

**Final report for BT**

**International benchmark of fixed  
access services**

*9 May 2013*

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Annex A Exchange rates

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Analysys Mason Limited  
Bush House, North West Wing  
Aldwych  
London WC2B 4PJ  
UK  
Tel: +44 (0)845 600 5244  
Fax: +44 (0)20 7395 9001  
[london@analysysmason.com](mailto:london@analysysmason.com)  
[www.analysysmason.com](http://www.analysysmason.com)  
Registered in England No. 5177472

# 1 Introduction

- 1 This document is the final report of a project carried out by Analysys Mason on behalf of BT, to provide data on broadband and narrowband volumes, retail prices and wholesale prices. This report compares the situation in the UK with similar Western European countries, for BT to use as part of its preparation for Ofcom's review of the fixed access line market.
- 2 The data in this report is based on Analysys Mason's data and forecasts that are produced as part of our published research programme, or are based on publicly available information.
- 3 Overall, the results show that the UK is performing strongly relative to other markets, with low prices, high penetration and a competitive market. For example:
  - In 2012, only France and the Netherlands had a higher penetration of fixed broadband than the UK
  - In 2012, only in one country, Austria, did consumers pay less for fixed broadband than in the UK
  - As a share of all broadband lines, unbundled lines in the UK form a greater share of broadband circuits than in any country except for France
  - BT Retail is the only Western European incumbent to have less than a 50% share of retail access narrowband line rentals, and its share is considerably lower than for all other incumbents.
- 4 This report is presented in three main sections:
  - **Broadband lines** – covering broadband penetration, prices, retail market share, subscriptions to double- and triple-play services, and the roll-out and take-up of superfast broadband services
  - **Narrowband lines** – covering the prices and retail market shares for narrowband lines
  - **Wholesale prices** – comparing wholesale prices across various Western European markets. Prices are included for narrowband (wholesale line rental, WLR) and broadband wholesale services (LLU prices, bitstream, superfast broadband).
- 5 The countries included in this benchmark are: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and the UK.
- 6 The exchange rates used in this report are set out in Annex A.
- 7 Most of the charts in the report follow the same convention:

- For the *retail markets*, data is shown for the UK, the average of the ‘big 4’ (France, Germany, Italy and Spain), the average for Western Europe *excluding* the UK (so that the UK results do not have an impact on the average), the highest and lowest results (or the second highest or lowest where the UK is highest or lowest)
- For *wholesale prices*, all countries with products comparable to those in the UK are shown. The average wholesale prices also exclude the UK.
- It should be noted that for the *Western Europe and big 4 averages*, the simple average has been used, rather than an average weighted by population (e.g. the result from Ireland carries equal weighting to the result from Germany) as the objective is to compare the UK with other individual countries, not with Europe as a whole. The use of a weighted average would substantially affect the results, as the performance of the big 4 would heavily outweigh all of the small countries included in the Western European average.

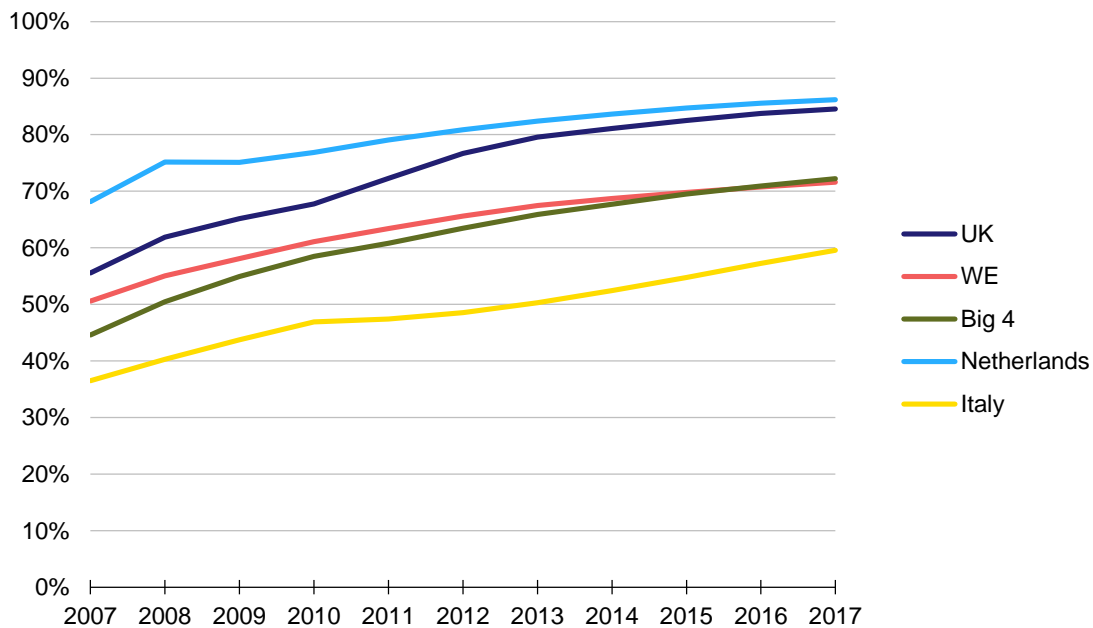
## 2 Broadband lines

### 2.1 Broadband penetration

In 2012, only France and the Netherlands had a higher penetration of fixed broadband than the UK

- 8 Figure 2.1 shows the percentage of total residential premises that are served by a fixed broadband connection (including ADSL, SDSL, VDSL, FTTP, cable modem, other fixed broadband and dedicated leased connections). Historical data has been used up to 2012, and the forecast for future residential premises connected to fixed broadband connections comes from Analysys Mason's report *Western Europe telecoms market: forecasts and analysis 2012–2017*<sup>1</sup>.

Figure 2.1: Residential fixed broadband connections as a percentage of total residential premises, Western Europe [Source: Analysys Mason, 2013]



- 9 With strong competition between cable and DSL-based broadband operators, the Netherlands has the highest penetration of residential fixed broadband connections, as a % of total residential premises. Household penetration in the UK was 77% at the end of 2012, which was 4% lower than the best performing country, the Netherlands, but considerably higher than the Western European and big 4 averages.
- 10 The UK can expect to see further growth in broadband connections and residential fixed broadband penetration. Competition between BT Retail and other operators – in particular BSkyB

<sup>1</sup> See <http://www.analysismason.com/Research/Content/Forecasts/Western-Europe-forecast-2012-2017-Sep2012-RDDF0>

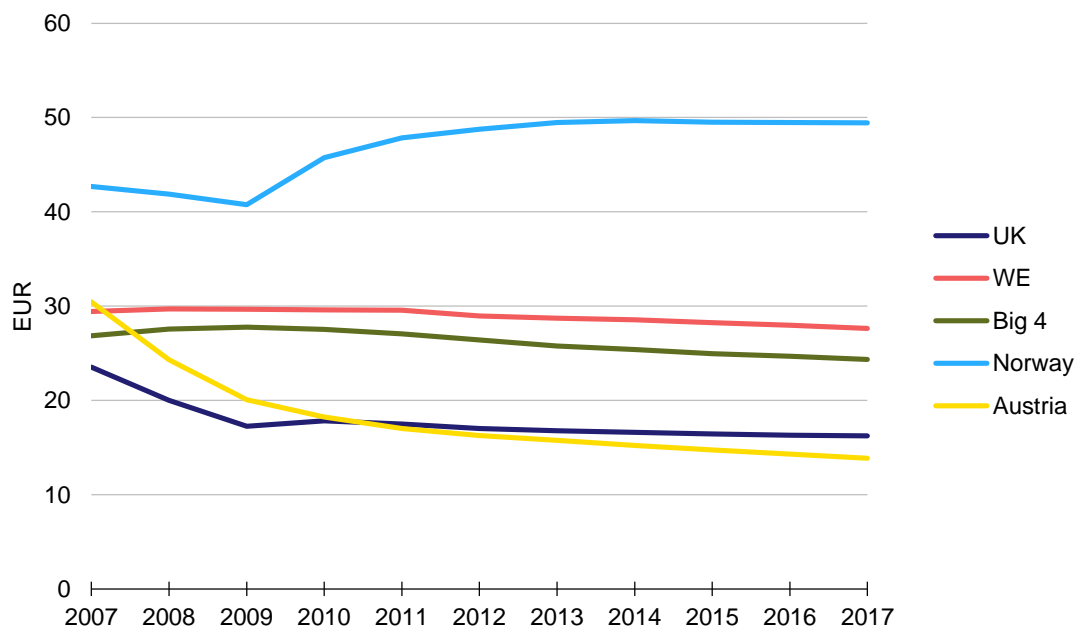
(Sky), TalkTalk and Virgin Media – will continue to put downward pressure on broadband prices, as discussed in Section 2.2, resulting in the relatively strong take-up of fixed broadband in the UK compared to other Western European countries. In 2017, we anticipate that 85% of residential properties in the UK will have a fixed broadband connection, compared to a Western European average of 72%.

## 2.2 Fixed broadband prices

In 2012, only in one country, Austria, did consumers pay less for fixed broadband than in the UK

- 11 Figure 2.2 shows the average monthly retail revenue per fixed broadband connection, based on all fixed broadband connections (ADSL, SDSL, VDSL, FTTP, cable modem, other fixed broadband and dedicated leased connections). The revenue per connection figure is calculated as the total revenue from fixed broadband divided by the average number of connections in the period. This calculation gives a more accurate reflection of the prices actually paid than analysis of published prices. Historical data has been used up to 2012, and the forecast for future average monthly retail revenue per fixed broadband connection comes from Analysys Mason's report *Western Europe telecoms market: forecasts and analysis 2012–2017*<sup>1</sup>.

Figure 2.2: Average monthly retail revenue per fixed broadband connection (EUR), Western Europe [Source: Analysys Mason, 2013]



- 12 With strong competition among its fixed broadband and mobile broadband operators, average monthly retail revenue per fixed broadband connection is lowest in Austria. The average monthly retail revenue per fixed broadband connection is highest in Norway, where revenue is expected to rise from EUR48.75 in 2012 to EUR49.42 in 2017, as FTTP technology makes up an increasing

proportion of broadband connections. In 2012, FTTP and VDSL accounted for 32% of Norway's broadband connections, compared to an average of 9% of connections throughout Western Europe.

- 13 At the end of 2012, retail revenue in the UK averaged EUR17.01 per connection, more than 40% lower than the price in the average Western European country, and more than 35% lower than in the big 4 markets.
- 14 As discussed in the previous section, low prices in the UK are due largely to strong competition between Virgin Media and the DSL-based operators, including BT Retail, Sky and TalkTalk. This rivalry is anticipated to lead to the average monthly retail revenue per fixed broadband connection falling from EUR17.01<sup>2</sup> in 2012 to EUR16.24 in 2017, even though a higher proportion of lines will be superfast (e.g. VDSL) by 2017.

### 2.3 Mobile broadband prices

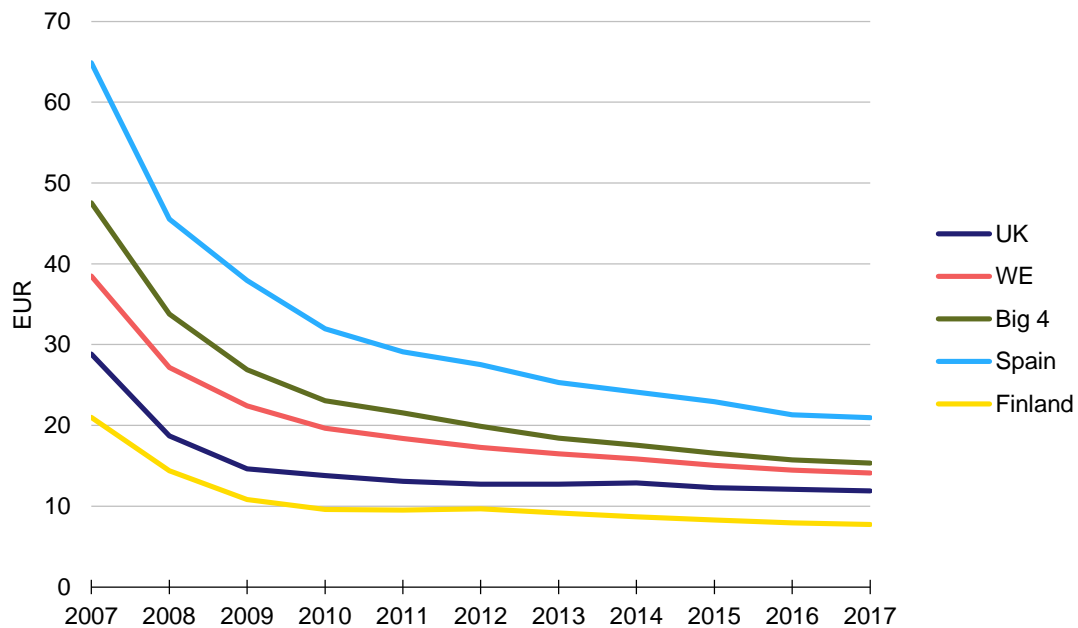
In 2012, mobile broadband ARPU in the UK was 26% lower than in the average Western European market

- 15 Figure 2.3 shows the average monthly retail revenue per mobile broadband connection, defined as all mobile broadband (2G+) PC, laptop, netbook or tablet connections via a USB modem or datacard. The figure excludes data access on a handset or the use of the handset as a modem. As operators and regulators do not typically publish data on mobile broadband revenue, average revenue per user has been calculated using a combination of Analysys Mason's existing research and forecasts prepared from published data on total retail revenue and the number of active subscriptions. Historical data has been used up to 2012, and the forecast for future average monthly retail revenue per mobile broadband connection comes from Analysys Mason's report *Western Europe telecoms market: forecasts and analysis 2012–2017*<sup>1</sup>.

<sup>2</sup> Figures include residential consumer and business broadband subscribers.



Figure 2.3: Average monthly retail revenue per mobile broadband connection (EUR), Western Europe  
 [Source: Analysys Mason, 2013]



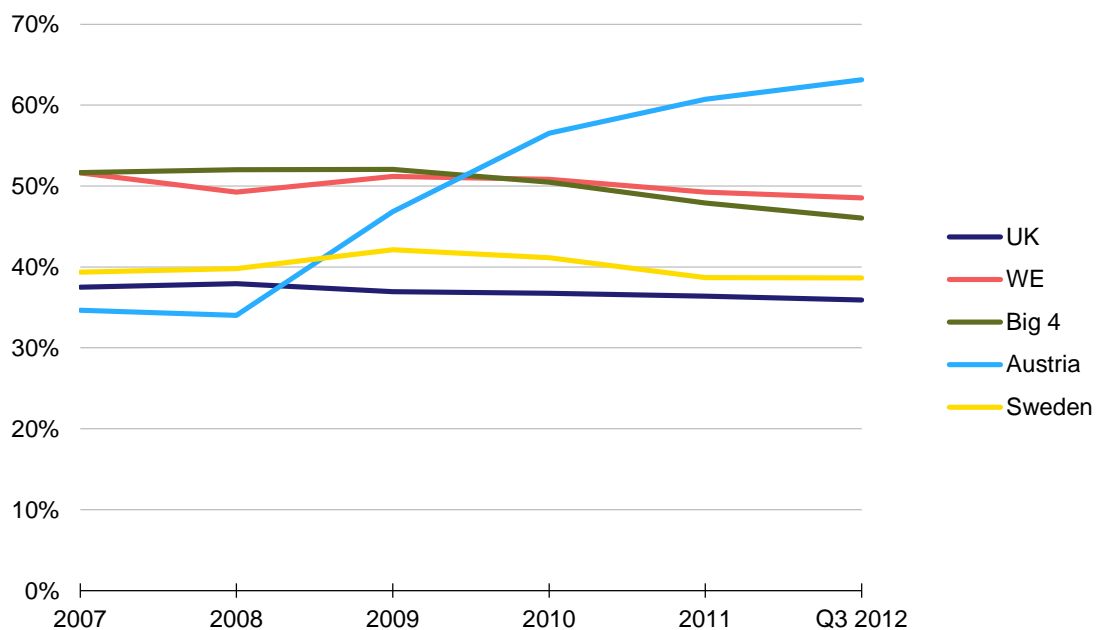
- 16 As the chart shows, mobile broadband revenue per connection has fallen considerably since the introduction of the services. On average, by 2012 ARPUs across Western Europe had fallen to less than half of their 2007 levels. As with fixed broadband, ARPU in the UK is lower than the Western European average. At the end of 2012, ARPU in the UK was less than EUR13, which was 26% lower than the average level for Western Europe and 36% lower than in the big 4.
- 17 Mobile broadband prices are strongly influenced by the level of competition and the relative positions of fixed and mobile. In the UK, 3 has been particularly aggressive in promoting mobile broadband, both as a supplement to fixed broadband and as a substitute for it, and this has had an impact on price.
- 18 The ARPU figures for mobile broadband should be treated with some caution, as the figures partly depend on usage levels. Spend figures for the UK, where mobile broadband typically supplements a fixed connection (and so usage is low relative to other countries), may be lower than in other markets, such as Austria, where mobile broadband is a replacement for fixed (and so usage and spend levels are higher).

## 2.4 Incumbent's share of fixed broadband retail revenue

Of all the Western European incumbents, BT Retail has the lowest share of fixed broadband retail revenue, providing an indication of the strong level of competition in the UK

19 Figure 2.4 shows the incumbent's fixed broadband retail revenue as a percentage of total fixed broadband retail revenue, with fixed broadband defined as total fixed broadband retail revenue, including ADSL, SDSL, VDSL, FTTP, cable modem and other fixed broadband. Historical data has been used up to Q3 2012, from Analysys Mason's report *Telecoms Market Matrix 3Q 2012*<sup>3</sup>. Please note that this chart only includes historical data, as Analysys Mason does not forecast market shares for individual operators.

Figure 2.4: Incumbent's broadband retail revenue as a percentage of total broadband retail revenue, Western Europe [Source: Analysys Mason, 2013]



20 As can be seen in Figure 2.4, BT Retail records the lowest incumbent market share of broadband revenue among the countries included in this study. BT Retail's position indicates the existence of a competitive market in the UK. Sweden's incumbent had the next lowest share as of Q3 2012 (39%), the highest was in Austria (63%), and the Western European average was 47%<sup>4</sup>.

21 BT Retail's share of total broadband retail revenue in the UK fell from 38% in 2007 to 36% in Q3 2012. This reflects continued strong competition from other operators, particularly Sky, which

<sup>3</sup> See <http://www.analysismason.com/Research/Content/Data-set/Telecoms-Market-Matrix>

<sup>4</sup> It should be noted that Finland has been excluded from these figures. In Finland, the market is structured with regional, rather than national, incumbent networks, and so the figures are not comparable.

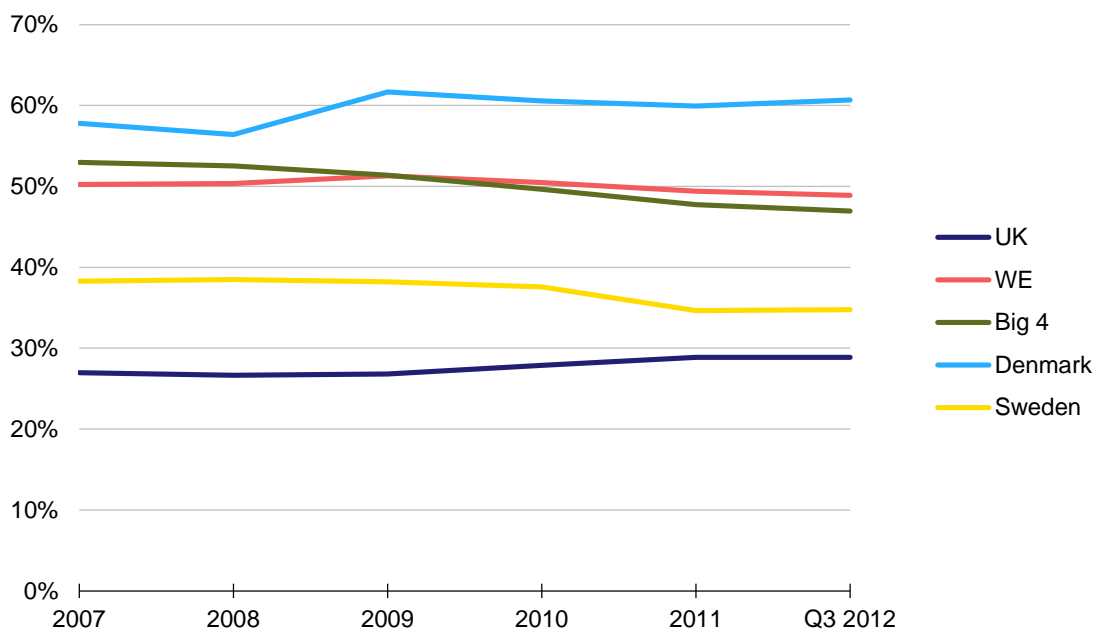
increased its share of broadband revenue from 7% of the market at the end of 2007 to 17% as of 3Q 2012.

## 2.5 Incumbent's share of retail fixed broadband connections

Of all the markets in this study, BT Retail has the lowest share of retail fixed broadband connections

22 Figure 2.5 shows the fixed broadband market share of incumbents as a percentage of total fixed broadband connections of all types (ADSL, SDSL, VDSL, FTTP, cable modem, other fixed broadband and dedicated leased connections). Historical data has been used up to Q3 2012, from Analysys Mason's report *Telecoms Market Matrix 3Q 2012*<sup>3</sup>. As with revenue, Analysys Mason does not forecast the shares of connections for individual operators and so Figure 2.5 only displays historical data.

Figure 2.5: Incumbent's retail fixed broadband market share as a percentage of total fixed broadband connections, Western Europe [Source: Analysys Mason, 2013]



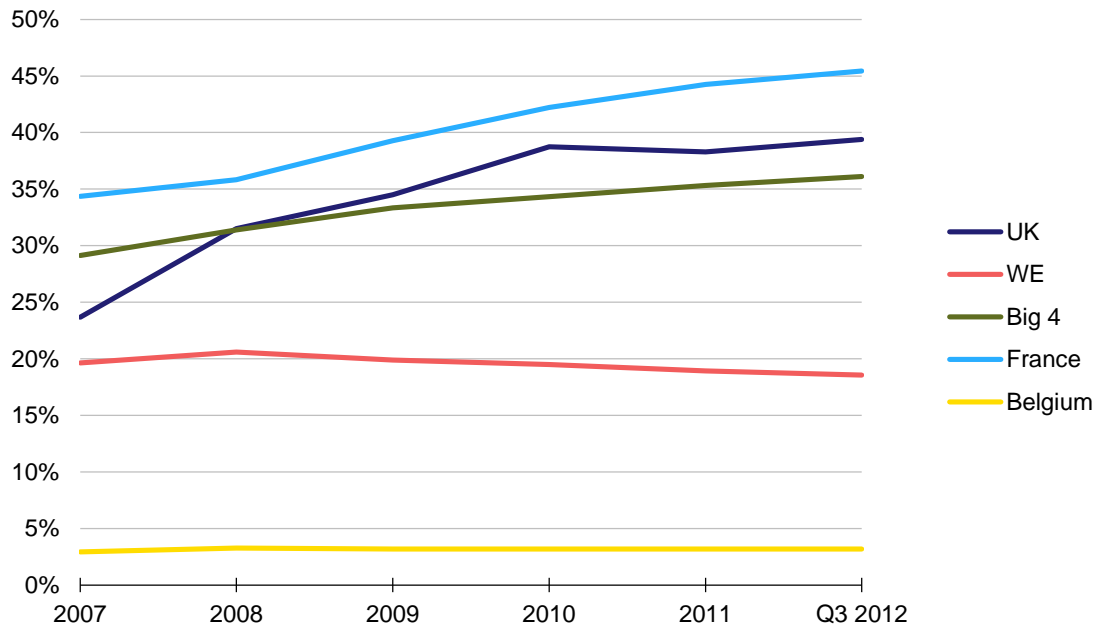
23 As is to be expected, a strong link can be seen between an incumbent's share of fixed broadband connections and its share of fixed broadband revenue, with BT Retail having a lower share of connections than any other European incumbent (29% in Q3 2012). As an indication of how BT compares to other incumbents, in the next lowest country, Sweden, Telia had 35% of connections as of Q3 2012, the highest incumbent share was in Denmark (61%), and the Western European average was 47%<sup>4</sup>.

## 2.6 Unbundled local loop penetration

Unbundled local loops make up a higher share of broadband connections in the UK than in any other country except for France

- 24 Figure 2.6 shows the percentage of all broadband connections that are provided over unbundled local loops (including all SMPF (shared metallic path facility) and MPF (metallic path facility) connections, or their local equivalents). The chart gives an indication of the level of success of unbundling in each market. Historical data has been used up to Q3 2012, from Analysys Mason's report *Telecoms Market Matrix 3Q 2012*<sup>3</sup>. Analysys Mason does not forecast the shares of unbundled loops as a share of total fixed broadband connections.
- 25 As can be seen, in Western Europe on average (excluding the UK), local loop unbundling has been losing market share, and declined slightly from a peak of 21% of connections in 2007 to 19% in Q3 2012. This slight decrease can be explained by a small increase in cable connections and an increase in the availability of other forms of next-generation access.
- 26 However, the UK has countered this trend, with unbundling increasing from 24% of connections at the end of 2007 to 39% in Q3 2012. This increase is due to a combination of alternative operators such as Sky gaining market share, and these operators transferring connections to unbundled loops. Today, the UK has more unbundled loops, as a percentage of all broadband connections, than any country other than France, which has long promoted unbundling as a way of increasing infrastructure competition.
- 27 In markets where alternative cable networks have extensive coverage and a high share of connections, such as Belgium, the share of unbundlers is much lower and is relatively static as a share of connections. In Belgium, wholesale offers were historically structured to favour the use of bitstream ADSL, rather than unbundling.

Figure 2.6: Total unbundled local loops as a percentage of all broadband lines [Source: Analysys Mason, 2013]



## 2.7 Fixed voice and broadband from a single provider as a percentage of retail fixed broadband connections

For most consumers, the default position is already to buy fixed voice and fixed broadband from the same supplier

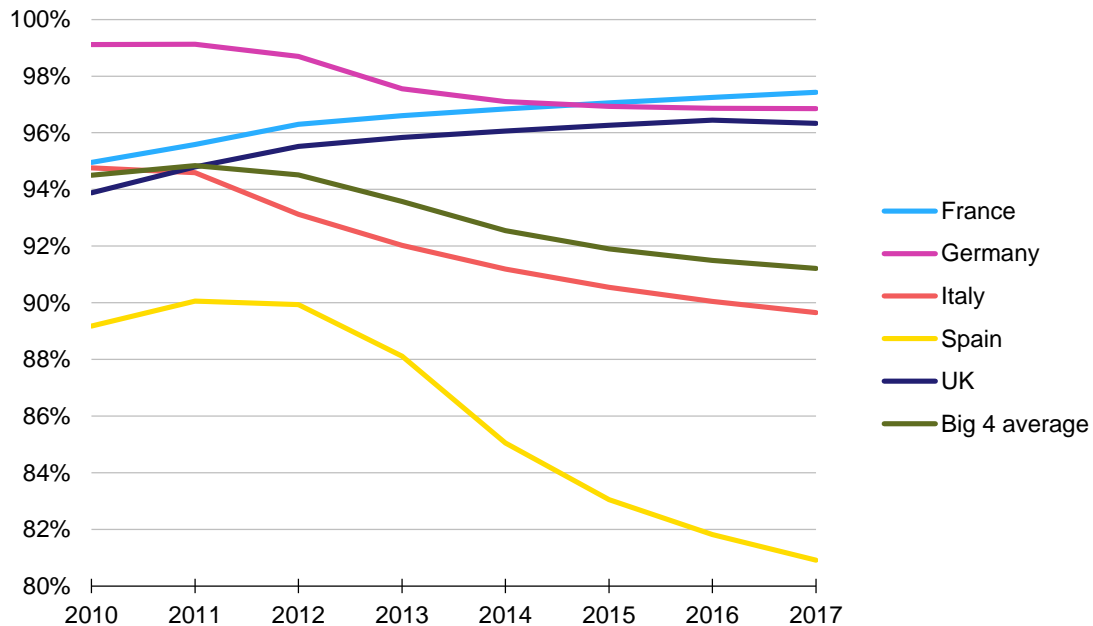
28 Figure 2.7 shows the percentage of retail fixed broadband subscribers who take fixed voice and fixed broadband from a single supplier (though not necessarily as part of a single package). The forecast is based on Analysys Mason's report *Multi-play services in Europe: forecasts and analysis 2012–2017*<sup>5</sup>.

29 In the UK, as in other markets, the percentage of fixed broadband connections that are bought from the fixed voice supplier is extremely high today, at over 90%. We expect this to increase to just over 96% by the end of 2017.

30 In some markets, notably Spain, there will be a gradual decrease in a single supplier being used, as a declining proportion of households are expected to take fixed voice services. We expect that there will be an increasing proportion of households which take fixed broadband from a single supplier, or fixed broadband and TV from the same supplier, but no fixed voice services. We have already seen this trend in Italy, where services delivered over FTTP are sold as separate items and there has been a decline in fixed voice subscriptions.

<sup>5</sup> See <http://www.analysismason.com/Research/Content/Reports/Multi-play-services-Europe-forecasts-Feb2013-RDMBO/>

Figure 2.7: Fixed voice and broadband from a single provider as a percentage of retail fixed broadband connections [Source: Analysys Mason, 2013]

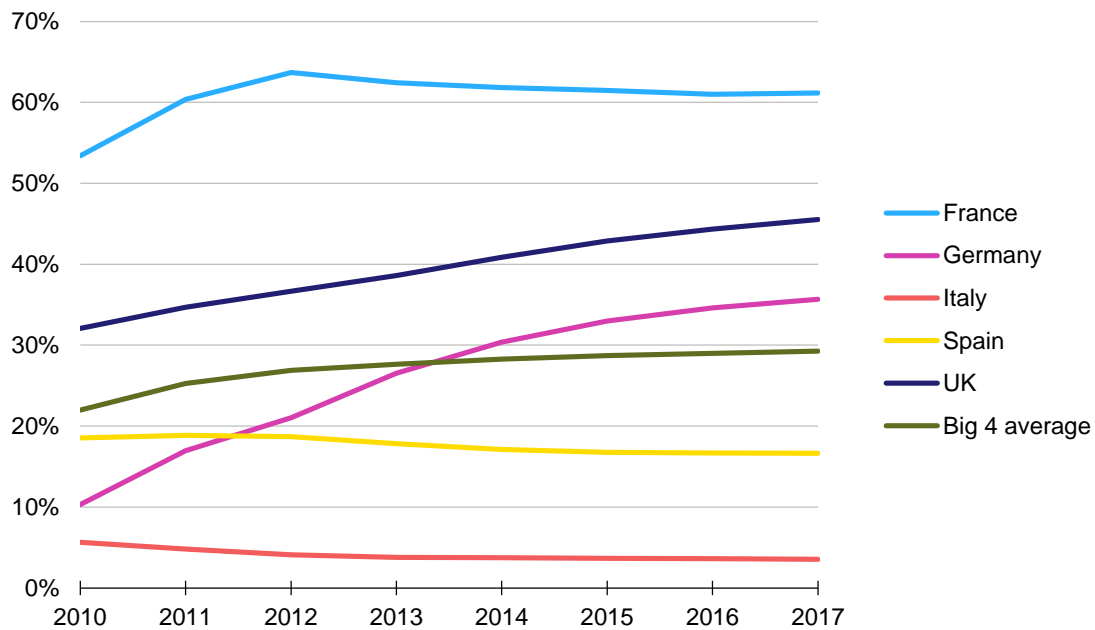


## 2.8 Three services taken from a single supplier as a percentage of retail fixed broadband connections

In the UK, more than a third of broadband customers currently take voice and TV from the same supplier

- 31 Figure 2.8 shows the subscribers who take fixed voice, fixed broadband and TV from a single supplier as a percentage of retail fixed broadband connections. Subscribers are included whether or not they take the services in a single package or bundle, or over the same network (for example, the UK data includes Sky customers who take services delivered by satellite and copper).
- 32 In the UK, as in most other European markets, we expect that there will be more packages that include TV and that the take-up of such packages will increase. We expect the penetration of three services taken from a single supplier to increase in the UK from 37% at the end of 2012 to 46% at the end of the period. Sky and Virgin form the bulk of the market for services from a single supplier in the UK.
- 33 In France, the penetration of three services being taken from a single supplier is already very high, and we believe the market for pay-TV services is saturated. The slight decline forecast in France is due to an increase in the penetration of fixed broadband by subscribers who do not want a pay-TV service. We have also seen a marginal decline in three services sold by the same supplier in Italy, as Telecom Italia has moved away from IPTV services to its Cubo over-the-top (OTT) video service. Our figures do not include subscriptions to OTT video services.

Figure 2.8: Three services taken from a single supplier as a percentage of retail fixed broadband connections  
[Source: Analysys Mason, 2013]



## 2.9 Retail prices of incumbent double-play service

For double-play services bought from the incumbent, only Denmark has lower prices than the UK

34 Figure 2.9 shows the monthly price for an incumbent's double-play service in Q4 2012 (defined as the lowest-priced fixed broadband (ADSL2+ or VDSL if ADSL2+ is not provided by operator) and a PSTN-based fixed voice calling package, plus the extra access charge from the incumbent for line rental). The pricing data is taken from Analysys Mason's report *Multi-play pricing benchmark 2Q 2012*<sup>6</sup>.

35 The price for a double-play service from BT Retail is EUR29.28 per month. Excluding the UK, the average price for a double-play service from incumbent operators for the countries listed in Figure 2.9 is EUR55.17 per month. Only Denmark, which charges EUR26.8 per month, has lower prices than the UK. It should be noted that not all incumbent operators offer double-play bundles.

<sup>6</sup> See <http://www.analysismason.com/Research/Content/Data-set/Multi-play-pricing-benchmark-RDMBO/>

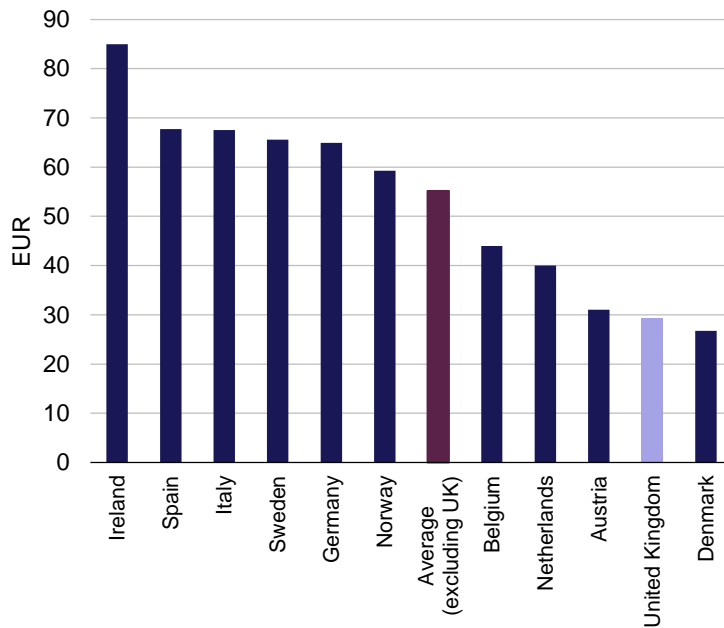


Figure 2.9: Price of incumbent double-play service, Q2 2012 (EUR)  
[Source: Analysys Mason, 2013]

## 2.10 Retail prices of incumbent triple-play service

The UK is also the second cheapest country for incumbent triple-play services

36 Figure 2.10 shows the monthly price for an incumbent's triple-play service (defined as the lowest-priced fixed broadband (ADSL2+ or VDSL if ADSL2+ is not provided by operator) and a PSTN-based fixed voice calling package, plus the extra access charge from the incumbent for line rental, plus the lowest-priced TV package). The price for a triple-play service from BT was EUR34.21 per month as of Q2 2012, and the average price for a triple-play service from incumbent operators for the countries listed in Figure 2.10 (excluding the UK) was EUR57.15 per month. It should be noted that not all incumbents offer triple-play packages (e.g. eircom in Ireland). Also, as the content of TV packages varies greatly (with some including more valuable content than others), there are limitations on the direct comparability of prices across markets.



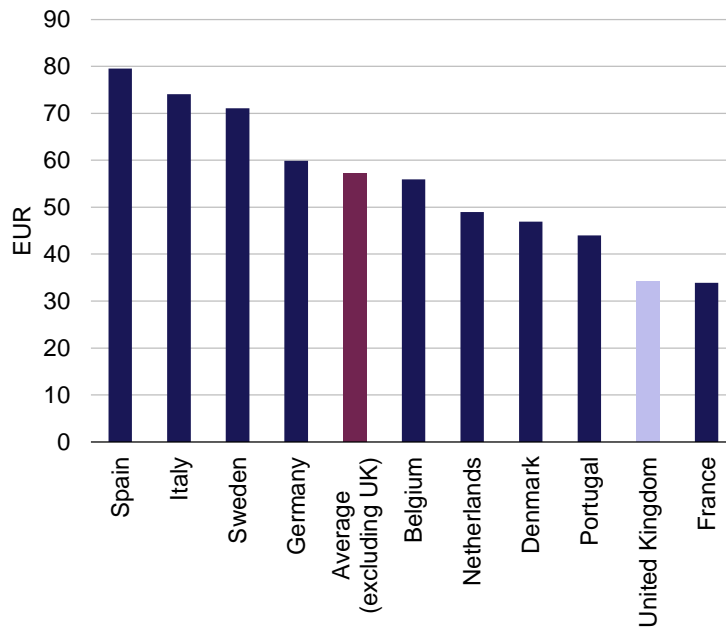


Figure 2.10: Price of incumbent triple-play service, Q2 2012 (EUR)  
[Source: Analysys Mason, 2013]

## 2.11 Premises passed by fixed superfast broadband from the incumbent

Based on current roll-out plans, we expect superfast broadband from the incumbent to be available in 83% of the UK's premises in 2017, compared to 75% in Western Europe on average

37 Figure 2.11 shows the percentage of premises passed by 'superfast' services provided by the incumbent (defined as services providing downstream bandwidth of at least 24Mbit/s (i.e. FTTC, FTTP)). Historical data has been used up to 2012, and the forecast for future homes passed comes from Analysys Mason's report *FTTx roll-out and capex in developed economies: forecasts 2012–2017*<sup>7</sup>.

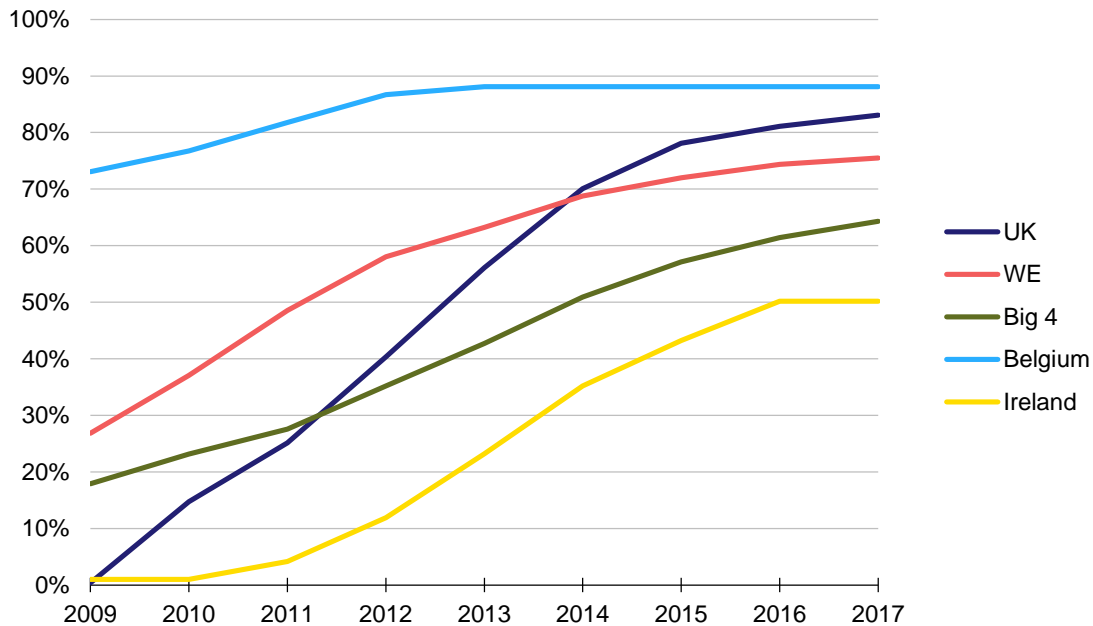
38 The UK was later than most other Western European countries in beginning roll-out of the incumbent's superfast network upgrades. However, more recently the upgrade of BT's network to VDSL has accelerated roll-out. BT delivered NGA coverage to over 13 million homes and businesses by the end of 2012<sup>8</sup>, using a mix of FTTP (GPON) and FTTC/VDSL2 technology. We are forecasting that BT will deliver FTTC/VDSL2 coverage to a total of 78% of households by the end of 2015. With continued rapid roll-out in the UK, we expect to see more than 80% of premises passed by superfast broadband by the end of 2016. This will put the UK 8 percentage points higher than the Western European average and 19 percentage points higher than the other large European countries (the big 4).

39 Strong competition from cable in Belgium and the Netherlands means that these countries have the highest percentage of homes passed by superfast broadband from the incumbent, with Belgium having the highest rate of all Western European countries.

<sup>7</sup> See <http://www.analysismason.com/Research/Content/Reports/FTTx-forecast-Mar2012-RDTW0/>

<sup>8</sup> See [http://www.btplc.com/News/ResultsPDF/q313\\_release.pdf](http://www.btplc.com/News/ResultsPDF/q313_release.pdf)

Figure 2.11: Premises passed by superfast broadband as a percentage of total premises, incumbents, Western Europe [Source: Analysys Mason, 2013]<sup>9</sup>



## 2.12 Premises passed by fixed superfast broadband from all operators

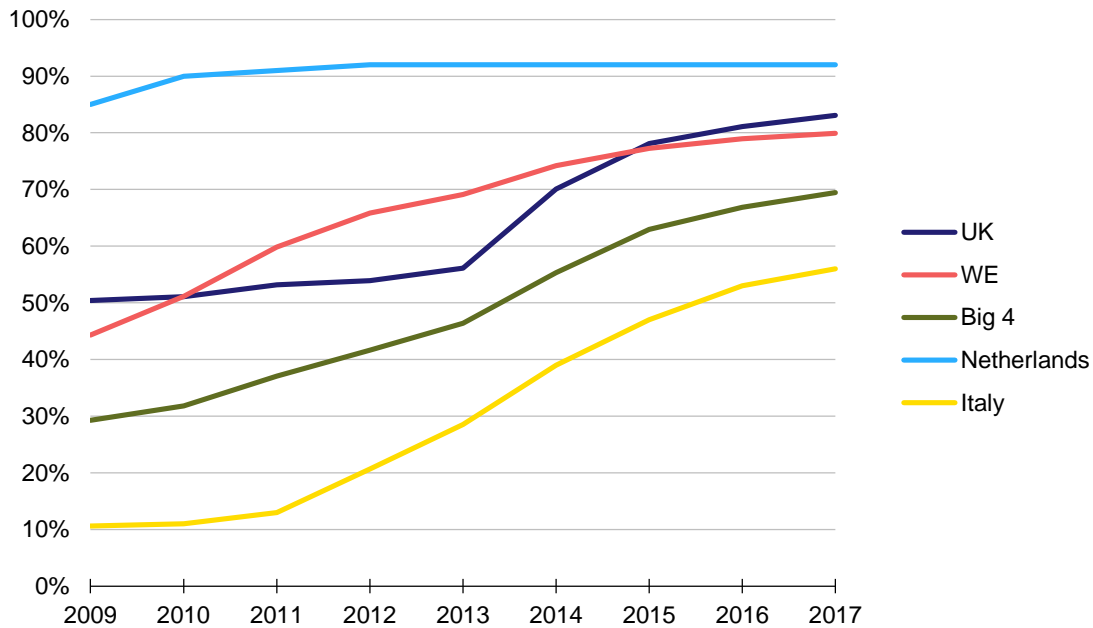
When including all operators' superfast broadband coverage, the UK will exceed the Western Europe on average by 2015

40 Figure 2.12 shows the percentage of premises passed by all 'superfast' broadband services (defined as services providing downstream bandwidth of at least 24Mbit/s (i.e. FTTC, FTTP and DOCSIS 3.0 cable)). Figure 2.12 builds on the data provided in Figure 2.11 by including DOCSIS 3.0 cable and FTTP from alternative operators, as well as superfast broadband from the incumbent. Again, historical data has been used up to 2012, and the forecast for future homes passed comes from Analysys Mason's report *FTTx roll-out and capex in developed economies: forecasts 2012–2017*<sup>10</sup>.

<sup>9</sup> This chart, like all similar charts in the report, compares the UK to the best performing country (in this case Belgium) and the worst performing country (in this case Ireland). The big 4 represents the simple average (i.e. not weighted by the number of connections) of France, Germany, Italy and Spain. WE shows the simple average of the 13 countries, excluding the UK.

<sup>10</sup> See <http://www.analysismason.com/Research/Content/Reports/FTTx-forecast-Mar2012-RDTW0/>

Figure 2.12: Premises passed by superfast broadband as a percentage of total premises, all operators, Western Europe [Source: Analysys Mason, 2013]



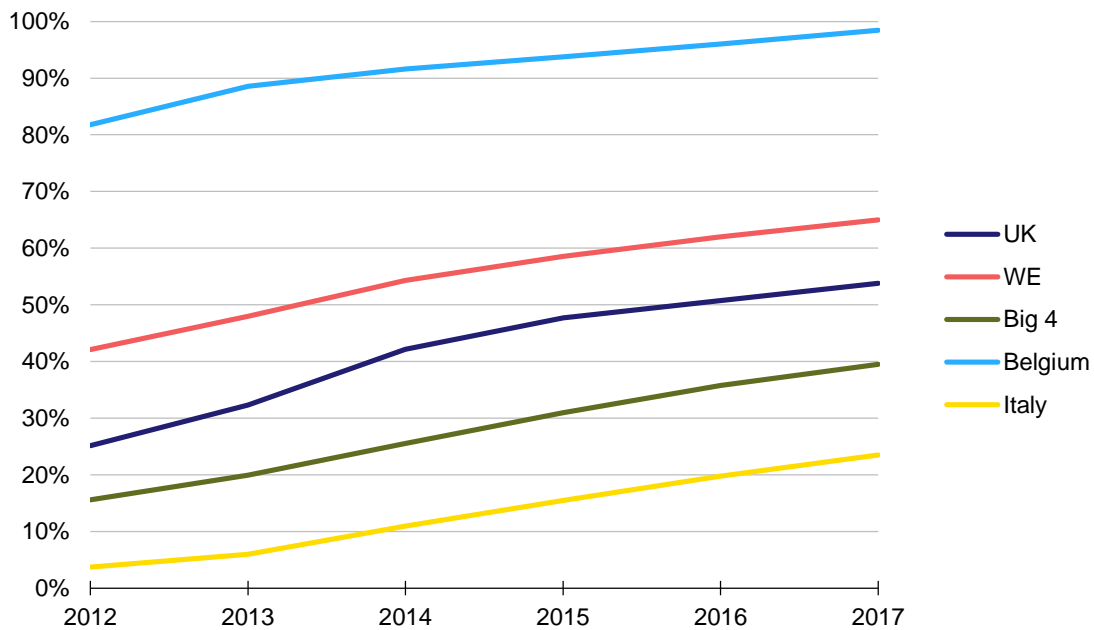
- 41 The overall message from Figure 2.12 (where non-incumbent networks are included) is the same as that from Figure 2.11 (where only incumbent data is shown). Countries with strong infrastructure competition (e.g. the Netherlands, Belgium) have the highest coverage of superfast broadband services. Countries with less infrastructure competition, such as Italy, have much lower levels of superfast broadband coverage.
- 42 In the UK, most of the early roll-out of BT's superfast broadband was in areas already covered by Virgin Media's DOCSIS 3.0 cable network. From 2013, with the acceleration of BT's roll-out of superfast services, we expect coverage of superfast broadband services to go beyond the Virgin Media areas and, by 2015, we expect it to exceed the European average.

### 2.13 Penetration of superfast fixed broadband services

We expect the penetration of VDSL services in the UK in 2017 to be 21% higher than the average of the big 4 countries and 4% lower than the average for Western European markets

- 43 Figure 2.13 provides a forecast of superfast broadband connections (defined as services of 24Mbit/s or greater, i.e. all services faster than ADSL2+) as a percentage of all broadband connections. Historical data is used for 2012, and the forecasts for 2013 to 2017 are based on data from Analysys Mason's report *Western Europe telecoms market: forecasts and analysis 2012–2017*<sup>1</sup>. We have assumed that all cable broadband can be classed as superfast, although a small proportion may be lower speed.

Figure 2.13: Superfast fixed broadband connections as a percentage of all fixed broadband connections  
 [Source: Analysys Mason, 2013]



- 44 Belgium's incumbent, Belgacom, started to roll out VDSL technology in 2004 to compete with the high-speed offerings from the cable providers. Today, Belgacom offers VDSL as the default fixed broadband service, and only sells new ADSL connections through its Scarlet sub-brand. As a result of this competition between the cable operators and the incumbent, penetration of superfast broadband was over 80% in Belgium at the end of 2012, and we forecast that it will approach 100% penetration by 2017. A similar situation, though with slightly lower penetration, can be seen in the Netherlands.
- 45 In the UK, we anticipate that the overall percentage of superfast broadband will increase from 25% in 2012 to 54% in 2017, below the simple average of European countries (65% in 2017), but well ahead of the big 4 (40% in 2017). In the big 4, the lack of widespread competition between cable operators and DSL-based operators means that there is less of an incentive to promote superfast broadband than in Belgium or the Netherlands.

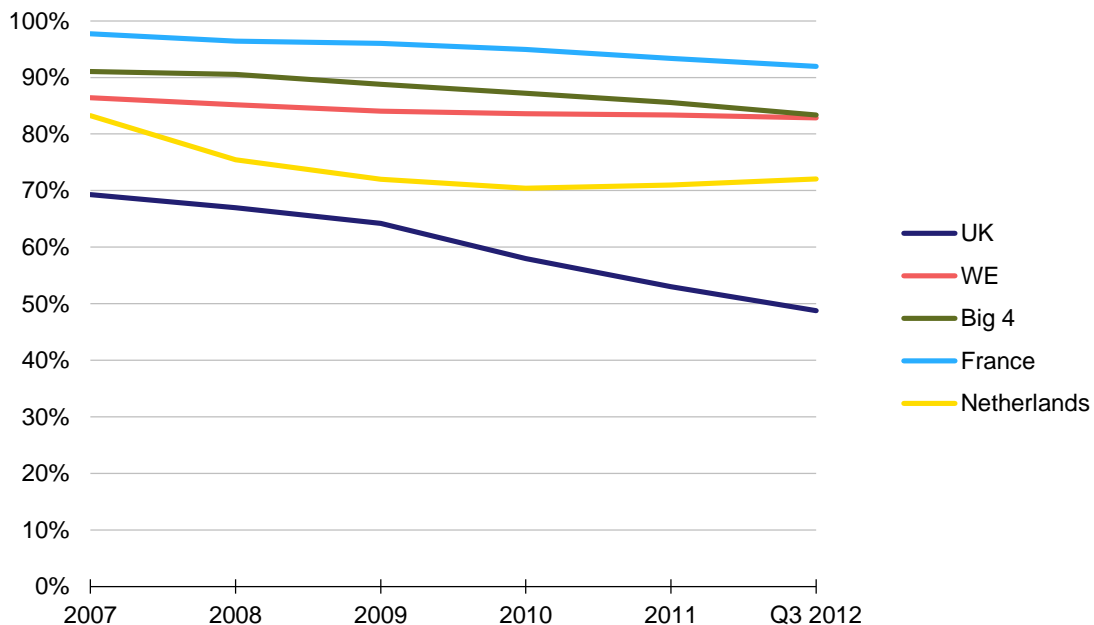
## 3 Narrowband lines

### 3.1 Incumbent's share of retail access narrowband revenue

BT Retail is the only Western European incumbent to have less than a 50% share of retail access narrowband line rentals, considerably lower than all other incumbents

46 Figure 3.1 shows incumbents' narrowband retail revenue as a percentage of total narrowband retail revenue (defined as PSTN and ISDN, including non-VoIP cable telephony). Historical data has been used up to Q3 2012, from Analysys Mason's *Telecoms Market Matrix 3Q 2012*<sup>3</sup>.

Figure 3.1: Incumbents' share of narrowband retail revenue, Western Europe [Source: Analysys Mason, 2013]



47 BT Retail's share of narrowband revenue fell from 69.3% of the total market in 2007 to 53% in 2011 and below 50% in Q3 2012, much lower than that of incumbents in other countries. The incumbent with the next lowest share, KPN in the Netherlands, had 72%. Orange/France Telecom in France had the highest share (92%) and the Western European average was 83%. In France, the incumbent's share of narrowband revenue is comparatively high because local loop unbundlers tend to use VoIP (rather than the PSTN) to deliver voice services.

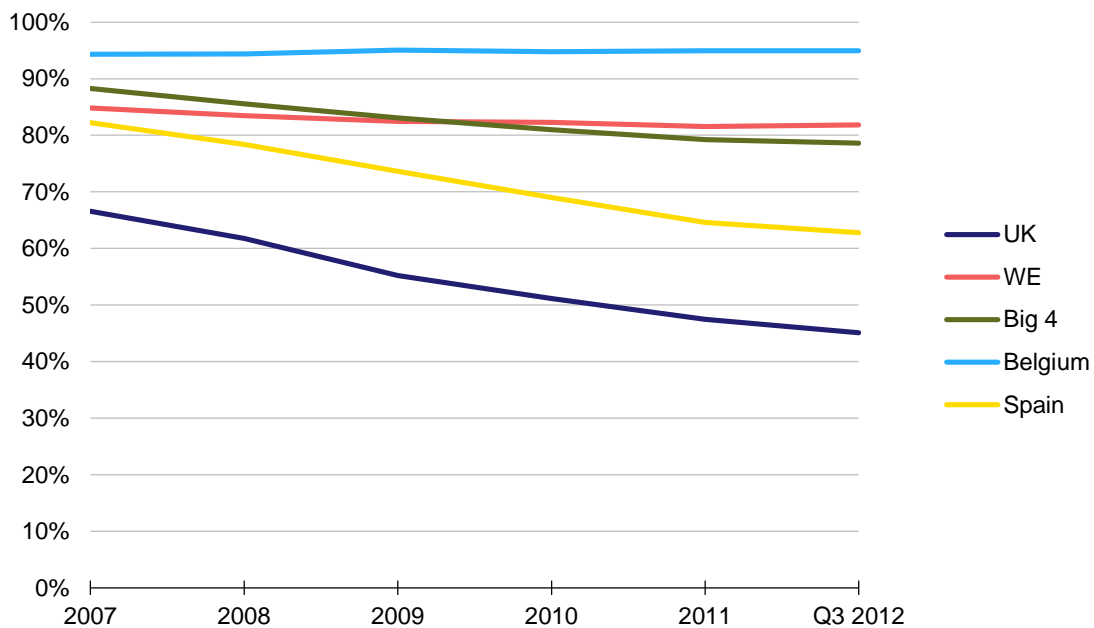
48 BT Retail's share of narrowband retail revenue has fallen as a result of competition from alternative operators, including Sky and TalkTalk, which use full local loop unbundling to deliver PSTN voice and broadband services.

### 3.2 Incumbents' share of narrowband connections

As with narrowband revenue, BT Retail's share of narrowband connections is much lower than that of any other Western European incumbent

49 Figure 3.2 shows incumbents' narrowband retail connections as a percentage of total narrowband retail connections (defined as PSTN and ISDN, including non-VoIP cable telephony). Historical data has been used up to Q3 2012, from Analysys Mason's *Telecoms Market Matrix 3Q 2012*<sup>3</sup>.

Figure 3.2: Incumbents' share of narrowband retail connections, Western Europe [Source: Analysys Mason, 2013]



50 BT Retail's share of total narrowband connections fell from 67% in 2007 to 47% in 2011 and 45% in Q3 2012. BT's share of narrowband retail connections in Q3 2012 was lower than that of incumbents in all other countries. Spain was the next lowest country (63%), Belgium was the highest (95%), and the Western European average was 82%.

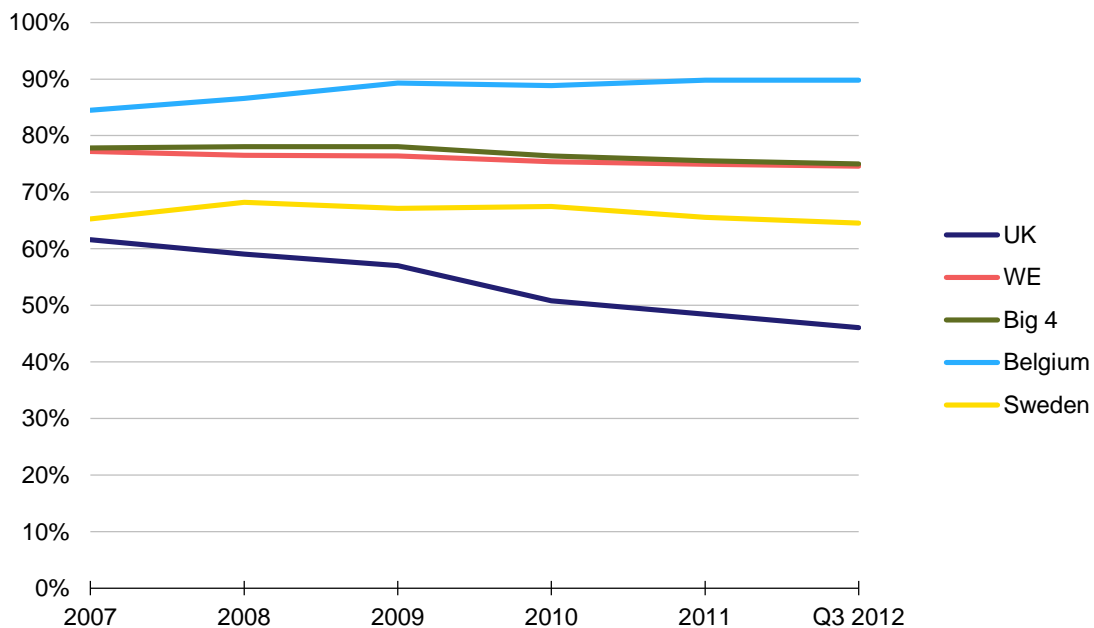
51 BT's share of narrowband retail connections has fallen for the same reason as explained above for narrowband retail revenue (competition from alternative operators using full local loop unbundling).

### 3.3 Incumbent retail revenue from narrowband access and calls

BT Retail's share of narrowband access and calls revenue is more than 15% lower than in the next lowest market

52 Figure 3.3 shows incumbents' revenue from narrowband access and calls. Historical data has been used up to Q3 2012, from Analysys Mason's *Telecoms Market Matrix 3Q 2012*<sup>3</sup>.

Figure 3.3: Incumbent's share of retail revenue from narrowband access and calls, Western Europe [Source: Analysys Mason, 2013]



53 BT Retail's share of retail revenue from narrowband access and calls fell from 62% in 2007 to 48% in 2011 and 46% in Q3 2012. BT Retail's share of revenue in Q3 2012 was considerably lower than that of incumbents in other countries. In the next lowest market, Sweden, the incumbent had 65% of revenue.

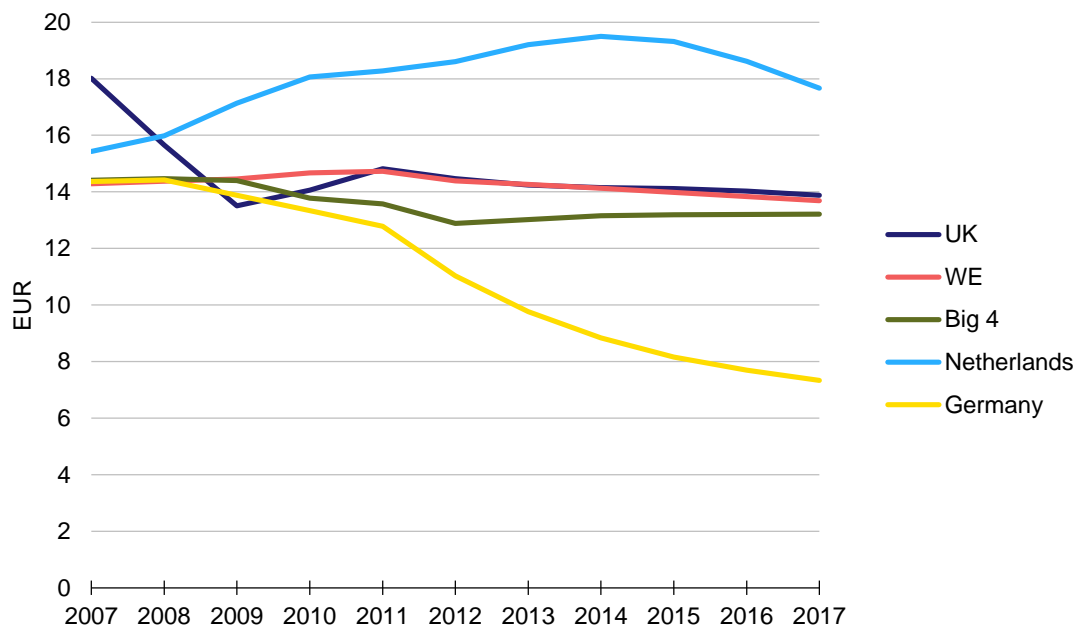
54 BT's share of retail revenue from narrowband access and calls has continued to fall as alternative operators transit an increasing proportion of voice traffic; alternative operators' share of voice traffic in the UK rose from 51.4% in 2007 to 65% in Q3 2012.

### 3.4 Narrowband retail prices

Per-line narrowband retail prices in the UK are in line with other European markets

55 Figure 3.4 shows the monthly revenue per narrowband channel (defined as PSTN and ISDN, including non-VoIP cable telephony). Historical data has been used up to 2011, with the forecast data taken from Analysys Mason’s report *Western Europe telecoms market: forecasts and analysis 2012–2017*<sup>11</sup>.

Figure 3.4: Monthly retail revenue per narrowband channel (EUR), Western Europe [Source: Analysys Mason, 2013]



56 Monthly retail revenue per narrowband channel in the UK is anticipated to fall from EUR14.47 in 2012 to EUR13.88 in 2017, in line with the broader trend in the European market.

<sup>11</sup> See <http://www.analysismason.com/Research/Content/Forecasts/Western-Europe-forecast-2012-2017-Sep2012-RDDF0>



## 4 Wholesale prices

### 4.1 MPF and SMPF prices

UK prices for SMPF are 35% lower than the average across Europe, while MPF prices are almost exactly in line with the average price

57 Figure 4.1 shows the monthly price for typical SMPF service or local equivalent. The price for an SMPF service in the UK is EUR2.08 per month, and the average price for an SMPF service across all the countries shown in Figure 4.1 (excluding the UK) is EUR3.19 per month. Prices are calculated using the monthly charge plus the one-off set-up charge amortised over 48 months.

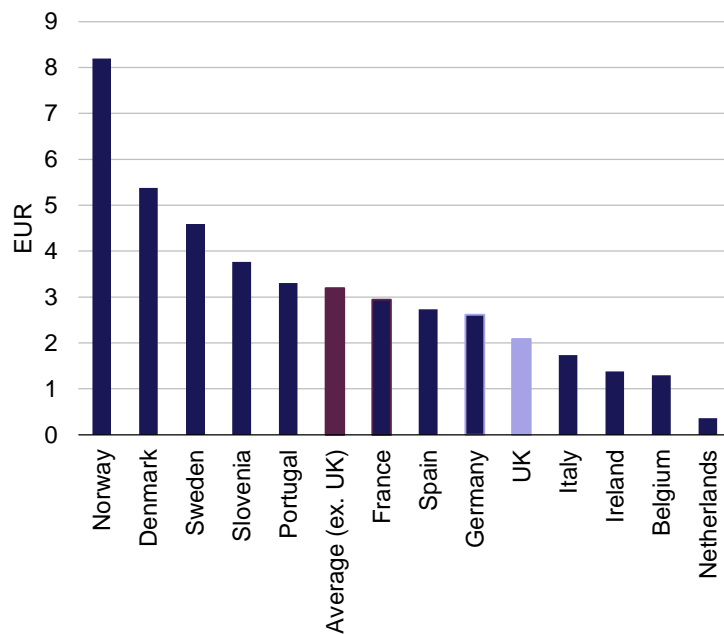


Figure 4.1: Monthly price for SMPF service, end of 2012 [Source: Analysys Mason, 2013]

58 Figure 4.2 shows the monthly price for MPF service or local equivalent. The typical price for an MPF service in the UK is EUR9.82 per month. The average price for an MPF service across all the countries listed in Figure 4.2 (excluding the UK) is 2% higher, at EUR9.99 per month.

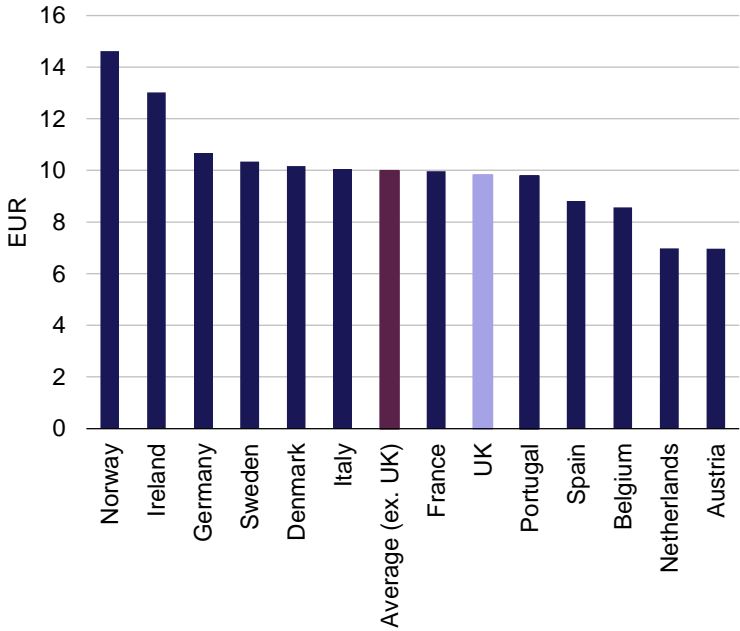


Figure 4.2: Monthly price for MPF service, end of 2012 [Source: Analysys Mason, 2013]

4.2 Shared and full SLU service prices

UK prices for shared SLU service are below the average European levels and those for full SLU are above it

59 Figure 4.3 shows the monthly price for a shared sub-loop unbundled (SLU) service. The price for a shared SLU service in the UK is EUR4.11 per month, while the average price across the countries shown in Figure 4.3 (excluding the UK) is EUR5.04 per month. The price has been calculated using the monthly charge plus the one-off set-up charge amortised over 48 months. It should be noted that not all incumbents offer shared SLU products.

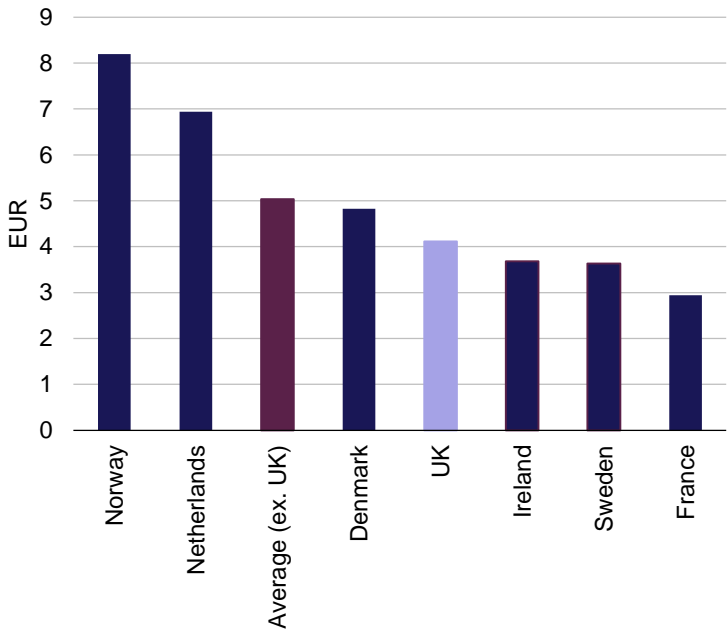


Figure 4.3: Monthly price for shared SLU, end of 2012, Western Europe [Source: Analysys Mason, 2013]

60 Figure 4.4 shows the monthly price for full SLU service. The price for a full SLU service in the UK is EUR12.8 per month, and the average price across all the countries listed in Figure 4.4 (excluding the UK) is EUR9.18 per month. The price is calculated using the monthly charge plus the one-off set-up charge amortised over 48 months. It should be noted that some incumbents do not offer SLU products.

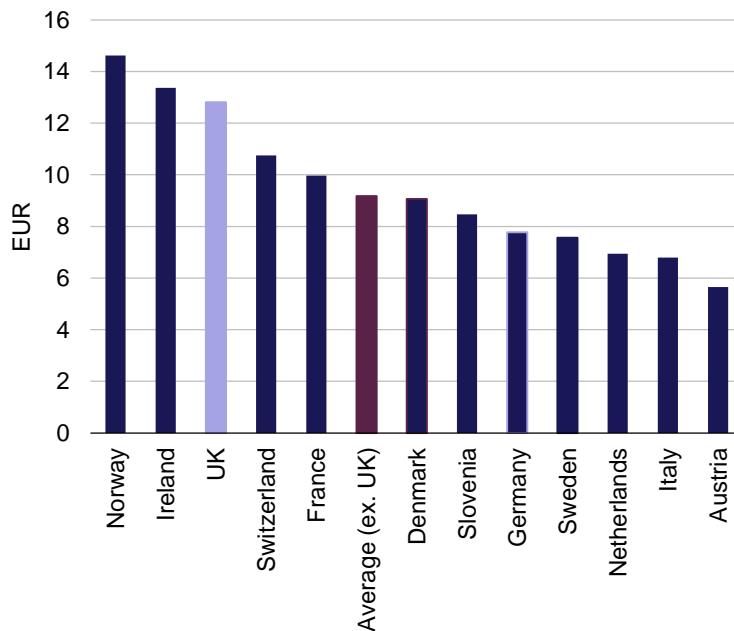


Figure 4.4: Monthly price for full SLU, end of 2012 [Source: Analysys Mason, 2013]

### 4.3 ADSL bitstream prices

The regulated price of ADSL bitstream in the UK is 7% higher than the Western European average, though this price only applies to 22.4% of the UK

61 Figure 4.5 shows the monthly price for a typical ADSL bitstream product. The regulated price for an ADSL bitstream product in the UK is EUR12.18 per month, and the average price across the countries listed in Figure 4.5 (excluding the UK) is EUR11.40 per month. Prices for bitstream include the end-user path, backhaul costs for a typical user and aggregation point charges. The price has been calculated using the monthly charge plus the one-off set-up charge amortised over 48 months. Figure 4.6 lists the products that have been used to compile Figure 4.5.

62 It should be noted that not all countries offer ADSL bitstream products.

63 In our model we have assumed that: 80kbit/s is provisioned per subscriber (in the busy hour) for backhaul, one-off charges are amortised over 48 months, the operator has a 2% market share of DSL, a monthly data allowance of at least 20GB is provided, and aggregation is regional.

64 In this assessment, the published UK prices are higher than other markets that have a regulated product. However, in the non-regulated areas (77.6% of premises where no operator is deemed to have SMP) BT may offer CPs lower wholesale broadband prices than the prices shown.

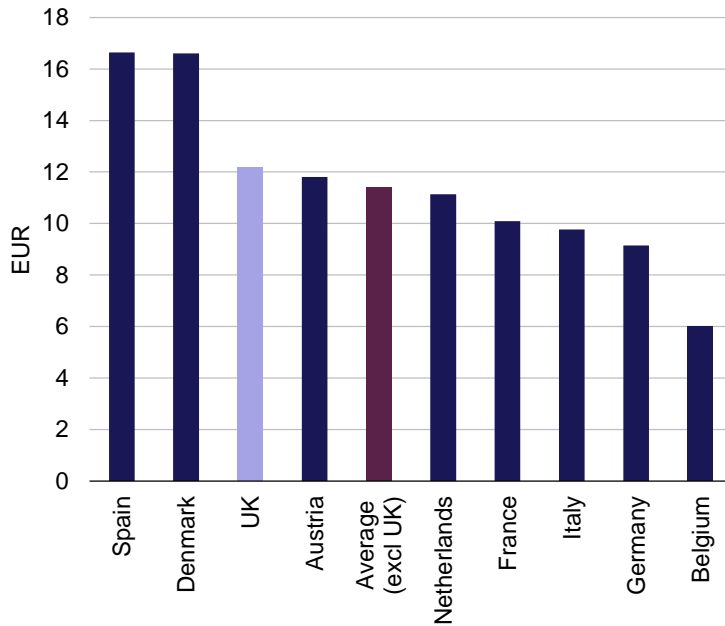


Figure 4.5: Monthly per-user cost for regulated ADSL2+ bitstream product, Q3 2012, Western Europe [Source: Analysys Mason, 2013]

Country	Product type	Product name
Austria	Layer 3 IP-based service	16Mbit/s national
Belgium	Ethernet-based service	BROBA ADSL2+ Ethernet shared VLANs
Denmark	Ethernet-based service	eBSA POI3
France	Ethernet-based service	Ethernet ADSL2+
Germany	Layer 3 IP-based service	IP Bitstream Classic 16/1 shared
Italy	Ethernet-based service	ADSL2+ Ethernet parent node
Netherlands	Ethernet-based service	ADSL2+ Ethernet national
Spain	ATM-based service	GigADSL
UK	Ethernet-based service	WBC ADSL2+

Figure 4.6: ADSL bitstream products shown in Figure 4.5 [Source: Analysys Mason, 2013]

#### 4.4 WLR prices

WLR prices in the UK are 15% lower than the next cheapest market, and 18% below the average figure

65 Figure 4.5 shows the monthly price for a typical WLR product or local equivalent. The typical price for a WLR product in the UK is EUR10.71 per month, and the average price across the countries listed in Figure 4.5 (excluding the UK) is EUR13.09 per month. The price has been calculated using the monthly charge plus the one-off connection charge amortised over 48 months. The comparison only includes a subset of Western European countries, as not all offer WLR products.

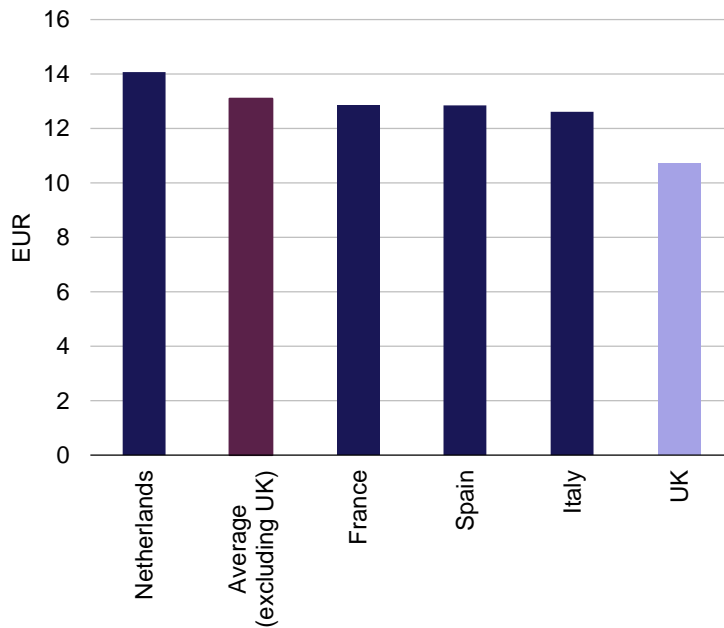


Figure 4.7: Monthly price for wholesale line rental, end of 2012, Western Europe  
[Source: Analysys Mason, 2013]

#### 4.5 VULA product prices

The UK price for a VULA service is lower than almost all other available offers. More importantly, the UK is one of the few countries to have an agreed VULA offer

66 Figure 4.8 shows the monthly price for a shared virtual unbundled local access (VULA) product (defined as a wholesale FTTC virtual unbundled access product). The price for Openreach's Generic Ethernet access 40/10 FTTC is EUR11.06 per month. The average price for a VULA product in the countries listed in Figure 4.8 (excluding the UK) is EUR14.57 per month. For all of the offers shown in Figure 4.9, an MPF or WLR connection needs to be purchased separately.

67 With such a new product and so few countries with which to compare the UK's offer, the availability of the product is perhaps more important than the relative prices. In the UK there is an open access offering available to all communications providers. Most markets have not yet agreed a wholesale offer.

68 The price has been calculated using the monthly charge plus the one-off set-up charge amortised over 48 months. The list only includes a subset of Western European countries, as not all offer VULA products. Figure 4.9 lists the products that have been used to compile Figure 4.8.

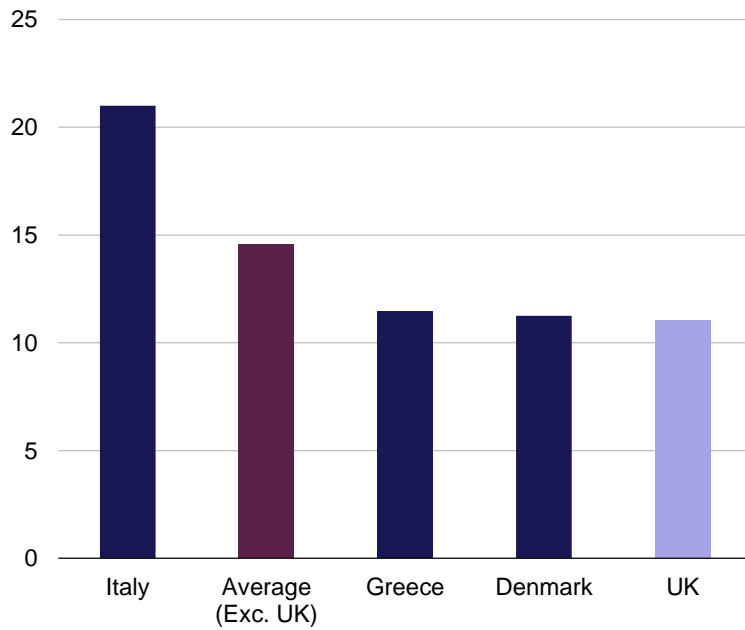


Figure 4.8: Monthly price for shared VULA product, Q3 2012 (EUR) [Source: Analysys Mason, 2013]

Country	Shared VULA product
Denmark	VULA 40960 shared
Greece	FTTC VDSL 30 – VULA
Italy	FTTCab Shared 30/3
UK	Generic Ethernet access 40/10 FTTC

Figure 4.9: Shared VULA products shown in Figure 4.8 [Source: Analysys Mason, 2013]

69 As a wider range of naked VULA offers are available (i.e. where the cost of the copper connection is included), in Figure 4.10 we compare the price of Openreach’s Generic Ethernet access 40/10 FTTC *plus* the cost of an MPF connection, with the price for naked VULA products in other countries. Again, the price in the UK is below average (EUR20.88 compared to an average (excluding the UK) of EUR24.47).

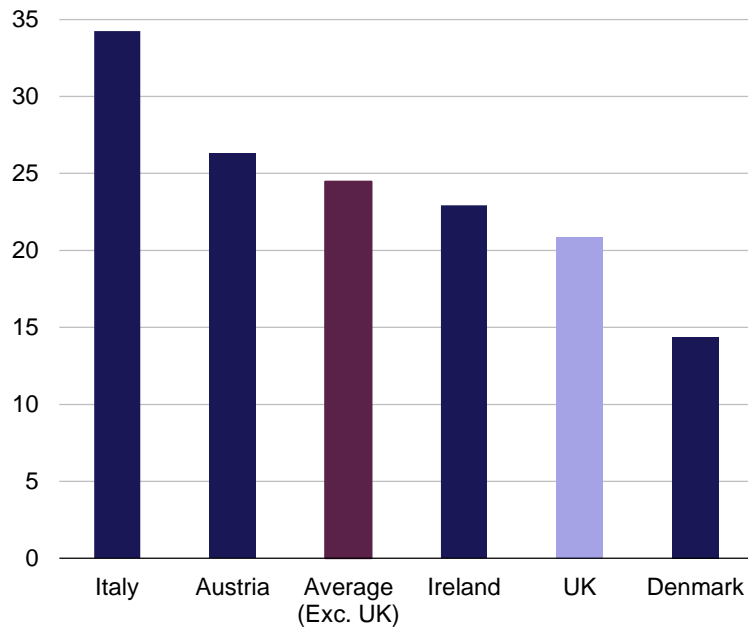


Figure 4.10: Monthly price for naked VULA product, Q3 2012 (EUR) [Source: Analysys Mason, 2013]

Country	Naked VULA product
Austria	Virtual Unbundling: 51200/5120
Denmark	VULA 40960 naked
Ireland	Fibre Unbundled Access FUAC – FTTC, 50/20
Italy	VULA: FTTCab Naked 30/3
UK	Generic Ethernet access 40/10 FTTC + MPF connection

Figure 4.11: Naked VULA products shown in Figure 4.10 [Source: Analysys Mason, 2013]

## Annex A Exchange rates

70 The Euro exchange rates used in this study are shown in Figure A.1. Constant 2012 rates were used for future years.

Figure A.1: Exchange rates, 2007–2012 [Source: Analysys Mason, 2013]

Country	2007	2008	2009	2010	2011	2012
Denmark	0.13423	0.13415	0.13431	0.13429	0.13423	0.13444
Norway	0.12484	0.12194	0.11458	0.12494	0.12832	0.13314
Sweden	0.10819	0.10419	0.09429	0.10486	0.11083	0.11461
Switzerland	0.60888	0.63051	0.66248	0.72442	0.81246	0.83042
UK	1.46226	1.25945	1.12288	1.16586	1.15280	1.23145