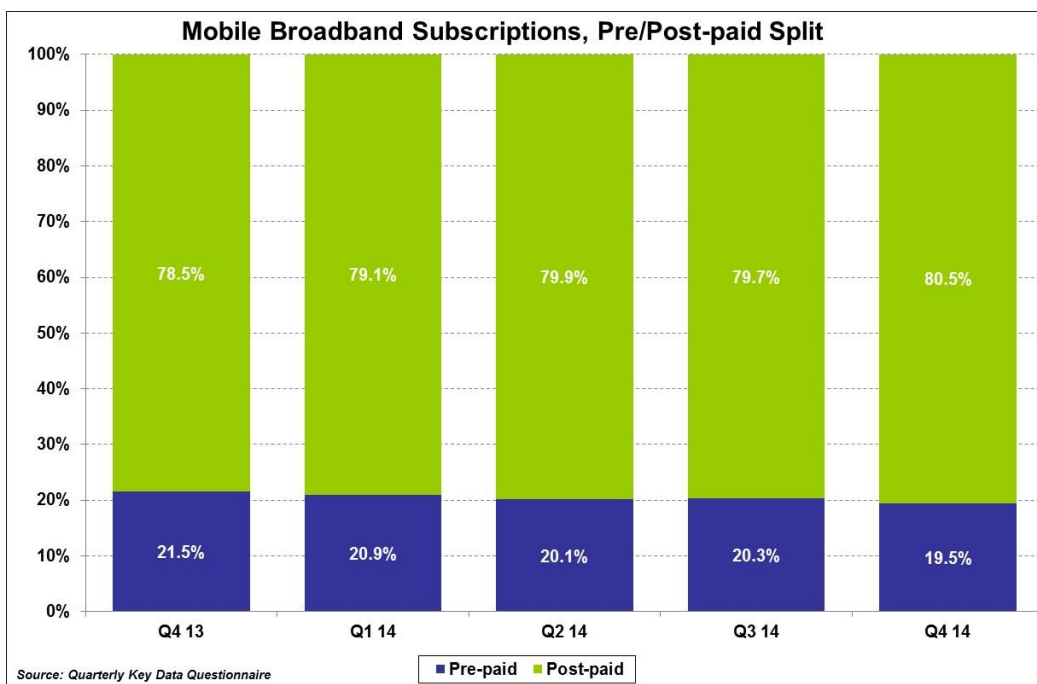


Figure 4.2.5 shows the split of post-paid business and non-business mobile subscriptions including and excluding mobile broadband and M2M between Q4 2013 to Q4 2014. Approximately 44.7% of post-paid mobile subscriptions (including mobile broadband and M2M) and 33.8% of post-paid mobile subscriptions (excluding mobile broadband and M2M) were classed as business subscriptions in Q4 2014.

Figure 4.2.5 – Post-Paid Business and Residential Mobile Subscriptions

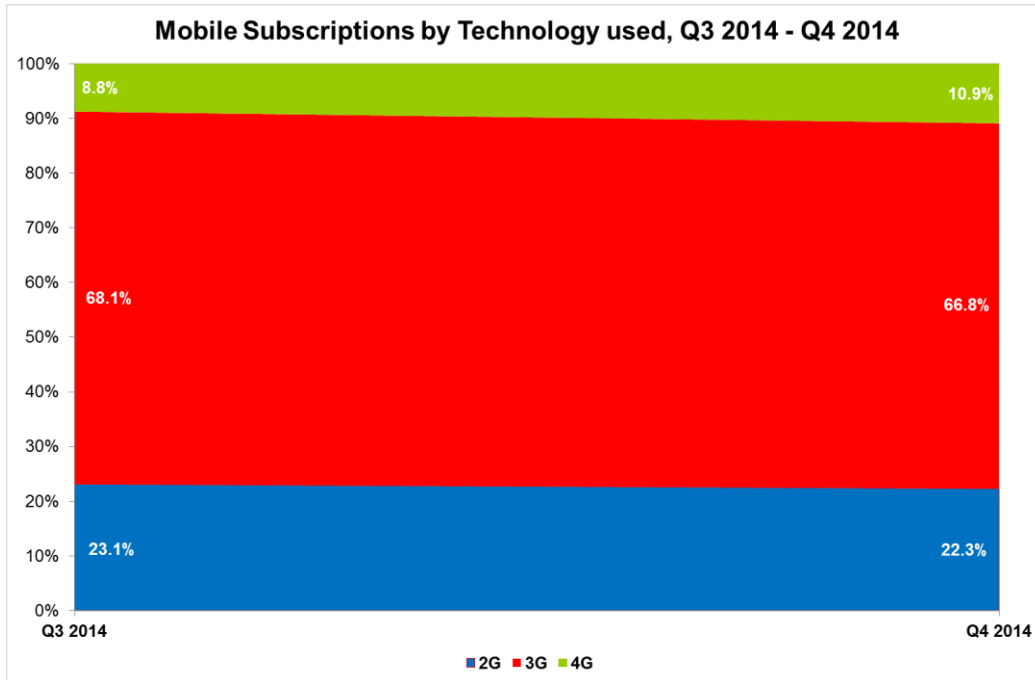
	Q4 2014	Q3 2014	Q2 2014	Q1 2014	Q4 2013
Residential subs inc. mobile broadband⁹⁰	1,532,005	1,510,561	1,499,595	1,492,293	1,448,329
Residential subs exc. mobile broadband	1,302,447	1,267,491	1,243,970	1,225,605	1,172,147
Business subs inc. mobile broadband & M2M	1,238,286	1,208,652	1,170,442	1,140,007	1,118,535
Business subs exc. mobile broadband & M2M⁹¹	663,606	652,108	633,998	623,097	611,969

Figure 4.2.6 shows the split of mobile subscribers (including mobile broadband and M2M subscribers) broken down by mobile network technology used by these subscribers. For example, subscribers who purchase 4G plans and have generated traffic on a 4G network are categorised as 4G subscribers. Categories are mutually exclusive in that subscribers who have generated traffic on multiple networks (e.g. 2G and 3G) are categorised as users of the higher quality network (3G in this example). By the end of December 2014, 11% of mobile subscribers have been categorised as 4G network users, 67% use 3G network with the remaining 22% of subscribers using 2G networks only.

⁹⁰ All M2M subscriptions are assumed to be business subscriptions.

⁹¹ M2M subscriptions excluded since Q2 2013.

Figure 4.2.6 – Mobile Subscriptions by Network used



4.3 Mobile Volumes

Figure 4.3.1 illustrates the change in voice minutes, SMS, and MMS (Multimedia Messaging Service) messages and 'other data'⁹² volumes (internet uploads and downloads) sent between Q4 2010 and Q4 2014. Total retail mobile voice traffic totalled 3.04 billion minutes in Q4 2014, an increase of 6.2% on Q4 2013.

The total number of SMS messages sent by mobile users in Ireland was over 1.88 billion in Q4 2014, down 12.4% on Q4 2013, but up by 2.7% since Q3 2014. SMS volumes showed positive quarterly growth for the first time since Q4 2011. The number of multimedia messages (MMS) sent was up by 6.6% in the year to Q4 2014. Data usage volumes continue to rise, increasing by 82.7% in the year to Q4 2014 to reach 22,429 terabytes.

⁹² Other data volumes means mobile traffic for which customers do and do not have to pay per MB charges and refers to both uploads and downloads. Retail international roaming data downloaded from network subscribers roaming on foreign networks (including EU-28) is also included.

Figure 4.3.1 – SMS, MMS, Other Data and Call Minute Volumes

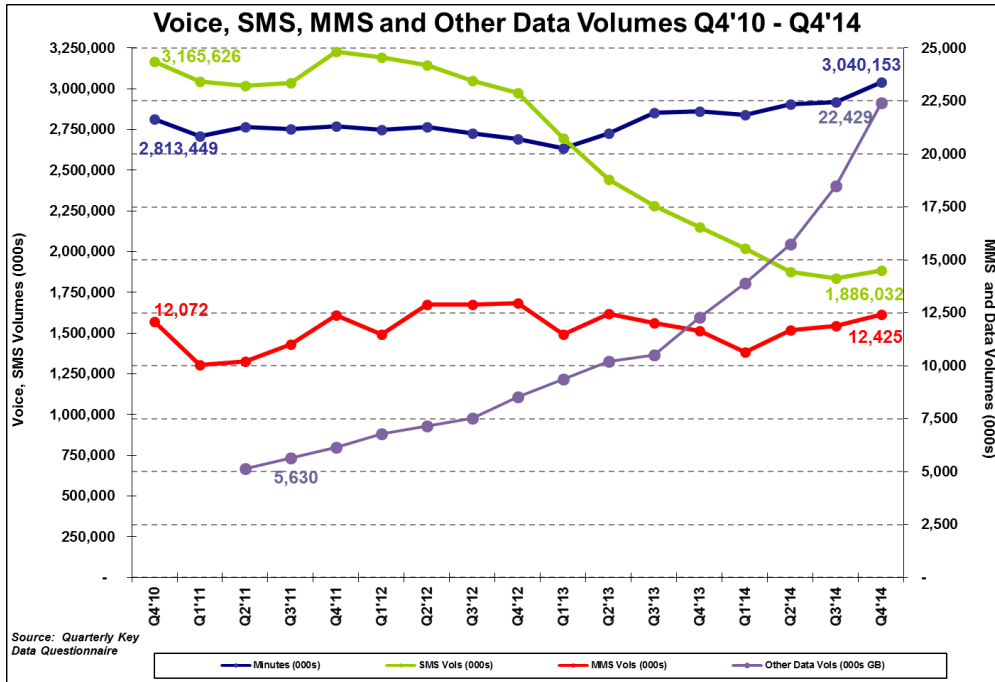


Figure 4.3.2 illustrates the share of types of mobile voice call minutes. As of Q4 2014, 75.9% of all mobile voice minutes were classified as mobile-to-mobile (on-net and off-net); 12.1% of mobile voice minutes were to fixed line phones, 9.4% were classified as international and roaming minutes and the remaining 2.6% were advanced voice minutes which include calls to premium rate services.

Figure 4.3.2 – Voice Call Minute Volumes by Type

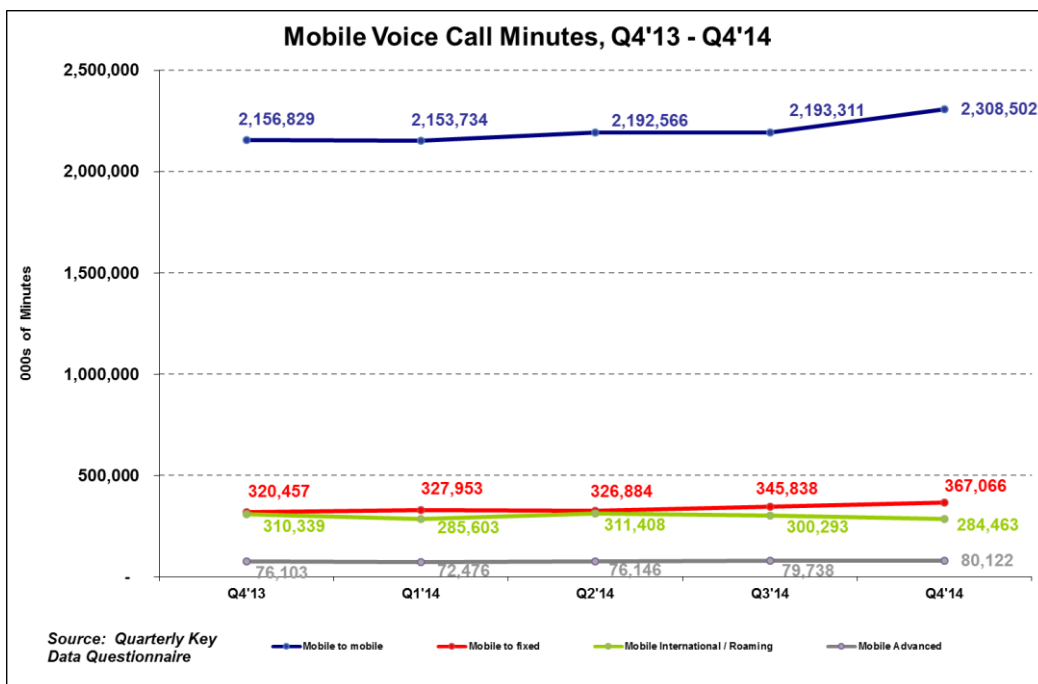


Figure 4.3.3 shows the change in the on net and off net mobile to mobile voice call minutes since Q4 2013. As of Q4 2014, 58.2% of all mobile to mobile voice minutes were classified as on-net down from 63.5% in Q4 2013.

Figure 4.3.3 – Mobile to Mobile Voice Call Minute Volumes by Type

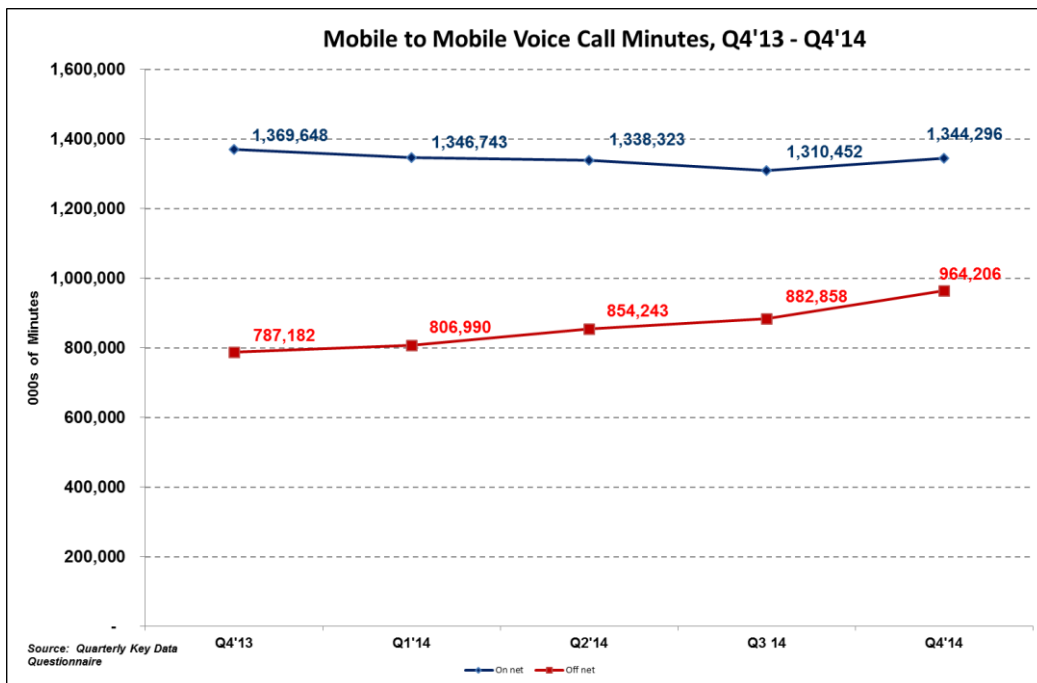


Figure 4.3.4 shows the change in the monthly mobile voice call minutes per subscription. In Q4 2014 the average usage was 207.1 minutes. From Q2 2013, the mobile voice subscription base is affected (relative to previous periods) by the subtraction of M2M subscriptions and thus, average minutes per subscriber reported from Q2 2013 are not directly comparable with the corresponding values in the previous quarters.

Figure 4.3.4 – Monthly Mobile Voice Call Minutes per Subscription by Type

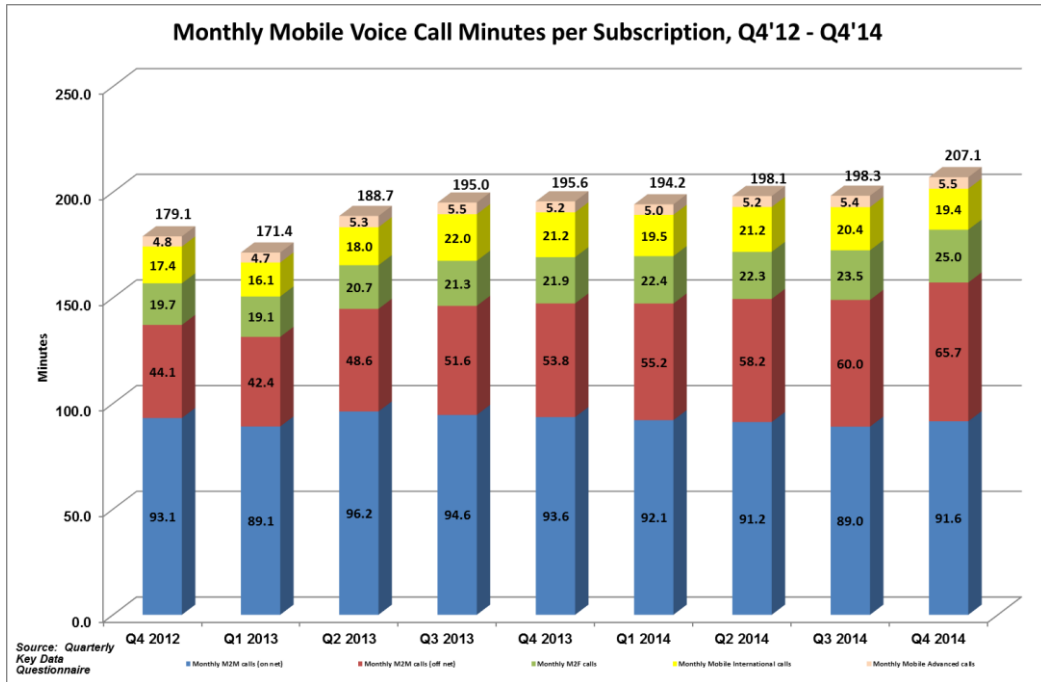
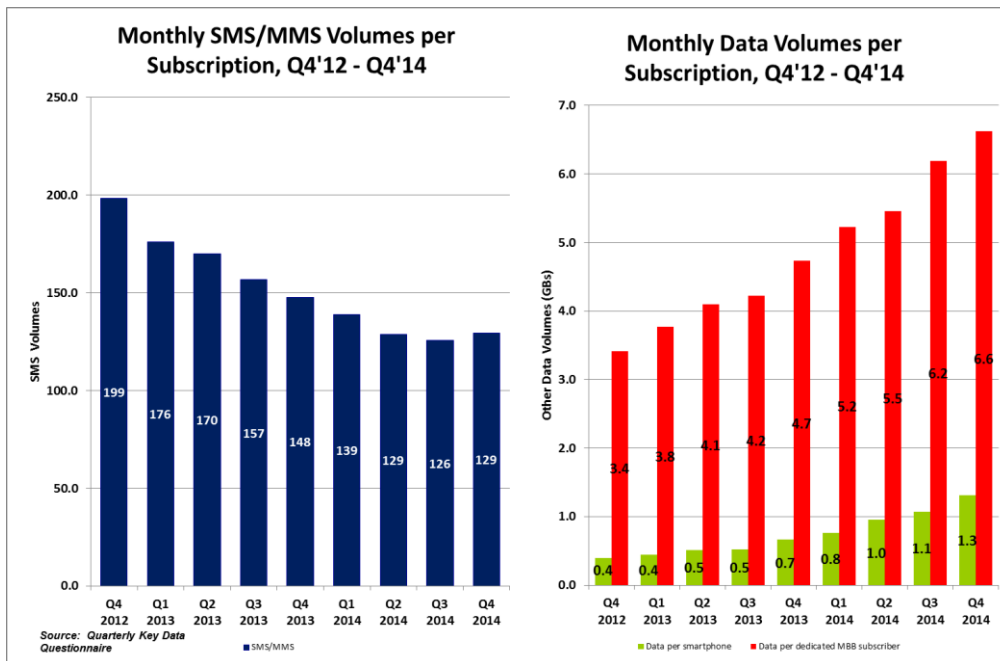


Figure 4.3.5 shows the change in the monthly mobile data volumes per subscription. In Q4 2014 the average monthly number of SMS/MMS sent was 129 and, the average traffic per smartphone⁹³ reached 1.3 GB of data, while the average traffic per dedicated mobile broadband subscriber was 6.6 GB of data⁹⁴.

Figure 4.3.5 – Monthly Mobile Messaging and Data Volumes per Subscription



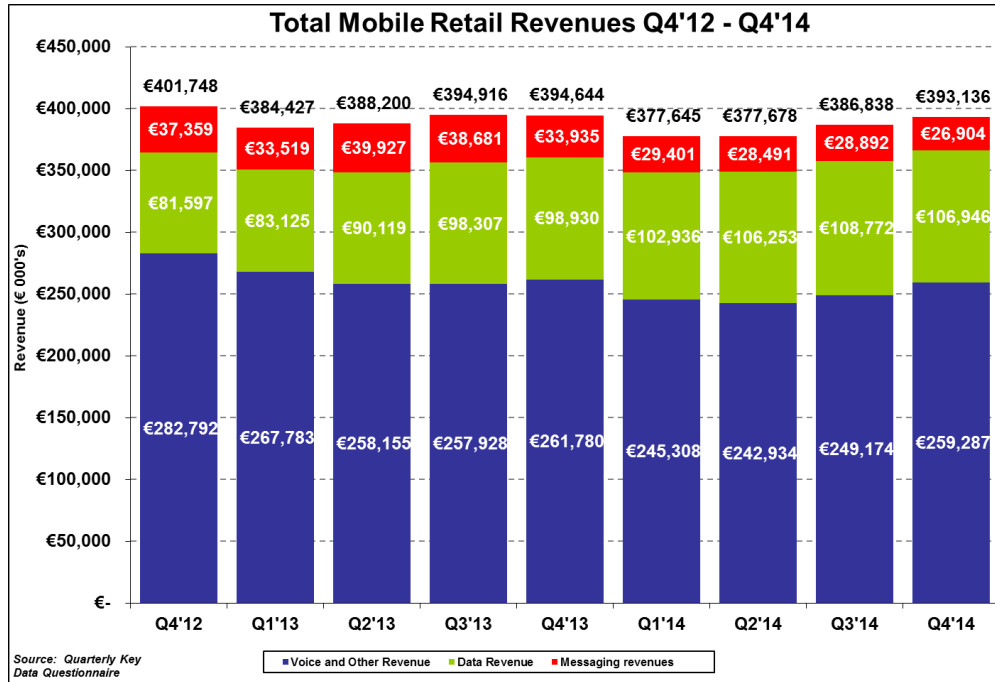
⁹³ Based on the number of standard mobile voice and data subscribers using 3G and 4G networks.

⁹⁴ Data traffic refers to both uploads and downloads.

4.4 Mobile Revenues

Figure 4.4.1 shows that mobile retail revenues for Q4 2014 were over €393 million. Messaging revenues decreased by 6.9% this quarter, while data revenues also decreased (down by 1.7%). However, voice and other revenues increased by 4.1% since Q3 2014.

Figure 4.4.1 – Total Mobile Retail Revenues



Wholesale mobile revenues were over €77 million in Q4 2014 (an increase of 2.6% since Q3 2014), the vast majority accounted for by terminating traffic, followed by access⁹⁵ and roaming⁹⁶ revenues.

4.5 Average Monthly Revenue per User

Mobile ARPU is a function of both the price of mobile services and the level of usage of mobile services. In Q4 2014 mobile APRU was €25.1 per month, down from €25.4 per month in the previous quarter, and down from €26.2 per month in the period Q4 2012. This overall decline over this period is in line with a general downward trend in ARPU across Western European countries. Based on data from Analysys Mason’s Telecom

⁹⁵ Includes revenues from the wholesale provision of voice, messaging and data services to MVNOs and access revenues not related to traffic. Includes revenues from the provision of wholesale roaming (outbound) services (voice/text/data services) to hosted MVNOs. Includes revenues from wholesale provision of voice, messaging and data services based on national roaming agreements.

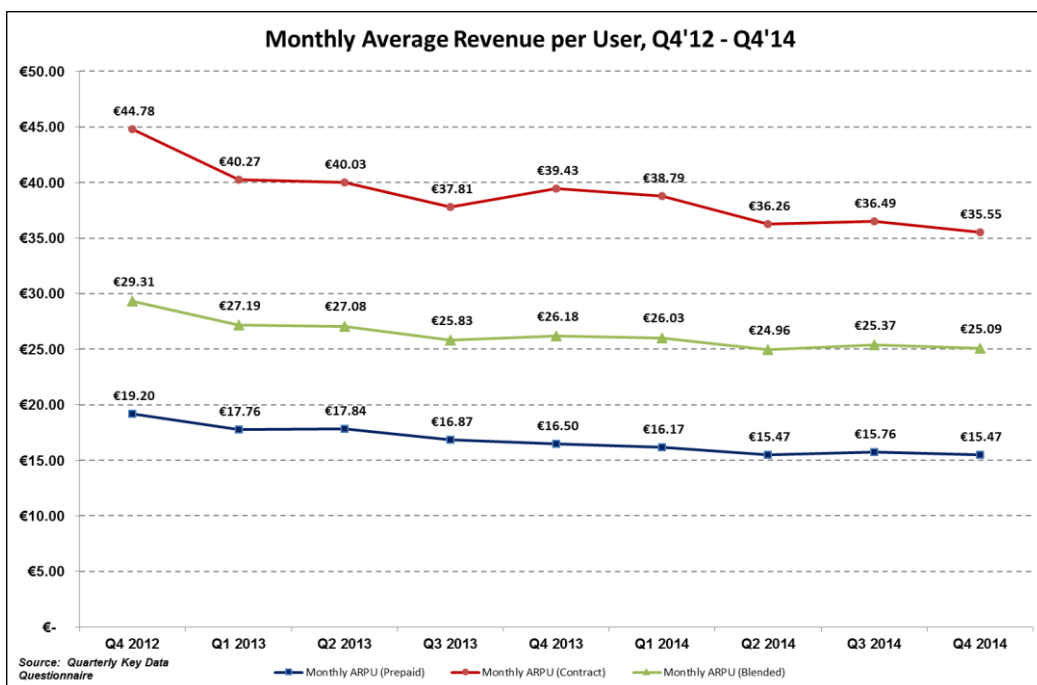
⁹⁶ Revenues from the provision of wholesale roaming (inbound) services (voice/text/data services). Excludes revenues from the provision of wholesale roaming (outbound) services to hosted MVNOs.

Matrix monthly mobile ARPU across the average of 14 Western European countries fell by 3.9% in Q3 2014⁹⁷ compared to Q3 2013.

Figure 4.5.1 illustrates the change in ARPU for prepaid and post-paid subscribers. In Q4 2014 mobile ARPU for prepaid subscribers was €15.47 per month (down 6.2% since Q4 2013) while mobile ARPU for post paid subscribers was €35.55 per month (down 9.9% since Q4 2013).

The general decline in ARPU is likely to be a reflection of a number of factors such as those attributable to lower priced mobile plans, increased sales of bundled products (combining mobile with fixed calls and sometimes broadband and/or TV) and reductions in roaming and mobile termination rates, among others.

Figure 4.5.1 – Monthly Average Revenue per User by Type



⁹⁷ Q3 2014 is the latest quarter for which this information is available.

4.6 Machine to Machine subscriptions

Machine to Machine (M2M) refers to technologies that involve data communication between devices or systems in which, at least in principle, human intervention does not occur. These technologies may encompass either wireless or wired communications, or both. M2M communication is already widely deployed in Ireland and its usage is set to grow rapidly, driven in no small part by the expansion of next generation telecommunications technology and a decline in the cost of the embedded wireless modules and sensors that enable M2M services. This continued improvement in the infrastructural environment around M2M has led to a rapid growth of applications and services that meet users' business and lifestyle needs. M2M technologies transfer data on the condition of physical assets and devices to a central location (which is distantly located the devices) for effective monitoring and control. M2M has a multitude of uses, with current deployments in the healthcare, energy, home automation and transportation sectors. Specific examples of M2M applications include smart metering, vehicle and consignment tracking and alarm monitoring systems of various kinds, ATM machines signalling the need for cash replacement, smart grid monitoring of real time electricity demand, smart home applications such as switching on and off lights, heating and other appliances.

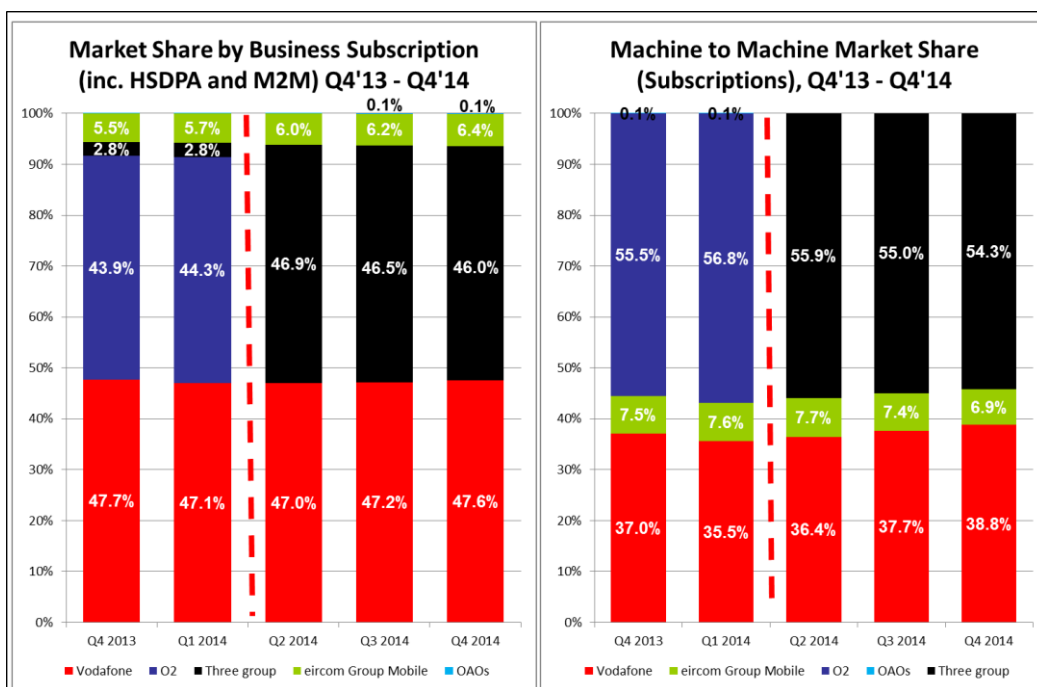
Different networking technologies can be used to connect M2M devices, depending on the amount of mobility needed, quality required, data rate, the degree of dispersion of devices over an area, and so on. Gathering data on dedicated M2M mobile connections assists ComReg in assessing future regulatory needs for M2M, e.g. for numbering resources. The additional data also allows for more accurate assessment of mobile telephony and broadband connections.

There were 455,745 M2M subscriptions at the end of December 2014. This is an increase of 16.7% since Q4 2013. Figure 4.6.1 outlines market shares based on active M2M subscriptions as well as market shares in terms of business subscribers (including mobile broadband and M2M subscriptions).

In Q4 2014 the Three Group had the largest market share of M2M subscriptions at 54.3% followed by Vodafone with 38.8% market share. Eircom Group Mobile had the remaining 6.9% of M2M subscriptions.

Vodafone had the largest market share in terms of business subscriptions (47.6%) followed by Three Group (46.0%) and Eircom Group Mobile (6.4%). OAOs accounted for the remaining 0.1%.

Figure 4.6.1 – Market Share – Number of Business Subscriptions/Number of M2M Subscriptions⁹⁸



4.7 Competition in the Mobile Market

Figures 4.7.1 and 4.7.2 outline mobile market shares based on the number of active subscriptions reported by each operator. ComReg notes that due to the revision of the number of subscriptions⁹⁹, market shares in Figure 4.7.1 have also been revised. In addition, market shares in Q4 2013 are not directly comparable with previous periods as data from additional MVNOs have been included in each of those subsequent periods.

Figure 4.7.1 includes mobile broadband and M2M while figure 4.7.2 excludes mobile broadband and M2M. Vodafone has the highest market share including and excluding mobile broadband and M2M (38.5% and 39.0%), followed by Three Group (35.8% and 32.1%), Eircom Group Mobile (18.8% and 21.0%) and Tesco Mobile (5.2% and 6.0%). OAOs have market shares of 1.7% and 2.0% respectively.

⁹⁸ ComReg notes that due to the revision of the number of subscriptions, market shares in terms of business and Machine to Machine subscribers in Figure 4.6.1 have also been revised. As of Q2 2014 O2 is included under Three Group umbrella. For more details see note on page 8 of this report.

⁹⁹ See note 1 within the corrigendum to Q3 2014 on page 5 of this report.

Figure 4.7.1 – Market Share – Number of Subscriptions (inc. mobile broadband and M2M)¹⁰⁰

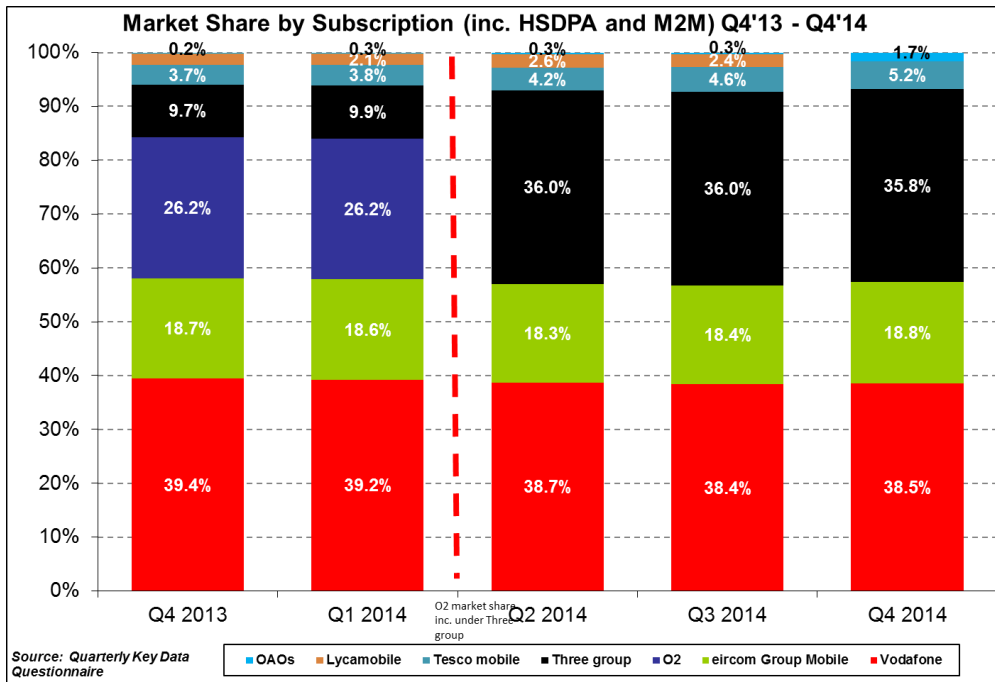
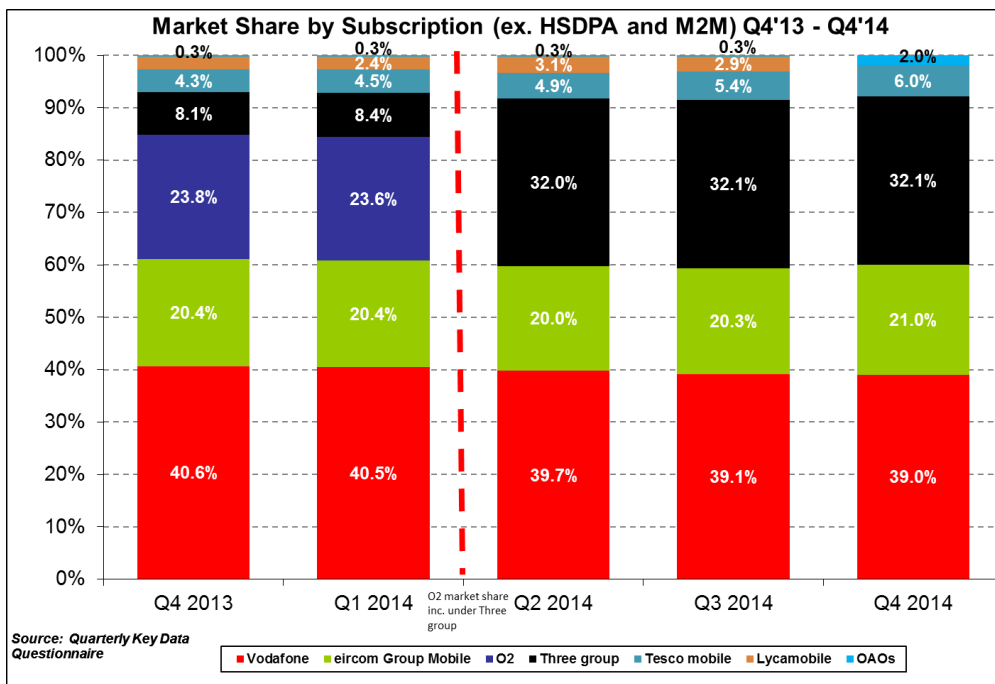


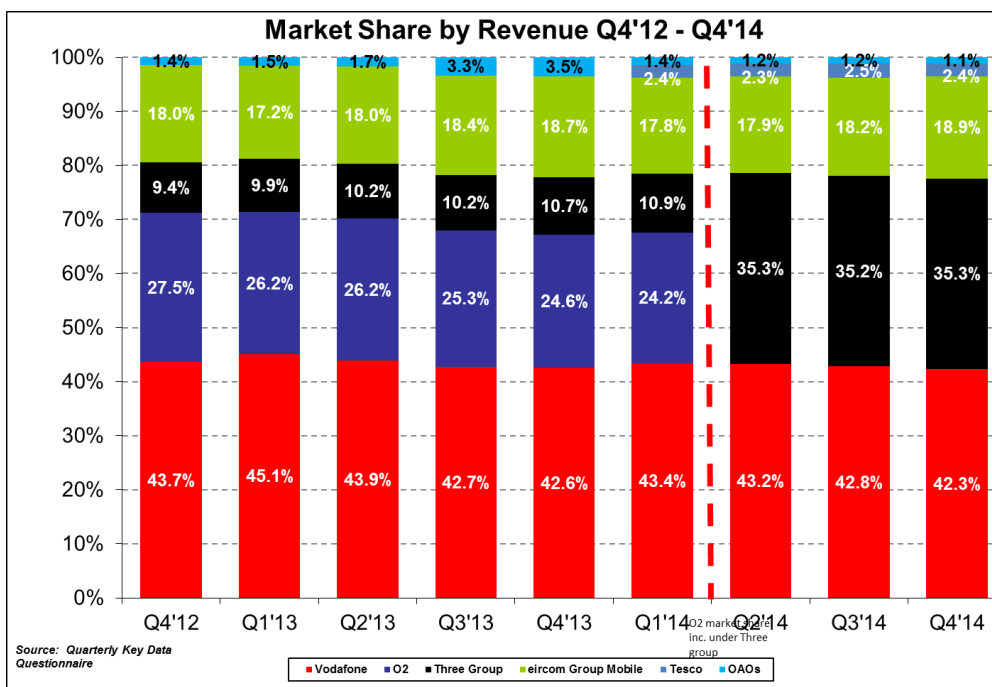
Figure 4.7.2 – Market Share – Number of Subscriptions (ex. mobile broadband and M2M)



¹⁰⁰ As of Q2 2014 O2 is included under Three Group umbrella. For more details see note on page 8 of this report.

Figure 4.7.3 shows market shares by total retail revenues for mobile operators. As of Q3 2013, data from additional mobile operators is included in this chart. Therefore, market shares previous to Q3 2013 are not directly comparable. Vodafone’s market share remains highest at 42.3% followed by Three Group at 35.3%. Eircom Group Mobile’s market share is the next largest at 18.9% followed by Tesco and OAOs at 2.4% and 1.1% respectively.

Figure 4.7.3 – Revenue Market Share

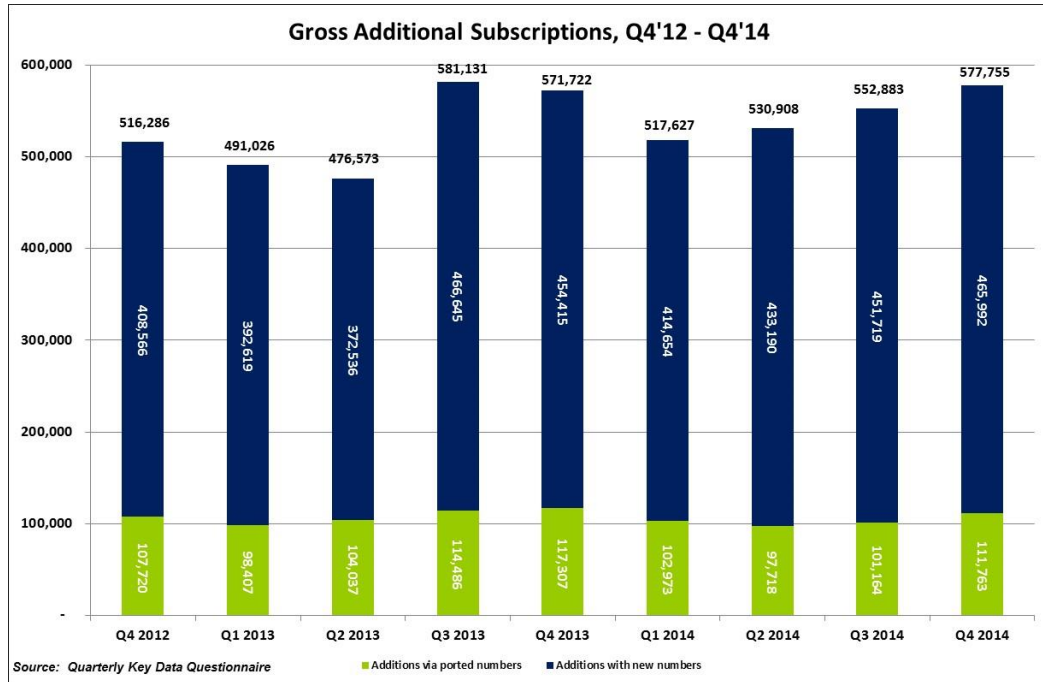


4.8 Switching in the Mobile Market

Figure 4.8.1 illustrates the number of subscribers who port their numbers as a proportion of total gross additions¹⁰¹. There were 577,755 gross additional subscriptions in Q4 2014. In the quarter to December 2014, 111,763 numbers were ported between mobile operators with a total of 413,618 numbers having been ported over a twelve month period. Gross additions via ported numbers accounted for 19.3% of total gross additions in Q4 2014.

¹⁰¹ Gross additions include consumers who decide to avail of multiple SIMs and thus, slightly overstate the switching intensity in Ireland.

Figure 4.8.1 – Gross Subscription Additions and Numbers Ported



4.9 Mobile Pricing Data

ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific mobile phone usage baskets of national and international telecoms services for both residential and business users. The pricing data used for international comparisons includes pricing information for selected countries, namely Germany, Denmark, Spain, Netherlands and the United Kingdom¹⁰².

For national comparisons, the prices advertised¹⁰³ by the largest operators (in terms of the number of subscribers to mobile voice services) during Q4 2014 were analysed¹⁰⁴ for selected usage baskets. In this Quarterly Key Data Report prices advertised by O2¹⁰⁵, Three, Vodafone, Meteor, eMobile, Tesco and Lycamobile were analysed. Thus, the analysis does not necessarily present the cheapest tariffs available in the whole market, but rather the lowest cost tariffs offered by the largest operators.

¹⁰² In future Quarterly Key Data Reports ComReg may expand the analysis and include more countries for international price comparisons.

¹⁰³ The pricing analysis is based on a review of operators’ advertised prices in the period Q4 2014.

¹⁰⁴ The subscribers of these operators jointly account for over 99% of all mobile voice subscribers. 4G tariffs were included in the analysis.

¹⁰⁵ O2 tariffs that were advertised in Q4 2014.

For international comparisons, the prices advertised¹⁰⁶ by three largest operators (in terms of the number of subscribers to mobile voice services) in each of the respective countries during Q4 2014 were analysed¹⁰⁷ for selected OECD mobile phone usage baskets¹⁰⁸. In order to enable international comparisons, prices are presented in Euro Purchasing Power Parities (PPPs) and exclude VAT charges. PPPs provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services.

The presented analysis incorporates discounts offered by operators. Nonrecurring charges (e.g. charges for the activation of a service) are discounted/amortised over three years. Calls to mobile (on net and off net) and fixed phones are included in the baskets.

The OECD basket methodologies are reviewed and revised periodically, with the latest revision made in 2012¹⁰⁹. Further information on the composition of the broadband basket can be found in the Explanatory Memorandum which accompanies this report.

The following baskets are presented in this report¹¹⁰:

Residential and business mobile phone usage baskets

Type of basket	Basket
Prepaid Residential	30 calls (50 minutes), 100 SMS, 0.1GB data basket
Postpaid Residential	100 calls (182 minutes), 140 SMS and 2GB data basket
Business	300 calls (569 minutes), 225 SMS and 1GB data basket

These baskets were selected given they most closely related to the mobile voice usage patterns presented in figures 4.3.4 and 4.3.5 above. ComReg notes that these baskets

¹⁰⁶ The pricing analysis is based on a review of operators’ advertised prices in the period Q4 2014.

¹⁰⁷ The subscribers of these operators jointly account for over 80% of all mobile voice subscribers in each of the respective countries.

¹⁰⁸ The same basket was applied to each respective country in order to make the international comparison.

¹⁰⁹ See <http://www.oecd-ilibrary.org/docserver/download/5k92wd5kw0nw.pdf?expires=1417540956&id=id&accname=quest&checksum=F27F571EC7CA723CF50FE9183C21AEE4>

¹¹⁰ In the future reports ComReg may expand the analysis and present price comparisons based on additional and/or different usage baskets.

reflect usage patterns of an average user and do not necessarily reflect prices of tariffs that are geared towards customers having different usage profiles.

ComReg notes that comparisons are based on the prices of advertised tariffs only and the analysis does not take into consideration other important factors such as quality of the network, levels of customer care, additional units of consumption available after having accounted in the analysis for the units in the OECD usage basket, minimum contract term etc.

OECD Pre-Paid Residential Mobile Basket

Figure 4.9.1 compares pre-paid tariffs advertised by mobile phone services providers for residential customers based on a basket of 30 calls (50 minutes), 100 SMS and 100 MB data usage. Lycamobile (€9.00) offers the cheapest tariff for this particular OECD basket, followed by Three (€15.48) and eMobile (€19.07).

Figure 4.9.1 – Residential Pre-paid Mobile Phone Services Basket (National comparison)¹¹¹

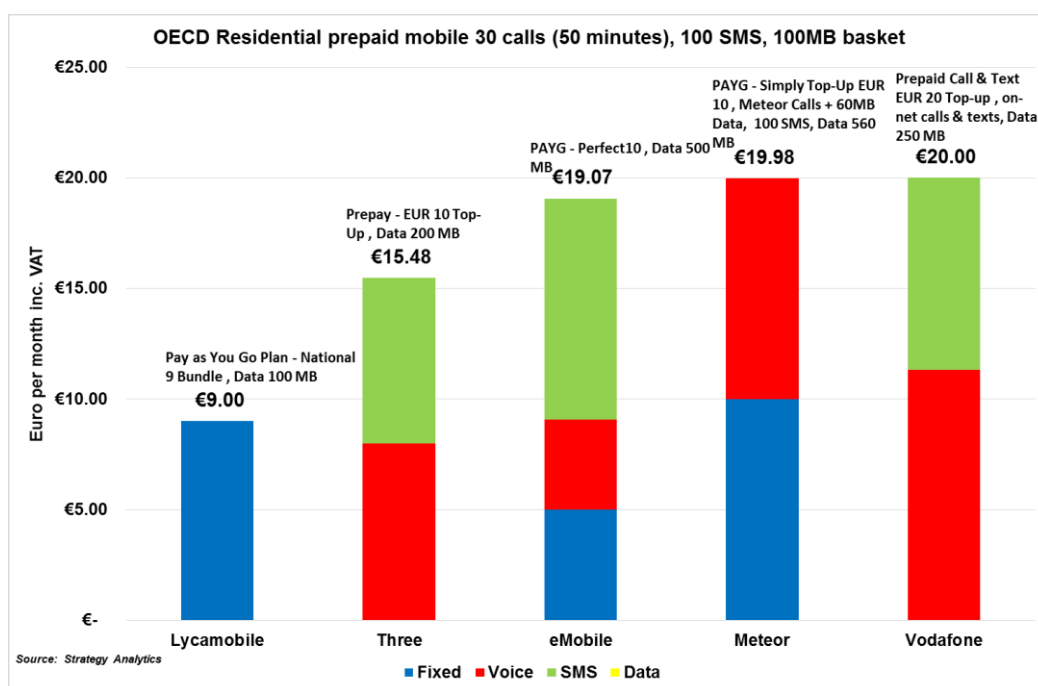


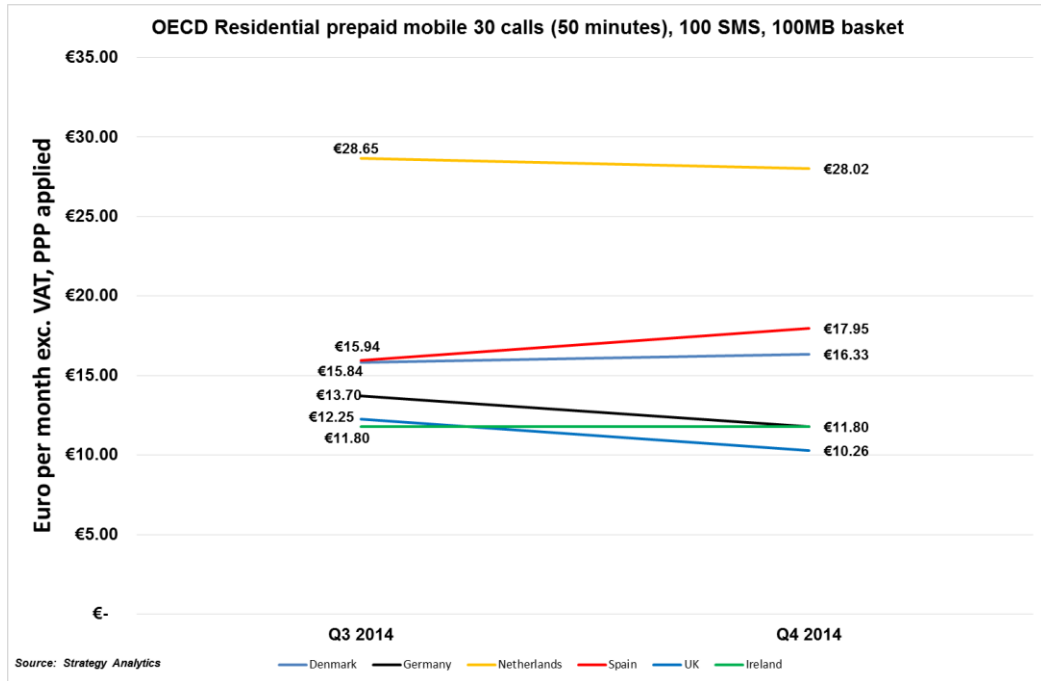
Figure 4.9.2 illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in second place with an average price of €11.80¹¹² for this

¹¹¹ Fixed element of the price refers to the pre-paid tariffs that require mandatory top-ups.

¹¹² As noted previously, average prices used for international comparisons exclude VAT charges.

particular basket. The average price in Ireland is 26% cheaper than the average price¹¹³ for all of the countries included in the analysis.

Figure 4.9.2 – Residential Pre-paid Mobile Phone Services Basket (International comparison)



OECD Post-Paid Residential Mobile Basket

Figure 4.9.3 compares post-paid tariffs advertised by mobile phone service providers for residential customers based on a basket of 100 calls (182 minutes), 140 SMS and 2 GB data usage. Tesco offers the cheapest tariff for this particular basket at €20.60, followed closely by Three (€20.94) and Meteor (€22).

¹¹³ The average of prices presented in Figure 4.9.2.

Figure 4.9.3 – Residential Post-paid Mobile Phone Services Basket (National comparison)

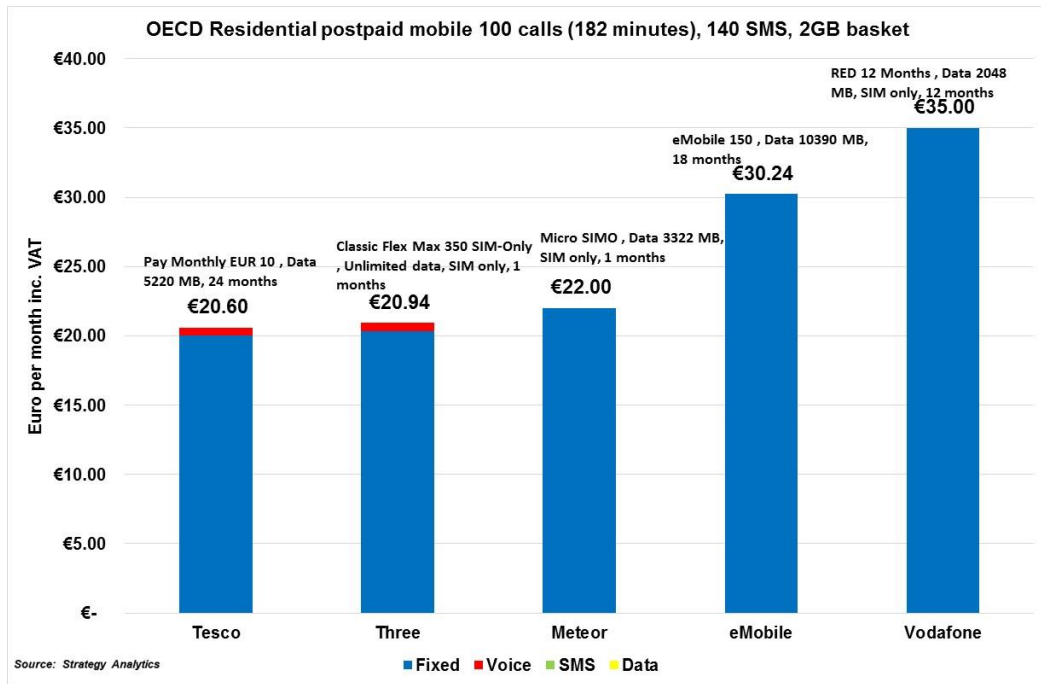
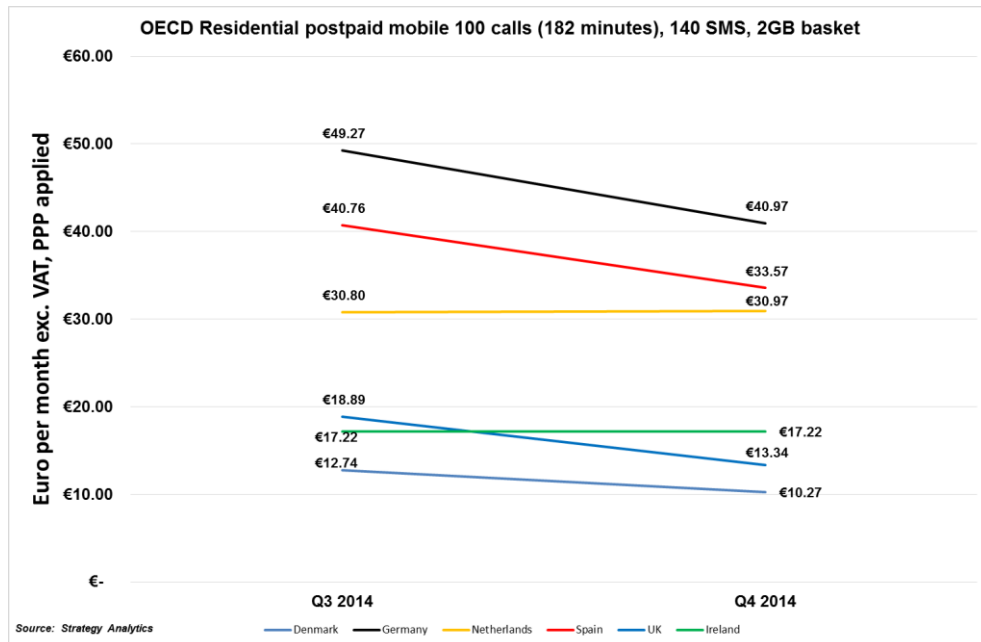


Figure 4.9.4 shows that Ireland (€17.22¹¹⁴), in an international comparison context, ranks in third place. The average price in Ireland is 29% cheaper than the average price¹¹⁵ for all of the countries included in the analysis.

Figure 4.9.4 – Residential Post-paid Mobile Phone Services Basket (International comparison)



¹¹⁴ As noted previously, average prices used for international comparisons exclude VAT charges.

¹¹⁵ The average of prices presented in Figure 4.9.4.

OECD Post-Paid Business Mobile Basket

Figure 4.9.5 compares post-paid tariffs advertised by mobile phone service providers¹¹⁶ for business customers based on an OECD basket of 300 calls (569 minutes), 225 SMS and 1 GB data usage. Vodafone offers the cheapest tariff for this particular basket at €55, followed closely by Three (€55.35) and O2 (€57.08).

Figure 4.9.5 – Business Post-paid Mobile Phone Services Basket (National comparison)

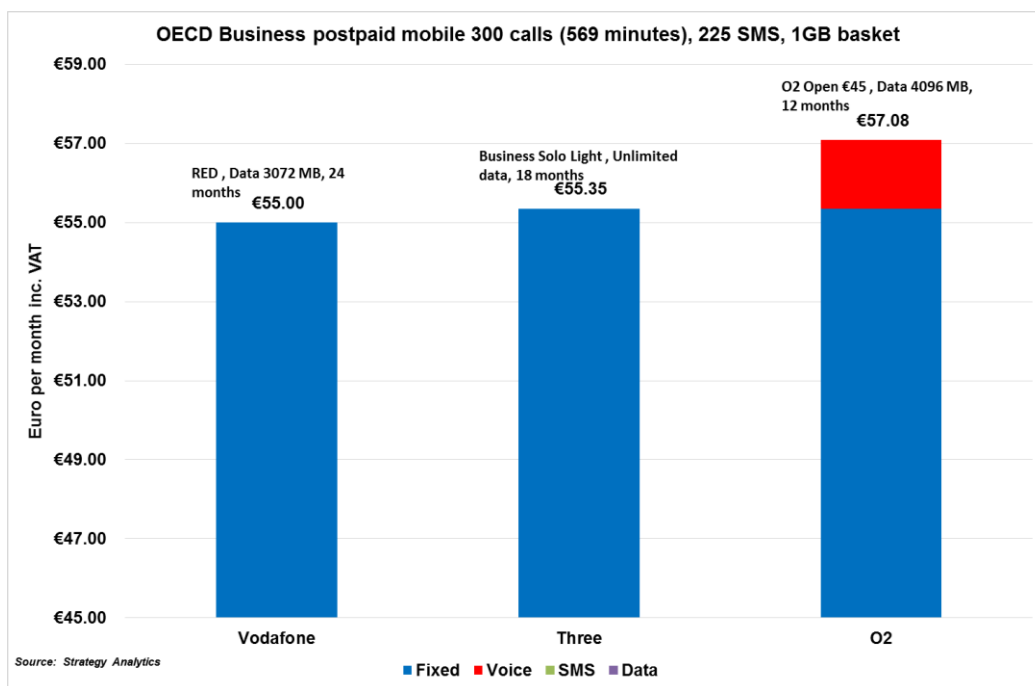


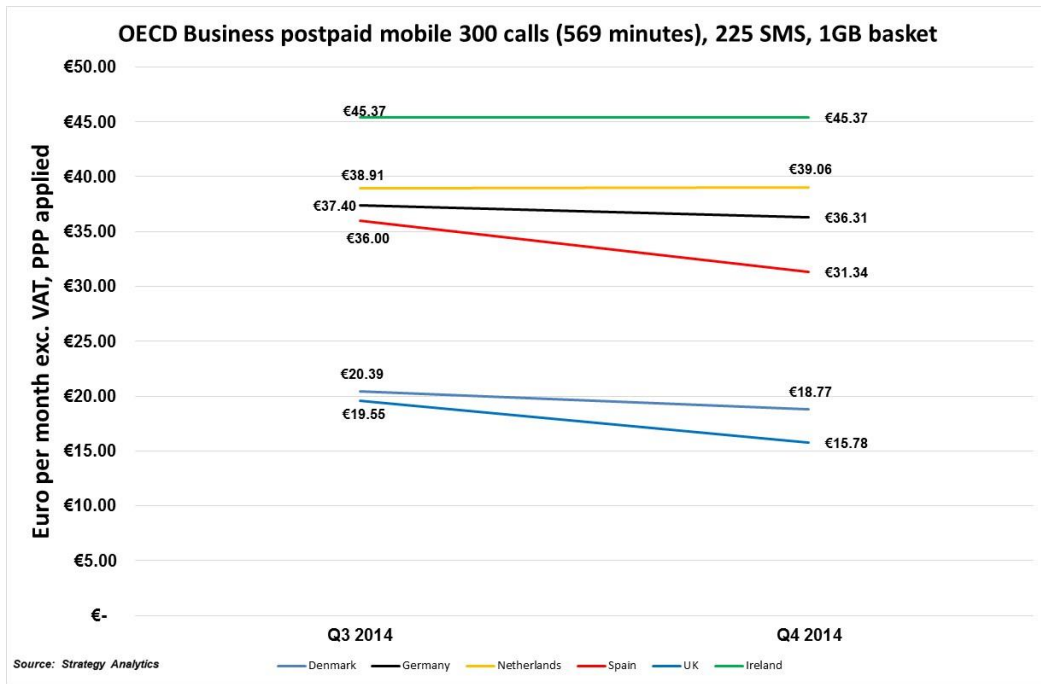
Figure 4.9.6 illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in sixth place with an average price of €45.37¹¹⁷ for this particular basket. The average price in Ireland is 46% more expensive than the average price¹¹⁸ for all of the countries included in the analysis.

¹¹⁶ Only tariffs advertised by Vodafone, Three and O2 were analysed for business customers. Some operators do not offer services to business customers.

¹¹⁷ As noted previously, average prices used for international comparisons exclude VAT charges.

¹¹⁸ The average of prices presented in Figure 4.9.6.

Figure 4.9.6 – Business Post-paid Mobile Phone Services Basket (International comparison)



5. Broadcasting

5.1 Overall Broadcasting Market

This broadcasting data is from the Nielsen TV Audience Measurement (TAM) Establishment Survey.¹¹⁹ The survey indicated that there were 1,583,000 TV homes in Ireland in January 2015. Figure 5.1.1 shows the estimated number of TV homes by reception type in January 2014 and January 2015 on the basis of the reception method through which the highest number of TV channels is received. Irish terrestrial DTT only homes represented 10.4% of all TV homes (although 38% of TV homes receive Irish DTT) as of January 2015. Cable/satellite platforms represented the remaining 89.6% of all TV homes in Ireland.¹²⁰

Figure 5.1.1 – TV Homes by Reception Type¹²¹

Reception	Jan 2015 (000s)	Jan 2014 (000s)	Jan 2015 as % of Total TV Homes	% Change Jan '14 – Jan '15
Irish Terrestrial	164	161	10.4%	+1.9%
Multi Total	1,419	1,429	89.6%	-0.7%
Analogue Cable/Sat	22	28	1.4%	-21.4%
Digital Cable/Sat	1,397	1,401	88.3%	-0.3%
Total Cable/Sat	1,419	1,429	89.6%	-0.7%
Total TV Homes	1,583	1,590	N/A	-0.4%
RECEPTION: Reception type categories are hierarchically defined and mutually exclusive. A home is classified once within reception type and this is based upon the highest form of reception available within the home.				
Multi Total: Made up of UK DTT / FTA Satellite, Cable, and SKY homes.				
Irish Terrestrial In September 2014 homes which only receive any or all of the following: RTÉ One, RTÉ Two, TV3, TG4, 3e, RTÉ One+1, RTÉ News Now, RTÉ jr via an aerial and a set-top box or an aerial and an integrated digital TV or via Saorsat.				
Cable/Satellite: Includes UK DTT / FTA Satellite, Cable, IPTV and SKY homes. Sky homes based on the possession of SKY boxes, not on being SKY subscribers.				

¹¹⁹ The Establishment Survey is a survey produced by Nielsen TV Audience Measurement (fieldwork is carried out by Behaviours and Attitudes) on behalf of Television Audience Measurement Ireland Ltd (a TV ratings body). The Establishment Survey covers areas such as ownership of TV related equipment, method of TV reception and demographics of TV household individuals such as age etc.

¹²⁰ MMDS (Multichannel Multipoint Distribution Service) is included under cable/satellite. MMDS is a wireless telecommunications technology, used usually in sparsely populated rural areas, where laying cables is not economically viable. Approximately 298,000 of those reported above as digital cable/sat and total cable/sat are UK DTT/FTA satellite.

¹²¹ Source: Nielsen TV Audience Measurement Establishment Survey on behalf of TAM Ireland.

Figure 5.1.2 shows TV homes by reception method¹²² from January 2013 to January 2015. The percentage of cable/satellite TV homes (this does not include other satellite i.e. respondents who said 'don't know' and satellites that receive foreign language stations including freesat) has averaged 70% over the last two years.¹²³ Television homes that subscribe to other satellite services beside Sky represented 13% of TV homes in January 2015. Reception by IPTV method is relatively low. Approximately 38% of TV homes have Irish DTT.

Figure 5.1.2 – TV Homes by Reception Method¹²⁴

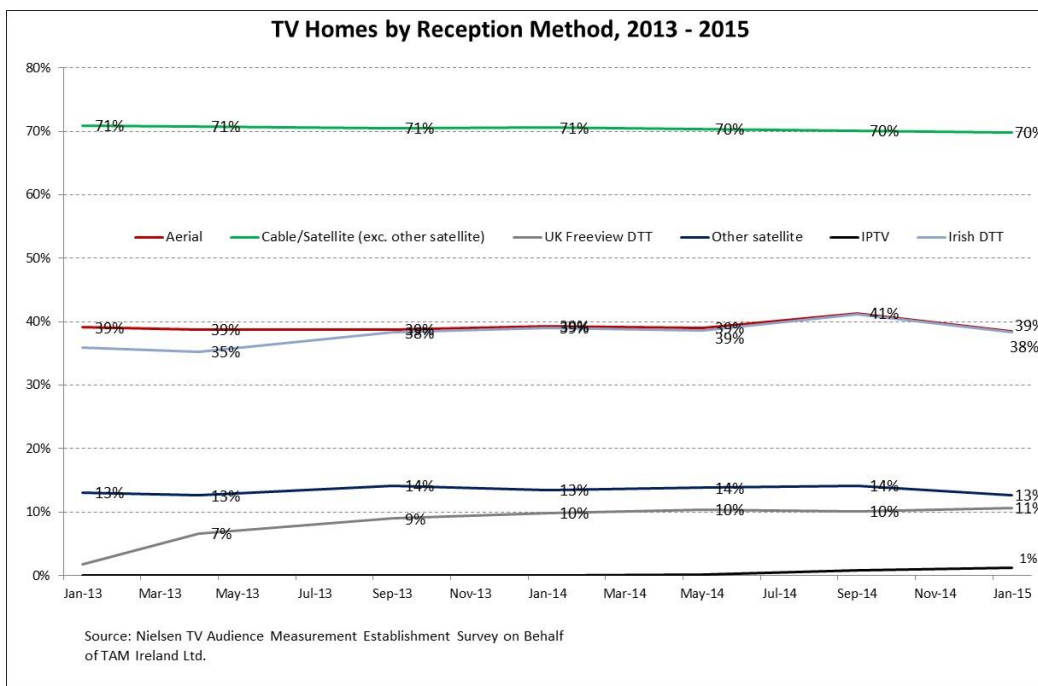


Figure 5.1.3 shows that, the total number of TV homes decreased slightly in January 2015. Digital TV homes represent 98.6% of all TV homes compared to 70.6% in January 2011.

¹²² This is determined by the method by which homes with a TV receive their channels. Each home can have more than one method of reception e.g. aerial and cable or digital satellite, digital satellite and cable, etc. The question is asked for their main and up to 9 TV sets. For this reason, the total for the reception methods adds up to more than 100%.

¹²³ It should be noted that from September 2011 the reporting of the cable/satellite figure has changed. This is because up to September 2011 cable/satellite reception method included homes that had both cable and satellite twice (i.e. (1) cable, (1) satellite). Nielsen now publish homes with cable and satellite as one reception method - as cable or satellite (i.e. cable or satellite (1)).

¹²⁴ As of November 2012 'Aerial' includes Saorsat homes. Irish DTT includes Saorsat. Cable/satellite includes MMDS and IPTV, excludes UK DTT, Irish DTT and Saorsat.

Figure 5.1.3 – TV Homes 2010 –2015

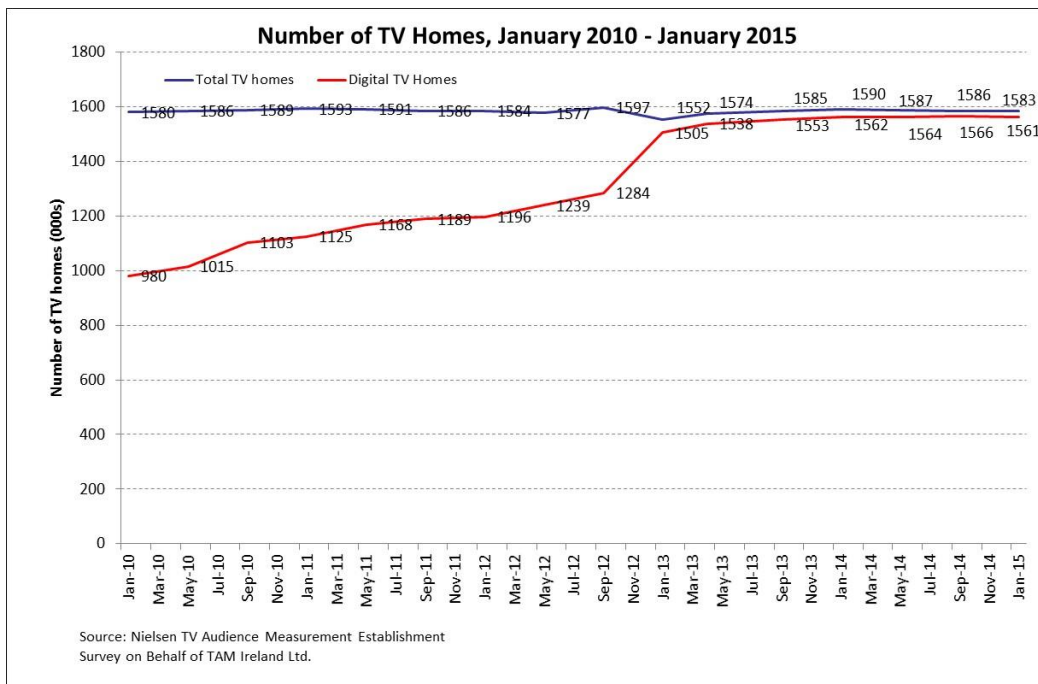


Figure 5.1.4 shows TV homes by DVD¹²⁵, broadband¹²⁶ access, game console and PVR¹²⁷ ownership between January 2012 and January 2015. 70% of television homes have a DVD player, but this figure has declined slightly over the last three years; down by five percentage points over the period. Broadband access was present in circa 72% of homes with a television in January 2015. The number of homes with games consoles has decreased over the last three years from 38% to 32%. PVR ownership was 58% in January 2015; up from 42% in January 2012.

¹²⁵ It should be noted that as of Sep 2013 VCR and DVD numbers are combined.

¹²⁶ Both fixed and mobile broadband.

¹²⁷ A PVR is an electronic device used to record media digitally. The PVR is also known as a digital video recorder or DVR. A PVR records and plays back television programmes, but, unlike the VCR, it stores the programs in digital rather than analogue format, for example, SKY+Box, or UPC Digital Video Recorder.

Figure 5.1.4 – DVD, Broadband, Games Console and PVR Trends

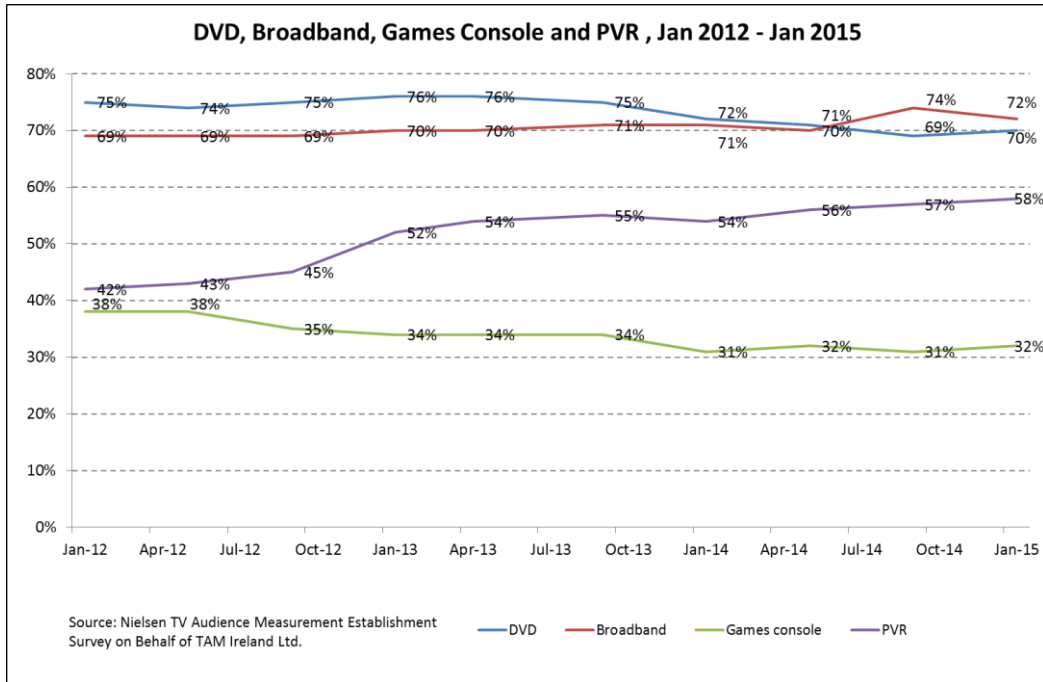
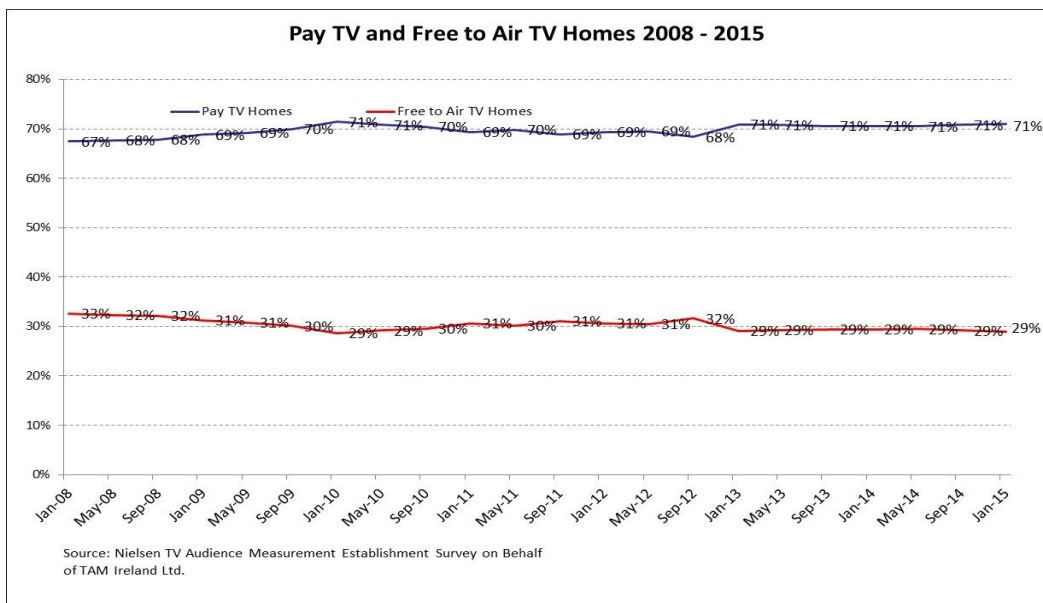


Figure 5.1.5 shows the level of household penetration of pay TV services and free to air TV services in Ireland based on reception method. This chart has been derived by ComReg using Nielsen data and is not a classification used by Nielsen or a classification used as part of the survey itself. Homes with a pay TV (cable, satellite and IPTV homes)¹²⁸ service have generally been stable since 2010 at 71% average of all TV homes.

Figure 5.1.5 – Pay TV vs Free to Air TV Homes, 2008 - 2015



¹²⁸ IPTV is included from September 2011.

6. Appendix

Sky Ireland's distribution of subscriptions by type (single play, double play or triple play) is estimated using percentage distribution of Sky Ireland's subscriptions obtained from the market survey data conducted by RED C Research & Marketing Ltd. The fieldwork on ComReg's behalf was carried out on November 17th-19th, 2014.

1005 respondents¹²⁹ were asked the following question:

- Does the telecommunications service provider, Sky, provide any of the following telecommunications services in your home?
 - TV
 - Internet/Broadband
 - Home Landline Telephone Service

The respondents who stated that Sky provides more than one service were then asked the following question:

- You mentioned that Sky provides your (x,y and/or z service). Do you receive one bill for these services (if 2 services mentioned) or do you receive one bill for at least two of this services (if 3 services mentioned)?

The respondents who gave the positive answer to the second question are categorized as bundle subscribers.

Survey results showed that 80.5% of Sky Ireland's subscribers were subscribing to one service, 7.5% to two services and 12.0% to three services.

Table A1: Sky Ireland's distribution of subscriptions by type

Subscription type (n=558)	Number of Sky's subscriptions	% share of total Sky's subscriptions
TV	408	73.1%
Broadband	25	4.5%
Fixed Voice	16	2.9%
TV and Fixed Voice	5	0.9%
TV and Broadband	30	5.4%
Fixed Voice and Broadband	7	1.3%

¹²⁹ The sample is nationally representative.

TV, Fixed Voice and Broadband	67	12.0%
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The following table lists Respondents who submitted data which was used to produce Q4 2014 quarterly report.

Table A2: List of Respondents

Respondent Name (N=52)
AirSpeed Telecom
AT&T Global Network Services Ireland Ltd.
Ats Voice Ltd
Bitbuzz Ltd
Brighter Networks Ltd
Blue Face Ltd
BT Communications Ireland Ltd
Cablewatch Ltd
Casey Cablevision Ltd
Centrecom Systems
Colt Telecoms
Crossan CableComm
Digitalforge
Digiweb group
Dome Mobile Services
Edge Telecommunications Ltd
eircom Ltd
E-Net
Equant operations in Ireland (EGN BV and ENS Ltd)
ESB Telecoms
EuNetworks Ireland Private Fiber Ltd
Fast Wireless Internet t/a Arra Communications
Fastcom Broadband Ltd
Fulnett Limited t/a Strencom
Greencom Telecommunications Ltd
Hutchison 3G Ireland Limited
IFA Telecom
Imagine Group
Ker Broadband Comms Ltd
Level 3 Communications (Ireland) Limited
Lycamobile Ireland Ltd
Magnet Networks
Meteor Mobile Communications

Modeva Networks
Nova Networks Ltd
Onwave Limited
PermaNet
Postfone
Pure Telecom
Rainbow Telecom LTD T/A Rainbow Communications
Rapid Broadband Ltd
Ripplecom
SAVVIS EUROPE BV
Sky Ireland
SprintLink Ireland Limited
Telefonica Ireland Ltd (O2)
Tesco Mobile Ireland Ltd
Transaction Network Services
UPC Communications Ireland Limited
Verizon Ireland Limited
Vodafone Ireland
Vu2Vu Ireland Ltd

6.1 15 years of Irish telecommunications sector monitoring

Following the publication of an annual market review in November 1999, ComReg's predecessor- the ODTR- published¹³⁰ its first Quarterly Review on 22nd March 2000.

Since that date, ComReg has continued to collect primary statistical data from authorised operators on a quarterly basis, in order to both understand current trends in the Irish communications market and inform external users.

The telecommunications sector in Ireland has evolved radically over the last 15 years as evident from the indicators published in the first Quarterly Review report:

- Competition in the sector has strengthened significantly with 510 authorised operators in Q4 2014 up from 70 in 2000.
- CPS service was introduced in 2000 as a measure of cost reduction that is incurred by customers when switching fixed voice operators. By the end of 2014, CPS accounted for only 4.4% of overall indirect access paths as OAOs continue to migrate their customer base to more advanced single-bill services, i.e. SB-WLR or WLA.
- Prices of fixed voice calls has also decreased significantly. ODTR in its first Quarterly Review reported that a ten minute call to the US during peak hours cost £2.30, a ten minute call to Cork cost £1.00 and ten minute local call during peak hours cost 38p¹³¹. Currently many fixed voice service packages include unlimited amount of local and national calls and a certain number of free minutes to international destinations and mobile phones.
- In 2000, 22% of survey respondents identified themselves as Internet users with the majority accessing Internet via dial up service. In Q4 2014 80% of survey respondents used internet within last three months while dial up subscribers accounted for only 0.4% of total Internet subscriptions (1.70 million)
- At the start of 2000, there were 1.7 million mobile telephony subscribers (resulting in penetration rate of 46%) all using 2G services. By the end of Q4 2014, this figure rose to 4,9 million (penetration rate of 106.5%) with the majority of subscribers moving to more advanced 3G and 4G services.

¹³⁰

See http://www.comreg.ie/publications/the_irish_telecommunications_market_quarterly_review_feb_2000.473.100023.p.html

¹³¹ All figures were based on Eircom's call charges.

ComReg would like to thank operators who continued to submit data to ComReg for Quarterly Key Data Reports over the last 15 years and hopes to see their continued co-operation in the future as ComReg will continue to monitor closely the developments in one of the most dynamic sectors in the Irish economy.