Fixed Broadband Prices in Europe 2018

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by:

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Abstract

English

The current study provides comprehensive data on 2017 retail prices of fixed broadband offers for consumers in the EU28, Iceland, Norway, Japan, South Korea, Canada and the USA. The five largest Internet Service Providers (ISPs) in each country were included. Data was collected from ISP websites between 8th and 22nd October 2018.

Offers were analysed for Single Play (standalone internet), for Double Play with fixed telephony, Double Play with television services, and for Triple Play. Offers for each of the four bundles were assigned to several download speed baskets ranging from 0.256 Mbps to more than 1Gbps.

To support valid cross-national comparison of retail prices of fixed broadband offers in each bundle and basket, consistent price normalisation procedures were applied. These take full account of features such as one-off fees, volume limits, discounts, different contract durations and varying telephony time limits.

Applying the normalised prices in Euro, it was found that the least expensive countries for fixed broadband in the EU in 2018 were Romania, Latvia, Hungary and Lithuania. Prices differ considerably between the least and most expensive countries in the EU.

Broadband prices show mixed trends in 2018.

- Retail prices for Single Play offers decreased slightly in the 12-30 Mbps (-1.32%) and 30-100 Mbps baskets (-2.48%), while increasing in the 100+ Mbps (+2.80%) basket.
- Retail prices for bundles which include fixed telephony actually rose on average over the year (+2.45%, 12-30 Mbps basket; +0.97%, 30-100 Mbps basket; +1.64%, 100+ Mbps basket)
- Bundles including television services show the same pattern as Single Play offers (-1.04%, 12-30 Mbps basket; -2.13%, 30-100 Mbps basket; +0.29%, 100 Mbps basket)
- Retail prices for Triple Play offers increased by 2.2% (12-30 Mbps basket), by 1.47% (30-100 Mbps basket), and by 5.66% in the 100+ Mbps basket.

Comparison of EU28 prices with prices in selected non-European countries in 2018 yielded the following picture:

- South Korea shows the least expensive offers for standalone internet in every basket.
- The EU28 shows slightly lower prices for Standalone and Double Play with Telephony offers compared with Japan.
- Japan, in turn, shows lower prices for bundles including television.
- Prices for all bundles in every basket are lower in the EU28 than in the USA and Canada.
Français
Cette étude vise à analyser le coût de la connexion fixe à large bande pour les pays de l’UE28, Islande, Norvège, Japon, Corée du Sud, et les États-Unis d’Amérique. Pour obtenir des résultats représentatifs, les cinq plus grand Fournisseurs d’Accès Internet (FAI) étaient incluses dans l’échantillon. La collecte de données était effectué en ligne directement sur les sites web des FAIs du 8 au 22 Octobre 2018.

Les offres étaient rangées par quatre forfaits (Single Play/Standalone et des forfaits avec téléphone fixe et/ou télévision ainsi que par la vitesse de connexion Internet (de 0,256 Mbps à 1 Gbps).

Afin d’analyser systématiquement les données recueillies et de permettre une comparaison transnationale sur le coût de la connexion fixe à large bande pour les forfaits comme pour les vitesses, des procédures de normalisation ont été appliqué. Donc, des détails des forfaits différents, telles que des redevances unique, des réductions, des durées contractuelles différentes ou des différences de téléphonie, pouvant être pris en compte.

L’analyse de données a révélé les résultats suivants: En moyenne, les pays le moins cher de l’UE28 concernant la connexion fixe à large bande, ce sont la Roumanie, la Lettonie, la Hongrie et la Lituanie. Les prix varient considérablement entre les pays les moins chers et les plus chers de l’UE.

En outre, en comparaison avec le jeu de données de 2017, les prix du haut débit ne présentent pas de tendances claires en 2018. En tout cas, les prix n'ont pas diminué de manière significative comparée aux données de 2017.

- Les prix pour les offres Single Play ont légèrement diminué dans les paniers de 12 à 30 Mbps (-1,32 %) et de 30 à 100 Mbps (-2,48 %), tandis qu'ils ont augmenté dans le panier de 100+ Mbps (+2,80 %).
- Prix pour des forfaits avec téléphonie fixe ont en fait augmenté dans tous les paniers de vitesse (+2,45%, panier 12-30 Mbps ; +0,97%, panier 30-100 Mbps ; +1,64%, panier 100+ Mbps)
- Les forfaits incluant les services de télévision présentent la même tendance que les offres Single Play (-1,04 %, panier 12-30 Mbps ; -2,13 %, panier 30-100 Mbps ; +0,29 %, panier 100 Mbps).
- Les prix pour des offres Triple Play ont augmenté de 2,2 % (panier de 12 à 30 Mbps), de 1,47 % (panier de 30 à 100 Mbps) et de 5,66 % dans le panier de 100+ Mbps.

La comparaison des prix dans l’UE28 avec les prix pratiqués dans certains pays non-européens en 2018 a donné le résultat suivant :

- La Corée du Sud a les offres les moins chères pour Single Play dans chaque panier.
- L’UE28 présente des prix légèrement plus bas pour les offres Single Play et Double Play avec téléphonie fixe par comparaison avec le Japon.
- Le Japon, quant pour sa part, affiche des prix plus bas pour les forfaits incluant la télévision.
- Les prix de tous les paquets de chaque panier sont plus bas dans l’UE28 qu’aux États-Unis et au Canada.
0. Executive Summary

0.1 English

0.1.1 Introduction
The current study provides comprehensive data on 2018 retail prices of fixed broadband offers for consumers in the EU28, Iceland, Norway, Japan, South Korea, Canada and the USA. The five largest Internet Service Providers (ISPs) in each country were included. Data was collected from ISP websites between 8th and 22nd October 2018.

Offers were analysed for Single Play (standalone internet), for Double Play with fixed telephony, Double Play with television services, and for Triple Play. Offers for each of the four bundles were spread over several download speed baskets ranging from 0.256 Mbps to more than 1 Gbps.

Cross-national comparison of retail prices of fixed broadband offers in each bundle and basket required the application of consistent price normalisation procedures. These take full account of features such as one-off fees, volume limits, discounts, different contract durations and varying telephony time limits.

0.1.2 Results: Average price per basket and bundle
Figure 1 shows the average across the EU of the lowest price found in each country for each of four service bundles and for the three speed baskets above 12 Mbps for which data was gathered. These EU average figures provide a reference point for international comparison and, to an extent, for comparison of country markets within the EU. The impact on prices of adding value through increased speed is clearly visible, especially in the Gigabit basket.

<table>
<thead>
<tr>
<th>Speed Basket</th>
<th>Standalone</th>
<th>Double Play</th>
<th>Double Play</th>
<th>Triple Play</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-30 Mbps</td>
<td>€21,36</td>
<td>€30,27</td>
<td>€30,71</td>
<td>€40,12</td>
</tr>
<tr>
<td>30-100 Mbps</td>
<td>€23,47</td>
<td>€31,90</td>
<td>€32,19</td>
<td>€41,35</td>
</tr>
<tr>
<td>100+ Mbps</td>
<td>€34,98</td>
<td>€44,01</td>
<td>€43,65</td>
<td>€53,22</td>
</tr>
<tr>
<td>200+ Mbps</td>
<td>€34,42</td>
<td>€43,49</td>
<td>€44,34</td>
<td>€52,39</td>
</tr>
<tr>
<td>1 Gbps</td>
<td>€53,72</td>
<td>€63,86</td>
<td>€71,95</td>
<td>€78,08</td>
</tr>
</tbody>
</table>
0.1.3 **Results: Least expensive countries in Europe**

Figure 2 shows the lowest price found anywhere in the EU for each service bundle and speed basket. As can be seen, Single Play standalone fixed internet of more than 12 Mbps can be obtained in at least one country\(^1\) from one of the top five providers at a normalised price of €10.11 per month (PPP). At the top end of the speed basket set and for both selected bundled services (Triple Play, 1 Gbps), the cheapest price in Europe\(^2\) is €28.98 (PPP).

Comparing normalised prices in Euro, it was found that the least expensive countries for fixed broadband in the EU in 2018 were Romania, Latvia, Hungary and Lithuania. Prices differ considerably between the least and most expensive countries in the EU.

![Figure 2 - EU Absolute lowest prices for four service bundles and five speed baskets, VAT included](image)

To present a fuller picture, but without introducing distraction by small price differences, 4 clusters of countries were identified\(^3\) in each offer category, that is, for each combination of service bundle and speed basket, based on the prices of the least expensive offer in the bundle/basket category in each country.

Figure 3 shows the results. A **green bullet (1)** in a bundle/basket combination represents the countries in the cluster with inexpensive offers for this category, a **red bullet (4)** countries in the expensive cluster of offers in a bundle/basket combination. **Blue (2) bullets** indicate clusters of relatively inexpensive, **yellow bullets (3)** of relatively expensive price levels. A dash means that no offer was collected in 2018 in this offer category and country.

\(^1\) This offer is available in Bulgaria only.

\(^2\) This offer is available in Italy only.

\(^3\) k-means clustering was used with k=4; observations (offer categories) are assigned to clusters so as to minimise the average squared Euclidean distance of observations to each cluster centroid.
The following general country groupings can be observed:

- Overall, Romania, Latvia, and Hungary have the most attractive prices for broadband internet in the EU. The majority of offers in these countries belong to the cluster of the least expensive in the respective baskets.
- Lithuania, France, Italy, and Slovakia follow. France and Italy have especially low prices for Triple Play offers.
- Bulgaria and Estonia tend to have attractive prices for lower bandwidth offers, but tend to be in the cluster of more expensive countries for speeds above 100 Mbps.
- Greece and Belgium have no offers belonging to the two less expensive clusters.
- No country has offers in only one cluster.
0.1.4 **Results: Development of prices**

Broadband prices show mixed trends in 2018:

- Prices for offers including telephony have increased by between 0.97% and 2.45%, as did prices for all bundles in the 100+ Mbps baskets. The largest increase (5.66%) was found in the 100+ Mbps Triple Play basket.
- A slight decrease in prices was observed for offers without telephony in the 12-30 Mbps (-1.32%) and 30-100 Mbps (-2.48%) baskets.

0.1.5 **Results: The EU compared with selected non-European countries**

Comparing the EU28 with other countries in the world, there is a similar pattern in all download speed baskets:

- South Korea shows the least expensive offers for Standalone Internet in every basket.
- The EU28 shows slightly lower prices for standalone internet and Double Play with Telephony offers compared with Japan.
- Japan, in turn, shows lower prices for bundles including television.
- In every speed basket, prices for bundles are lower in the EU28 than in the USA or Canada.
0.2 **Français**

0.2.1 **Introduction**
Cette étude fournit des données complètes sur les prix de détail en 2018 des offres de services fixes à large bande pour les particuliers dans l’UE28, en Islande, en Norvège, au Japon, en Corée du Sud, au Canada et aux États-Unis. Les cinq plus grands fournisseurs de services Internet (FAI) de chaque pays ont été inclus. Les données ont été collectées sur les sites Internet des FAI entre le 8 et le 22 octobre 2018.

Les offres ont été analysées pour Single Play (Internet standalone), Double Play avec la téléphonie fixe, Double Play avec les services de télévision, et Triple Play. Les offres pour chacun des quatre forfaits étaient réparties sur plusieurs paniers de vitesse de téléchargement allant de 0,256 Mbps à plus de 1 Gbps.

La comparaison transnationale des prix de détail des offres à large bande fixe dans chaque forfait et panier a nécessité l’application de procédures cohérentes de normalisation des prix. Celles-ci tiennent dûment compte des caractéristiques telles que les frais uniques, les limites de volume, les rabais, les différentes durées de contrat et les différents délais de téléphonie.

0.2.2 **Résultats: Prix moyen par forfait et vitesse**
Figure 1 montre les prix moyens le plus bas dans l’UE trouvé dans chaque pays pour chacun des quatre groupes de forfaits et pour les paniers à trois vitesses au-dessus de 12 Mbps pour lesquels les données ont été recueillies. Ces chiffres moyens constituent un point de référence pour la comparaison internationale et, dans une mesure, pour la comparaison des caractéristiques du marché national au sein de l’UE. L’impact sur les prix en ajoutant valeur par une vitesse augmentée est bien visible, en particulier dans le panier Gigabit.

**Figure 4 –Prix moyens les plus bas EU 28 pour quatre forfaits et cinq débits de l’internet, TVA inclus**

<table>
<thead>
<tr>
<th></th>
<th>Standalone</th>
<th>Double Play</th>
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<td>€78,08</td>
</tr>
</tbody>
</table>
0.2.3 Résultats: Pays avec les prix le plus bas

Figure 5 montre le prix le plus bas observé dans l'UE pour chaque groupe de services et panier de vitesse. On peut voir que l'Internet fixe Single Play de plus de 12 Mbps peut être obtenu dans au moins un pays par un des cinq plus grands fournisseurs à un prix normalisé de 10,11 € par mois (PPP). Dans la partie supérieure du panier de vitesse et pour les deux services groupés sélectionnés (Triple Play, 1 Gbps), le prix le plus bas en Europe est de 28,98 € (PPP).

En comparant les prix normalisés en euros, on a constaté que les pays de l'UE les moins chers pour le haut débit fixe en 2018 étaient la Roumanie, la Lettonie, la Hongrie et la Lituanie. Les prix diffèrent considérablement entre les pays les moins chers et les plus chers de l'UE.

Pour une image plus complète, mais sans introduire distraction par des petits écarts de prix, 4 clusters de pays ont été identifiés dans chaque catégorie d'offre, c'est-à-dire pour chaque combinaison de forfait et de panier de vitesse, basé sur les prix de l'offre la moins chère des combinaisons forfaits/vitesse dans chaque pays.

Figure 6 montre les résultats. Une balle verte (1) dans une combinaison forfait/vitesse représente les pays du cluster avec les offres les moins chères pour cette catégorie, une balle rouge (4) les pays dans le groupe d'offres les plus chers. Les balles bleues (2) indiquent le cluster relativement peu cher,

4 Cette offre n’est disponible qu’en Bulgarie.
5 Cette offre n’est disponible qu’en Italie.
6 Le clustering est réalisé au moyen de l’approche K-means, une méthode qui vise à répartir toutes les observations dans un nombre prédéfini de clusters en minimisant la moyenne du carré de la distance euclidienne entre les observations et le centre du cluster.
les balles jaunes (3) le cluster relativement cher. Un tiret signifie qu’il n’y avait pas d’offre en 2018 dans cette catégorie d’offre et dans ce pays.

Figure 6 – Variation de prix par combinaisons | Clusters de pays

Les groupes suivants de pays peuvent être observés:

- Dans l’ensemble, la Roumanie, la Lettonie et la Hongrie ont les prix les plus compétitifs de l’Internet à large bande dans l’UE. La majorité des offres dans ces pays appartient au groupe des moins chères dans les paniers respectifs.
- La Lituanie, la France, l’Italie et la Slovaquie suivent. La France et l’Italie ont des prix particulièrement bas pour les offres Triple Play.
- La Bulgarie et l’Estonie ont tendance à proposer des prix attrayants pour des offres de bande passante plus faibles, mais elles se situent généralement dans le groupe des pays les plus chers pour des débits supérieurs à 100 Mbps.
- La Grèce et la Belgique n’ont pas d’offres appartenant aux deux clusters les moins chers.
- Aucun pays n’a d’offres dans un seul groupe.
0.2.4 **Résultats: Évolution des prix**

Les prix du haut débit ont des tendances contrastées en 2018 :

- les prix des offres incluant la téléphonie ont augmenté de 0,97 % à 2,45 %, tout comme les prix de tous les forfaits dans les paniers de 100 Mbps et plus. La plus grande augmentation (5,66 %) a été observée dans le panier Triple Play de 100 Mbps et plus.
- Une légère baisse des prix a été observée pour les offres sans téléphonie dans les paniers 12-30 Mbps (-1,32%) et 30-100 Mbps (-2,48%).

0.2.5 **Résultats: Comparaison avec des pays non-européens**

En comparant l’UE28 avec d’autres pays dans le monde, on observe une tendance similaire dans tous les paniers de vitesse de téléchargement :

- La Corée du Sud a les offres les moins chères pour Single Play dans chaque panier.
- L’UE28 présente des prix légèrement plus bas pour les offres Single Play et Double Play avec téléphonie fixe par comparaison avec le Japon.
- Le Japon, quant pour sa part, affiche des prix plus bas pour les forfaits incluant la télévision.
- Les prix de tous les paquets de chaque panier sont plus bas dans l’UE28 qu’aux États-Unis et au Canada.
A note on limitations of the study

Readers are advised to note some limitations of the information presented in this report:

1. The data on the offers on supply fixed internet services in 2018 represents a snapshot of prices, limited to two weeks in October 2018.

2. All reasonable steps were taken to obtain a complete data set for each offer; however, some gaps remain.\(^7\)

3. Following the consistent methodology agreed with the European Commission, only offers advertised and purchasable on provider websites were taken into account. In consequence, offers which may have been referred to in documents on the website but which were not available for sale on the site were not included in the analysis.

4. Offers from a maximum of five internet service providers (ISP) per country were taken into account. The ISPs selected were those with the largest market share, determined after consultation with the relevant national regulation authority (NRA). This method permits that less expensive offers may have existed on a market in October 2018, but guarantees that these cannot have been taken up by more than a small proportion of all internet customers in a country.

5. Where an ISP sets different prices for the same offer so that prices vary by city or region, a sample of 5 - 15 locations was drawn and the mode of the sampled prices recorded as the price of the offer in the country concerned.\(^8\)

6. The data represents only offers as advertised. As such it cannot be taken to represent what customers actually paid for their fixed broadband connection in 2018. Moreover, the advertised speeds reported cannot be taken as a reliable guide to speeds actually experienced by customers.

7. The bundles defined in this study are not necessarily representative for usage by customers in every country. Because an offer was selected for having the lowest advertised price in a country does not imply that that offer enjoys any particular volume of sales or is in any other way significant in a market.

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\(^7\) Gaps include in several cases missing download speeds, missing upload speeds and missing information on type of technology. Some price information had to be simplified.

\(^8\) Sample sizes were 5 - 10 in the USA, 10 - 15 in European countries.
1. Introduction

1.1 Broadband internet in the Digital Single Market

When starting his Presidency in 2014, Jean-Claude Juncker promised to make the EU a fully digital single market. Almost a year later, the European Commission’s Digital Single Market strategy (DSM) was adopted.

The DSM is built on three pillars:

1. Access: better access for consumers and businesses to digital goods and services across Europe;
2. Environment: creating the right conditions and a level playing field for digital networks and innovative services to flourish;
3. Economy & Society: maximising the growth potential of the digital economy.

According to the European Commission (EC), a Digital Single Market could contribute €415 billion per year to Europe’s economy, create jobs and transform the Union’s public services.

All digital services, applications and content depend on the availability of high-speed, secure infrastructures, requiring a strong, competitive and dynamic telecoms sector.

Broadband internet first became available to everyone in the European Union in 2013. Universal access to broadband represented a key achievement of the EC’s prior Digital Agenda for Europe. Fixed broadband with 3.5G/4G mobile technologies (HSPA and LTE) provided coverage of 97%; 100% broadband coverage was reached using additional techniques, particularly satellite.

Now that every European can purchase at least some kind of broadband internet connection, the next milestones of the Digital Agenda are to be achieved. These are:

- Next Generation Access networks (30 Mbps or more) for all by 2020;
- 50% of households having 100 Mbps subscriptions or higher.

In September 2016, the EC set additional targets for a Gigabit society:

- By 2025, all households (cities as well as rural regions) should have access to technologies with download speeds of at least 100 Mbps, and the possibility to upgrade to Gbps connections.9

Significant progress has already been made towards the Digital Agenda milestone for Next Generation Networks. Overall coverage of Next Generation Access Networks rose from 29% in 2010 to roughly 71% in 2015 to 80% in 2017 and to 83% in 2018, with VDSL having the highest coverage at 53%, followed by EuroDOCSIS3.0 Cable VDSL (45%) and FTTx (27%) in 2017.10 EuroDOCSIS and VDSL have been able to expand coverage more easily due to their ability to re-use existing cabling.

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Next Generation Access Networks continue to be limited to urban areas. EU-wide, only 47% of homes were covered in 2017 (an increase by 22% percentage points since 2014), and there are significant differences per country.

Concerning the Digital Agenda milestone that 50% of households should have 100 Mbps subscriptions or higher, subscriptions are currently available to slightly more than half of EU homes, delivered through either FTTx or EuroDOCSIS 3.0 networks. The uptake of available subscriptions, however, remains significantly below 50% in most EU Member States.\(^1\) In the near future it can be expected that provision will continue to cover more and more areas, but actual uptake may require service innovation\(^2\) and, of course, that ISPs offers affordable subscription schemes to European citizens. This is the reason that the monitoring of the prices of high-speed, broadband internet access services is needed.

### 1.2 Monitoring internet prices in Europe

This study took place as part of the annual cycle of European Commission (EC) monitoring of retail prices of broadband internet access, which has been in place since 2007. Results are used to provide

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\(^{1}\) The latest data (July 2017) show that five countries already reach or are close to reaching this ambitious goal: Romania (65.5%), Sweden (60.8%), Latvia (54.9%), Belgium (51.7%), and Portugal (49.1%). See the electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM).

\(^{2}\) Services for a broad consumer base have yet to be developed which make full use of the highest download speeds. Even streaming two 4k videos in parallel while doing some online shopping is possible in reasonable comfort with less than 50 Mbps. Market and policy attention should possibly now shift to setting targets for upload rates. Upload capacity is needed for social media and other services based on sharing information, particularly where these include live sound, pictures and video. Currently, adequate upload rates are typically available only with the highest download rates, making high download rates indirectly attractive.
policy feedback, including constructing indicators for both the Digital Scoreboard as well the Digital Economy and Society Index (DESI).\textsuperscript{13}

The focus in this study is on the offers that are available to residential customers on fixed broadband services. Fixed broadband services are supplied to homes via xDSL, cable modem, FTTx, satellite or fixed wireless systems.

Though fixed broadband internet access is sometimes provided as a stand-alone service, this basic service is often bundled with other services, from telephony to web space. Four specific bundles of services, each of which include fixed broadband internet access, were included in the study. The four specific, "fixed bundles" are all combinations of fixed internet access with or without telephony and television, referred to as Single Play (or as "standalone" internet), Double Play with fixed telephony, Double Play with television services, and Triple Play.

For each of the four fixed bundles, prices of offers were analysed in each of several download speed baskets, ranging from 0,144 Mbps to more than 200 Mbps plus an additional Gigabit basket. Offers at the lower limit, the ISDN Basic Rate Interface payload rate of 144 kbps\textsuperscript{14} are now rare. As is evident from the targets set in the Digital Agenda, interest in policy and the market has now moved on significantly to higher speeds of internet access. The results presented in this report therefore focus on offers in much higher speed baskets, from 12 Mbps upwards.

Mobile broadband products are the subject of a separate annual EC price monitoring exercise. Mobile services are included only when these were bundled with fixed broadband offers in such a way that consumers wanting a particular fixed bundle and speed basket from that provider could not avoid. Therefore, the price of products bundling mobile services of any type with fixed broadband access were included in the 2018 dataset only where the same provider did not also offer the same fixed bundle, without the mobile services concerned, in the same speed basket.

Data on offers on the market were gathered throughout Europe and beyond in order to identify the least expensive offers of each bundle in a given country.

Comprehensive data has been compiled on the 2018 retail prices of the fixed broadband offers available by the largest Internet Service Providers (ISPs) in each country for consumers in the EU28, Iceland, Norway, Japan, South Korea, Canada and the USA. For intra-annual comparability and consistency, data was collected from ISP websites within two weeks in October 2018.

All offers were included in the 2018 dataset to enable analysis and the opportunity to identify the least expensive offer in each country. The least expensive offer was to be identified for each speed basket in each of the four selected fixed service bundles in each country, provided there was at least one offer on the market.

\textsuperscript{13} Indicator 1d1 is the percentage of individual gross income spent for the least expensive Single Play fixed broadband subscriptions with speeds between 12 and 30 Mbps. Indicator 1d1 belongs to the Connectivity dimension of DESI, which has five principal dimensions in total.

\textsuperscript{14} The ISDN Basic Rate Interface provides 144 kbit/s over a twisted pair line, comprising two 64 kbit/s bearer "B" channels and a 16 kbit/s signalling "D" channel.
To support valid cross-national comparison of retail prices of fixed broadband offers in each bundle and basket, consistent price normalisation procedures were applied. These take full account of the impact they have on consumers on a range of marketing, sales, service and payment features such as one-off fees, discounts, different contract durations and varying telephony time limits.

Price normalisation did not involve the creation of fictitious or proxy offers. All offers considered are such which consumers could buy on the market. Consumer profiles were agreed upon with the Commission and applied to normalise actual service use where flat rates were not provided or would be often exceeded, causing greater cost. In line with this real customer view of the market, real offers which provide more than a customer profile requests - e.g. have a faster speed or more services - but are cheaper than offers which match the customer profile were accepted as the lowest price offer for that profile. Further detail is provided in section 3.2.4.

2. Residential broadband prices: key findings

2.1 2018 prices across the EU for fixed broadband offers

Figure 8 shows the average across the EU of the lowest prices found in each country for each of four service bundles and for the five speed baskets above 12 Mbps. These EU average figures provide a reference point for international comparison and, to an extent, for comparison of markets within the EU. The impact on prices of adding value through increased speed is clearly visible - see section 0 for a discussion of these "speed premiums" - as is the increase in price from bundling television and fixed telephony services with standalone internet - see section 2.6 for detail on the "bundle premiums". Please note that 200+ Mbps and 1Gbps offers are not available in all EU28 countries.

<table>
<thead>
<tr>
<th>Speed Basket</th>
<th>Standalone</th>
<th>Double Play</th>
<th>Double Play</th>
<th>Triple Play</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-30 Mbps</td>
<td>€21,36</td>
<td>€30,27</td>
<td>€30,71</td>
<td>€40,12</td>
</tr>
<tr>
<td>30-100 Mbps</td>
<td>€23,47</td>
<td>€31,90</td>
<td>€32,19</td>
<td>€41,35</td>
</tr>
<tr>
<td>100+ Mbps</td>
<td>€34,98</td>
<td>€44,10</td>
<td>€43,65</td>
<td>€53,22</td>
</tr>
<tr>
<td>200+ Mbps</td>
<td>€34,42</td>
<td>€43,49</td>
<td>€44,34</td>
<td>€52,39</td>
</tr>
<tr>
<td>1 Gbps</td>
<td>€53,72</td>
<td>€63,86</td>
<td>€71,95</td>
<td>€78,08</td>
</tr>
</tbody>
</table>

Figure 8 – EU28 average lowest prices for each service bundle across five speed baskets
Figure 9 shows the lowest price found anywhere in the EU for each service bundle and speed basket. As can be seen, standalone fixed internet delivered at more than 12 Mbps can be obtained in at least one country from one of the top five providers at a normalised price of only €10.11 per month (PPP)\(^\text{15}\). At the top end of the speed basket set and for both selected bundled services (Triple Play, 1Gbps), the cheapest price in Europe is €28.98 (PPP)\(^\text{16}\).

Figure 9 - EU28 lowest prices for each service bundle across five speed baskets

<table>
<thead>
<tr>
<th>Speed Basket</th>
<th>Standalone</th>
<th>Double Play</th>
<th>Double Play</th>
<th>Triple Play</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-30 Mbps</td>
<td>€10.11</td>
<td>€16.55</td>
<td>€14.04</td>
<td>€25.77</td>
</tr>
<tr>
<td>30-100 Mbps</td>
<td>€10.11</td>
<td>€17.59</td>
<td>€14.04</td>
<td>€25.77</td>
</tr>
<tr>
<td>100+ Mbps</td>
<td>€12.57</td>
<td>€17.59</td>
<td>€19.18</td>
<td>€25.77</td>
</tr>
<tr>
<td>200+ Mbps</td>
<td>€12.57</td>
<td>€17.59</td>
<td>€20.97</td>
<td>€27.39</td>
</tr>
<tr>
<td>1 Gbps</td>
<td>€12.71</td>
<td>€18.21</td>
<td>€20.97</td>
<td>€28.98</td>
</tr>
</tbody>
</table>

Figure 10, below, gives a first idea of how variable prices for fixed broadband access are across Europe. For each country, the average was calculated across the lowest prices in twelve offer categories (four service bundles and three speed baskets, as 200+ Mbps and 1Gbps offers are not available in all EU28 countries). Despite the fact that these averages include the fastest download speeds and all Triple Play offers, the average lowest price lies under €25 in seven Member States. Consumers in another four countries are looking at average prices of under €30 from their most competitive large suppliers. Though the majority of EU national markets exhibit averages under €40, ten markets have (much) higher averages, so that the range of average prices in total is €47.33.

\(^{15}\) In fact this offer is available in Bulgaria only.

\(^{16}\) This offer is available in Italy only.
Figure 10 – Country averages across 12 lowest price offers, EU28

Figure 11, below, shows results for the cheapest prices found for standalone internet providing speeds greater than 12 Mbps. If we allow that these speeds are "high speed internet", then the lowest price in Europe for high speed internet is €10.11, found in Bulgaria.

To present a fuller picture, but without introducing the distraction of small price differences, four clusters of countries were identified\(^\text{17}\) in each category of offer, that is, for each combination of service bundle and speed basket, based on the prices of the least expensive offer in the bundle/basket category in each country.

\(^{17}\) k-means clustering was used with k=4; observations (offer categories) are assigned to clusters so as to minimise the average squared Euclidean distance of observations to each cluster centroid.
Figure 12 shows the results. A green bullet (1) in a bundle/basket category stands for countries in the cluster with inexpensive offers for that category, a red bullet (4) for countries in the expensive cluster of offers in a bundle/basket category. Blue (2) bullets indicate clusters of relatively inexpensive, yellow bullets (3) of relatively expensive price levels. A dash signifies that no offer was collected in 2018 in that offer category and country.

<table>
<thead>
<tr>
<th>Cluster Centre [EUR]</th>
<th>Number of cases in each cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11 12.61 13.05 16.9 16.38 20.54 17.44 24.42 17.89 22.88 20.36 17.24 16.97 26.66 28.18 27.31 27.58 28.08 31.7 29.24 31.15</td>
</tr>
<tr>
<td></td>
<td>8 17.52 19.04 21.39 29.01 38.94 23.89 34.17 29.94 33.92 29.62 25.72 27.48 42.08 47.09 65.56 35.8 38.42 53.7 36.22 53.58</td>
</tr>
<tr>
<td></td>
<td>26.05 27.73 44.62 46.19 73.31 31.31 27.44 44.12 55.1 58.1 60.62 50.61 46.49 112.81 88.68 141.98 58.72 86.72 141.19 72.71 127.4</td>
</tr>
<tr>
<td></td>
<td>36.57 98.16 77.03 115.72 40.64 45.21 76.8 71.04 104.49 50.61 46.49 112.81 88.68 141.98 58.72 86.72 141.19 72.71 127.4</td>
</tr>
</tbody>
</table>

**Figure 12 - Price variation per offer category across the EU, country clusters**

<table>
<thead>
<tr>
<th>Green bullet</th>
<th>Blue bullet</th>
<th>Yellow Bullet</th>
<th>Red bullet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>inexpensive</td>
<td>relatively inexpensive</td>
<td>relatively expensive</td>
<td>expensive</td>
</tr>
</tbody>
</table>
In the following, general country groupings can be observed:

- Overall, Romania, Latvia, and Hungary have the most attractive prices for broadband internet in the EU. The majority of offers in these countries belongs to the cluster of the least expensive in the respective baskets.
- Lithuania, France, Italy, and Slovakia follow. France and Italy have low prices especially for Triple Play offers.
- Bulgaria and Estonia tend to have attractive prices for lower bandwidth offers, but also tend to be in the cluster of more expensive countries for speeds above 100 Mbps.
- Greece and Belgium have no offers belonging to the two less expensive clusters.
- No country has offers in only one cluster.
2.2 Price trends

Broadband prices show mixed trends in 2018. Figure 13 shows that prices for offers including telephony increased between 0.97% and 2.45% over 12 months, as did prices for all bundles in the 100+ Mbps baskets. The largest increase (5.66%) was found in the 100+ Mbps Triple Play basket.

A decrease in prices was observed for offers without telephony in the 12-30 Mbps (-1.32%/-1.04%) and 30-100 Mbps (-2.48%/-2.13%) baskets.

![Figure 13 – Changes in least expensive broadband prices, EU level, 2017-2018](image)

### Table: Price difference between 2017 and 2018

<table>
<thead>
<tr>
<th>Service Bundle</th>
<th>12-30 Mbps</th>
<th>30-100 Mbps</th>
<th>100+ Mbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Play</td>
<td>-1.32%</td>
<td>-2.48%</td>
<td>2.80%</td>
</tr>
<tr>
<td>Double Play</td>
<td>2.45%</td>
<td>0.97%</td>
<td>1.64%</td>
</tr>
<tr>
<td>TV</td>
<td>-1.04%</td>
<td>-2.13%</td>
<td>0.29%</td>
</tr>
<tr>
<td>Triple Play</td>
<td>2.20%</td>
<td>1.47%</td>
<td>5.66%</td>
</tr>
</tbody>
</table>

2.3 Who is best in class in the EU?

The maps in the following sections show the prices in EU28 countries of the least expensive offer found on the market for each service bundle - standalone fixed internet, the two Double Play offer categories and Triple Play - and, within a service bundle, for each download speed basket. The rank order of countries by price, in 7-quantiles (4 countries in each group), is indicated by a range of colours.\(^{18}\)

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\(^{18}\) A q-quantile divides a set of observations, each located by value on one dimension and ordered by value, into q groups of equal size (or a probability distribution into groups of equal probability). For samples, any value for a q-quantile may be chosen between the lowest value of the higher-ranked group and the highest value of the neighbouring lower-ranked group. Applying 7-quantiles to the full sample of 28 Member
2.3.1 Single Play (standalone internet) across Europe

For Single Play (standalone fixed internet), the map indicates that the best in class, with the least expensive offers across the EU28, are Bulgaria, Hungary, Romania, and Lithuania. The lowest price found is €10.11; however the EU average (€21.4) is twice as high and the top price - despite being the least expensive in that country - is more than three times the lowest price found.

States, there are four countries per group. Where the number of countries falls below 28 - there are not offers on the market for all bundle/basket offer categories - there may be only three countries in a group.
Single Play offers in the 30-100 Mbps speed basket show a similar pattern to the next lower download speed basket. The best in class group of countries is Bulgaria, Romania, Lithuania, and Hungary.
The picture for Single Play standalone internet in the top download speed basket shows some changes in pattern. Here, the best in class are Romania, Hungary, Lithuania, and Poland.
The best in class for Double Play with TV at 12-30 Mbps download speed are Estonia, Finland, Slovakia, and Lithuania.
The Baltic States are the best in class for Double Play (TV) offers in the 30-100 Mbps basket. They are joined by Finland.
For Double Play (TV) in the top speed basket, some changes are visible compared with the next lower download speed basket. Poland is the best in class, joined by Latvia, Slovakia, and Romania in topping the ranking of the least expensive Double Play offers with TV.
2.3.3 **Double Play with fixed telephony across Europe**

Map 7 – Double Play with fixed telephony, 12-30 Mbps

Best in class for Double Play offers with fixed telephony in the 12-30 Mbps speed category are Bulgaria, Romania, Hungary, and Austria. The least expensive offer in the EU28 for this offer category is about half the EU28 average (€30.3).
The EU28 average of lowest prices per country for Double Play with fixed telephony in the 30-100 Mbps download speed range is €31.9. The best in class in this bundle/basket offer category are Romania, Bulgaria, Hungary, and Lithuania.
For the top download speed category, Double Play with fixed telephony, the range in European lowest prices is from €17.6 to €128, the second largest range across all bundle/basket offer categories. The best in class are Romania, Hungary, Poland, and Slovakia.
2.3.4 Triple Play across Europe

In the least expensive price cluster for Triple Play at an advertised download speed in the 12-30 Mbps, Slovakia is accompanied by Lithuania, Latvia, and Bulgaria.
The best in class for Triple Play 30-100 Mbps are Slovakia, Lithuania, France, and Romania.
The best in class for the top advertised download speed category 100+ Mbps and the Triple Play service bundle are Slovakia, France, Romania, and Italy. The range in European lowest prices is from €25.77 to €141.2, the largest range across all bundle/basket offer categories.
2.3.5 Findings from the map visualisation
Looking at all least expensive offers for every service bundle and speed basket offer category, a few countries offer the cheapest prices across all offer categories. These are Lithuania, Romania, Slovakia, Latvia, and Bulgaria.¹⁹

From the map visualisation, a tendency for prices in the European fixed broadband market to fall towards Eastern Member States is visible; however, there are many exceptions. A number of other observations can be made from the analyses above:

- Italy and Slovakia, despite their offers on standalone internet being around average for the EU, they provide consumers with very low price bundles including television services, particularly for the speed ranges 30-100 Mbps and 100+ Mbps.
- Consumers in Romania, Latvia, and Hungary enjoy the lowest price offers for Single Play (standalone internet) across all speed baskets. Furthermore, Romania and Hungary are among the least expensive countries regarding Double Play with fixed telephony for the highest advertised download speeds, that is the speed basket 30-100 Mbps and higher.

2.4 The bigger picture: the EU in the world

2.4.1 Comparing the EU with the rest of the world in 2018
To give an indication of how prices in the EU compare with the rest of the world, a full set of data on fixed broadband internet offers was collected for each of four non-European countries, two Asian (Japan and South Korea) and two North-American (Canada and the USA). For the USA, three representative states were selected: New York State (Middle-Atlantic Division), Colorado (Mountain Division) and California (Pacific Division).

Figure 14 below shows how mean prices in the EU28 relate to those in the selected non-European countries.

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¹⁹ These are different countries than when compared to the k-means clustering as we do not look at the two top baskets, as they are not available in every MS.
Figure 14 - EU28 least expensive prices compared to other countries in the world (expressed in EUR/PPP, VAT included)²⁰

²⁰ Prices given for the USA are calculated as the average of the least expensive offers found in each of the states California, Colorado and New York.
Comparing the EU28 with other countries in the world, there is a similar pattern in all download speed baskets. South Korea shows the least expensive offers for standalone internet. The EU28 shows slightly lower prices for Standalone and Double Play with Telephony offers compared with Japan. Japan in turn, shows lower prices for bundles including Television. Prices for bundles in all speed baskets are lower in the EU28 than in the USA and Canada.

### 2.4.2 Changes in the EU position since 2017

The comparison of retail prices for fixed broadband offers between EU Member States and third countries for 2018 can be compared to the previous year, 2017. Findings of the 2017 study included the following:

- Ultra-fast broadband was most expensive in the USA and Canada,
- In South Korea, no broadband offer was available in baskets below 100 Mbps
- European citizens, compared to Japan and South Korea, pay similar prices for connections up to 100 Mbps, but have to pay significantly more for faster access.

These findings are partly unchanged in 2018:

- Ultra-fast broadband offers (100+ Mbps) were still the most expensive in the USA and Canada
- The least expensive offer in South Korea across all bundles was faster than 30 Mbps
- In 2018, European citizens paid similar prices to those in Japan for Single Play and Double Play with telephony services; however prices are higher for bundles including television services.

### 2.5 Speed premiums

Given the greater expense of infrastructure to carry higher data speeds, prices for providing higher advertised download speeds can be expected to be higher than for offers providing lower speeds. A *speed premium* has been calculated for 2018 for each country as the price difference between

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Similarly calculated price differences have been referred to previously as "high speed premiums". Using this term confuses the idea of a high (download) speed with the price comparison at hand. The comparison
offers in neighbouring speed baskets. The prices applied for a speed basket is that of the least expensive offer for the respective basket/bundle combination in the country. A speed premium is the amount a consumer has to pay for upgrading, say a Double Play bundle including TV services in the 12-30 Mbps range to a service in the 30-100 Mbps basket, assuming the worst case, that the consumer’s original service was the cheapest on the market for the 12-30 Mbps speed basket.

Figure 16 shows the speed premiums per country and per service bundle for the basket transition (upgrade) 12-30 to 30-100 Mbps, and Figure 17 further below the speed premiums for the next higher basket transition. The average speed premiums across the EU for each service bundle are shown on the right in those figures, and are presented in overview in Figure 15.

Compared with data from 2017, the speed premiums are slightly lower.

For several service bundles in various countries, offers in a lower downloadable speed basket were found to be more expensive than the cheapest offer in the next higher speed basket. In such cases the same offer is the cheapest for consumers looking for a service in either speed basket. When the same offer is the cheapest in both speed baskets, the speed premium is considered to be zero.

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22 An asterisk indicates that no offer was found on the market in the particular bundle/basket offer category in the respective country.

23 This is represented by an empty column in the figure, e.g. for all service bundles in Croatia.
On EU average, customers pay around €2 extra for a 30-100 Mbps broadband offer compared to a 12-30 Mbps offer, regardless of the bundle type. The high-speed premium ranges from €1.23 for a Standalone or Single Play to €2.11 for Double Play with TV.

The EU average includes many cases of zero premiums, including eleven countries with all service bundles at zero premiums. It is therefore unsurprising that, where a premium has to be paid, these are often significantly higher than the average. In Austria, Greece, and the Netherlands, the market exhibits particularly high premiums, in one case exceeding ten times the European average.

Speed premiums shown in Figure 17 for the transition (upgrade) between the speed baskets 30-100 Mbps and more than 100 Mbps are significantly different from those for the lower speed transition (between 12-30 and 30-100 Mbps, Figure 16). The EU average for this basket transition varies across service bundles from €11.47 for Double Play offers with bundled fixed telephony to €12.21 for Double Play offers including TV services.

There are fewer cases of zero premiums overall in this basket transition than in the lower speed transition. Only one country, Italy, has zero premiums across all service bundles. In Italy, the least
expensive 12-30 Mbps offer is an offer with an advertised download speed belonging to the 100+ Mbps basket. Consumers in Cyprus, Greece, Malta, and, to a lesser extent, in the Netherlands, Slovenia, and Estonia face high speed premiums for this transition, with consumers having to pay significantly above the European average.

2.6 Bundle premiums

The bundle premiums calculated and reported here represent the increase in price that consumers face for upgrading a standalone internet, Single Play offer to one including fixed telephony and/or TV services, without a change in the download speed basket of the overall service. For example, the bundle premium for Double Play with fixed telephony represents how much extra a consumer must pay for adding fixed telephony to a standalone fixed broadband offer as well as by selecting the best offer on the market (from the largest providers). This is assuming that in the worst case the original service was the cheapest on the market.

To give a first overview, EU averages for all the bundle premiums are shown in Figure 18.

Figure 18 – EU28 average bundle premiums by speed basket and added service(s)

Adding telephony or television services costs about 9€, adding both services around 18€, regardless of the speed basket. In contrast to 2017 data, there is no clear trend that adding services is cheaper in the higher speed baskets.

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24 The offer promises the fastest download speed possible technically available at the customer’s premises.
2.6.1 Adding services in the 12-30 Mbps basket

Figure 19 shows the bundle premium for adding services in the 12-30 Mbps basket.

- **Telephony**
  The prices for adding telephony vary considerably between the EU28 countries. The premium is between 1.17€ in Spain and almost 28€ in Sweden. The EU28 on average is at €8.91. No offer including telephony was found in Finland.

- **TV**
  In Croatia, Estonia, Finland, and Italy the television services are already included in the least expensive standalone offer. For the other countries, the premium ranges between less than 0.70€ in Slovakia to almost 29€ in Sweden. On average in the EU28, customers have to pay a premium of 9.34€.

- **Telephony and TV**
  The premiums lie between 5.13€ in Lithuania and almost 50€ in Sweden. The EU28 on average is at 18.76€. No offer including telephony services was found in Finland.

![Figure 19 - Bundle premiums 12-30 Mbps by country [in EUR PPP]](image)

2.6.2 Adding services in the 30–100 Mbps basket

Figure 20 shows the bundle premium for adding services in the 30-100 Mbps basket.

- **Telephony**
  In Greece, the least expensive standalone offer already includes telephony services. For the other countries, the premium is between 1.17€ in Spain and 27.65€ in Sweden. The EU28 on average is at €8.42. No offer including telephony was found in Finland.

- **TV**
  In Croatia, Estonia, Finland, and Italy, television services are already included in the least expensive standalone offer. For the other countries, the premium ranges between 1.11€

---

25 However this is rather an effect of a reasonably priced Single Play offer than of very expensive telephony services in Sweden.
in Poland to almost 29€ in Sweden. On average in the EU28, customers have to pay a premium of €8.71.

- **Telephony and TV**
  The premiums lie between 5.13€ in Italy and roughly 50€ in Sweden. The EU28 on average is at 17.88€. No offer including telephony services was found in Finland.

![Figure 20 – Bundle premiums 30-100 Mbps by country [in EUR PPP]](image)

Adding services in the 100+ Mbps basket

Figure 21 shows bundle premiums for adding services in the 100+ Mbps.

- **Telephony**
  In France, Greece, Ireland, and Spain, the least expensive standalone offer already includes telephony services. For the other countries, the premium is between 2.92€ in Slovakia and almost 29€ in Sweden. The EU28 on average is at €9.12. No offers in this basket including telephony were found in Finland.

- **TV**
  In Croatia, France, Italy, Latvia, Slovakia, and Slovenia, television services are already included in the least expensive standalone offer. For the other countries, the premium ranges between less than 0.70€ in Poland to more than 32€ in Sweden. On average in the EU28, customers have to pay a premium of €8.67.

- **Telephony and TV**
  In France, the least expensive standalone offer already includes telephony and television services. The premiums in the other countries lie between 2.92€ in Slovakia and more than 50€ in Sweden. The EU28 on average is at 18.24€. No offers in this basket including telephony were found in Finland.
Figure 21 – Bundle premiums 100+ Mbps by country [in EUR PPP]
3. Methodology

3.1 Introduction
To ensure the validity of the international comparisons made in this report required a clear set of criteria. This is because the comparisons made on the retail broadband prices covered a range of complex products taken across many different countries. This enabled that the inclusion of offers and the procedure of the normalisation of prices can be rendered comparable. Details of the methodology applied for this are provided below.

3.2 Data collection and market coverage

3.2.1 Scope and overall approach
The study covers the following countries:

- The 28 Member States of the EU;
- Norway and Iceland;
- Japan, South Korea and Canada;
- Three states of the USA: California, Colorado and New York

The methodology for collecting data on broadband prices in each country includes sampling of ISPs, sampling of their products, sampling of prices over time (price reference period), modes of access to product information, and definition of the categories and codings to be applied.

All offer data was collected from online sources hosted by the ISP offering the service concerned. Only offers which were purchasable on the website of the respective ISP were included into the sample.

The data was collected within two weeks in October 2018. This represents the price reference period for 2018 prices. Previous monitoring took place at a similar time of year and as is expected, so will subsequent annual surveys, supporting easy interpretation of inter-annual price comparisons.

3.2.2 Internet service provider (ISP) and product sample
The study set out to achieve good coverage of the market in all countries, with clear rules for ISP and product inclusion to avoid distortions of comparisons.

The ISP sample was drawn from a list of ISPs ranked by market share in each country. ISPs were drawn from the list up to a market coverage at least 80% (90% in each of the EU28, Norway and Iceland) and up to a maximum of five ISPs per country: In addition, all incumbent operators were included, even where these were no longer in the top five in terms of market share. Also, for countries where one incumbent ISP had a sufficient market share alone and where the next largest ISP was a new entrant, the new entrant ISP was included in the ISP sample.

National Regulatory Authorities (NRA) were given the opportunity to verify the sample drawn for their Member State (see Annex 2).

For each of the ISPs selected, all the products offered to residential consumers were identified which consisted of or contained fixed broadband internet access, whether stand-alone or combined with any type of value-adding service or feature.
The value-adding provision of fixed voice telephony and/or provision of television were singled out for full sampling and analysis. The resulting four selected service bundles are:

- fixed broadband internet access, either provided alone (Single Play) or combined with
- either fixed voice telephony or television (Double Play) or
- both fixed telephony and television (Triple Play).

As described further below, information was captured on other value-adding services bundled with fixed internet access including mobile voice telephony, mobile broadband internet access, pay-per-view TV, subscribed-to content, web-space, mail-boxes, etc. However, bundles with these features were not sampled in their own right.

In principle, all products were included from all selected ISPs in all four selected service bundles and for all advertised broadband download speeds falling under the EC definition of broadband.

Where the same product - a product in the same selected service bundle and providing the same download speed - was offered in different variants, and where it was clear which of the variants was the least expensive - usually that with the least value-adding features – only then was the least expensive variant included in the sample. This inclusion rule meant in particular that offers including mobile voice telephony or mobile broadband access were included only where the respective provider did not offer an equivalent product without the mobile service in question.

3.2.3 **Recorded offer characteristics / indicators**

For each retail broadband product in the sample, information on each of the following data items was aimed to be collected in all cases meeting accessibility criteria set:

<table>
<thead>
<tr>
<th>Characteristic of offered service / indicator</th>
<th>Categories, units and remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Country data set - see notes.</td>
</tr>
<tr>
<td>ISP</td>
<td>(listed item - unique ISP name)</td>
</tr>
<tr>
<td>Name</td>
<td>(free text - name of offer)</td>
</tr>
<tr>
<td>Geographical coverage</td>
<td>Nation, region, some cities, one city, other</td>
</tr>
<tr>
<td>Type of service</td>
<td>Fixed broadband internet access standalone or with fixed telephony and/or television.</td>
</tr>
<tr>
<td>Download speed</td>
<td>(integer) Mbps</td>
</tr>
<tr>
<td>Upload speed</td>
<td>(integer) Mbps</td>
</tr>
<tr>
<td>Capped volume</td>
<td>(integer) GB.</td>
</tr>
<tr>
<td>Capped monthly time</td>
<td>(integer) Hours. Remarks: Zero if not metered</td>
</tr>
<tr>
<td>Characteristic of offered service / indicator</td>
<td>Categories, units and remarks</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Cap breach mode</td>
<td>Continued reduced service, disconnect, automatic surcharge / overage</td>
</tr>
<tr>
<td>Reduced speed after breach</td>
<td>(integer) Mbps Default: zero</td>
</tr>
<tr>
<td>Volume over cap</td>
<td>(integer) price in local currency per GB over cap volume (overage) at normal service quality.</td>
</tr>
<tr>
<td>Maximum volume surcharge</td>
<td>(integer) local currency.</td>
</tr>
<tr>
<td>Time over cap</td>
<td>(integer) price in local currency per hour of usage beyond the capped amount at normal service quality.</td>
</tr>
<tr>
<td>Maximum time surcharge</td>
<td>(integer) local currency.</td>
</tr>
<tr>
<td>Contract duration</td>
<td>(integer) months.</td>
</tr>
<tr>
<td>Recurring charges</td>
<td>(integer) local currency per month. See notes.</td>
</tr>
<tr>
<td>Non-recurring charges</td>
<td>(integer) local currency.</td>
</tr>
<tr>
<td>Extra up-front charges</td>
<td>(integer) local currency.</td>
</tr>
<tr>
<td>Time-based discounts</td>
<td>(integer) local currency per month.</td>
</tr>
<tr>
<td>Up-front discounts</td>
<td>(integer) local currency.</td>
</tr>
<tr>
<td>Telephone line rental</td>
<td>(integer) local currency per month.</td>
</tr>
<tr>
<td>Cable TV subscription fee</td>
<td>(integer) local currency per month.</td>
</tr>
<tr>
<td>Bundled mobile telephony</td>
<td>Telephony service data set - see notes.</td>
</tr>
<tr>
<td>Bundled fixed telephony</td>
<td>Telephony service data set - see notes.</td>
</tr>
<tr>
<td>Bundled television</td>
<td>TV data set - see notes.</td>
</tr>
<tr>
<td>Bundled mobile data</td>
<td>Internet data set - see notes.</td>
</tr>
<tr>
<td>Access technology</td>
<td>xDSL, DOCSIS 3.0, FTTB/H, NGA-enabled technologies, Ethernet, plug and play (fixed wireless WiMax not LTE), satellite, other</td>
</tr>
<tr>
<td>Zero-rated services</td>
<td>(text) Description of services offered</td>
</tr>
</tbody>
</table>

**Notes**

- Recurring charges include phone line rental and cable TV fee and any other charge which the customer necessarily incurs to receive the offered service. The recorded recurring charge is a monthly charge. Regular charges for periods other than a month are converted
proportionately to a recurring the charge for one month. Irregular charges are treated as a mixture of recurring charge and non-recurring charge.

- Where prices differ by payment method, the most easily and publicly accessible price is recorded, regardless of the payment or billing method specified.
- Discounts were recorded which applied to all customers, and applied on the first day of the Price Reference Period.
- The country data set comprises: Country symbol; EU, non-EU; currency; (integer) Euro exchange rate; VAT rate (integer) percent
- The TV data set comprises: number of channels (categories of); download content or other value add, no value add.
- The internet data set comprises: (integer) Mbps download speed; (integer) GB volume cap; (integer) hours time cap. Remark: provided all
- The telephony service data set comprises: geographic coverage of international calls; (integer) minutes time allowance to mobile; (integer) local currency cost of additional minute to mobile; (integer) minutes time allowance to fixed; (integer) local currency cost of additional minute to fixed.
- Value-adding features are recorded only if no additional charge is made for their provision.

Electronic copies of the web pages (screenshots) and documents from which tariff information was collected were kept and used in quality assurance processes during data capture.

3.2.4 Download speed baskets

The absolute download speed as advertised was recorded for each offer. For analysis, offers were classified in baskets of advertised download speed as shown in Figure 23.

**Figure 23 – Download speed baskets**

<table>
<thead>
<tr>
<th>Basket</th>
<th>greater than (Mbps)</th>
<th>less than or equal to (Mbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>≥ 0.144</td>
<td>≤4</td>
</tr>
<tr>
<td>2</td>
<td>&gt; 4</td>
<td>≤ 8</td>
</tr>
<tr>
<td>3</td>
<td>&gt; 8</td>
<td>≤ 12</td>
</tr>
<tr>
<td>4</td>
<td>&gt; 12</td>
<td>≤ 30</td>
</tr>
<tr>
<td>5</td>
<td>&gt; 30</td>
<td>≤ 100</td>
</tr>
<tr>
<td>6</td>
<td>&gt;100</td>
<td>≤ 200</td>
</tr>
<tr>
<td>7</td>
<td>&gt;200</td>
<td>≤ 999</td>
</tr>
<tr>
<td>8</td>
<td>&gt;999</td>
<td>n/a</td>
</tr>
</tbody>
</table>

As shown, each basket includes the upper bound of the speed interval given but not the lower bound, except in the lowest category, which includes 144 kbps. This should be borne in mind when reading results referring to a basket not by number but e.g. as "8-12 Mbps".
3.3 Price normalisation and analysis

3.3.1 Standard broadband internet service price BISP

Normalisation of advertised prices is necessary to provide comparability across offers which have different price components, and/or usage rules with relevance to the cost incurred. Normalisation was predominantly necessary in cases where services included volume or time capping. Applying the normalisation techniques and parameters defined here and a standard monthly broadband internet service price (BISP) was determined for each offer. This is designed to be equivalent to the actual cost to a customer using the offered service, complied with a specified usage profile. The BISP takes fully into account the impact on consumers of:

- any non-recurring / one-off charges,
- the recurring / monthly and usage-dependent charges and
- applicable discounts or surcharges to either type of charge.

The BISP is a monthly cost to the consumer on average over the full standard contract duration.

A standard contract duration (SCD) of 36 months was set. Any charges for renewing a shorter contract or overrun of a contract (series of contracts) of fixed duration were taken into account as non-recurring charges at a particular time, and discounting techniques applied to determine a BISP component.

All charges that a customer cannot avoid including, for instance, contributions to universal service provision or TV contributions for settling author rights and local taxes or fees were taken fully into account.

The total BISP includes components to reflect all non-recurring charges. Non-recurring or one-off charges - e.g. installation or equipment purchase - were converted to BISP components at constant net present value using the standard contract duration and an appropriate discount rate. Given the economic climate of 2018, a discount rate of zero was applied.

Discounts - typically one-off up-front or a reduced monthly charge for a limited period, were taken fully into account. This created a (negative) BISP component and where necessary, the use of depreciation techniques. The method of taking discounts into account were valid for all customers on the first day of the price reference period and ensured that proper reflection of the cost of the service to an average customer, purchasing it then, and retaining the service for the standard contract duration could be made. Therefore discounts applicable only to certain types of customers such as students, disabled people or any groups, were not included. Discounts for ordering online were applied in full. A recurring discount provided for a limited period was discounted to a net present value and spread over the standard contract duration.

Where an ISP gave the option to either buy or rent required equipment, the less expensive variant (usually buy not rent) was included.

3.3.2 Application of usage / user profiles

Metered offers provide broadband internet access for a fixed monthly price up to a certain usage level, which may be expressed in time or volume. Once the usage limit is exceeded, additional charges apply.
These thresholds were compared with a standard user profile, and where usage in the profile exceeded the particular usage limit, the surcharge was calculated and added as a BISP component. The agreed user profiles shown in Figure 24 specify how usage volume is believed to be linked to the offer speed basket. A monthly usage time of 20 hours of internet connection was assumed. Where service conditions limited any additional charge, this limit was also taken into account. The resulting price normalisation establishes comparability in particular of otherwise identical metered and unmetered offers.

Figure 24 – User profiles for internet usage volume, by speed basket

<table>
<thead>
<tr>
<th>Baskets</th>
<th>Volume of data (GB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basket 1:</td>
<td>5</td>
</tr>
<tr>
<td>Basket 2:</td>
<td>5</td>
</tr>
<tr>
<td>Basket 3:</td>
<td>10</td>
</tr>
<tr>
<td>Basket 4:</td>
<td>10</td>
</tr>
<tr>
<td>Basket 5:</td>
<td>30</td>
</tr>
<tr>
<td>Basket 6:</td>
<td>30</td>
</tr>
<tr>
<td>Basket 7:</td>
<td>50</td>
</tr>
<tr>
<td>Basket 8:</td>
<td>50</td>
</tr>
</tbody>
</table>

Offers in which use of television was restricted in time or in volume or where less than 5 free channels were offered as television were treated as no television service.

Offers which imposed volume limits but without the customer being able to request (and pay for) continued provision at the same quality, were only included if the ISP continued to offer access, at reduced speed, and the prominently displayed reduced speed exceeded 0.144 Mbps. For profiles which breached the volume limit, the offer was reclassified in the speed basket appropriate to the speed after limit breach.

Normalisation was applied where the volume limit of an offer was below the user profile value and exceeding the limit led not to service degradation but to additional charges. In such cases the cost of the profile volume was adjusted based on prices advertised for exceeding the volume threshold, whether or not the charges were applied automatically or only on request.

Prices for services including fixed telephony were normalised by applying a single user profile comprising 14 and 6 calls to fixed and mobile lines respectively, with calls of 5 minutes average duration.

3.3.3 Euro prices and least expensive offer

As described above, the standard monthly broadband internet service price (BISP) was determined for each offer in local currency using advertised prices. A discount rate of zero was applied over 36 month standard contract duration to take account of non-recurring charges and discounts. Volume and time limits for internet use and fixed telephony use were compensated for by applying usage
levels defined in standard usage profiles to calculate the additional monthly cost to a consumer with that usage level.

Of all offers in the product sample for a country, the least expensive (lowest BISP) was selected for each service bundle and speed basket. Occasionally, a higher quality offer - one with a higher download speed or additional services - was found to be less expensive than all offers in a particular service bundle and speed basket. In such cases the higher quality offer was taken as the least expensive offer. If this led to a higher quality offer including fixed telephony being included in a service bundle without fixed telephony, then any surcharge BISP on that offer for telephony service normalisation was removed.

For international comparability, purchasing power parity (PPP) conversion rates were applied. PPP values were taken from Eurostat26. For countries not in the scope of Eurostat’s publications, data from the OECD was used27. Values in USD PPP were converted to EUR using the USD-EUR exchange rate on 21st October, 2018.

Valid trend analysis requires standardisation of methods over time. The rules for ISP sampling, in selection of the least expensive offers and for price normalisation have been improved and compared to previous years. For trend analysis, EC broadband internet price data from 2013 onward were reanalysed, using the criteria and methods described here.

3.3.4 Restatement of historical data
Historical data from 2014 onwards was normalised using the methodology above in order to ensure comparability. Additionally, following critical comments on 2017 data, minor corrections were applied to some offers. Data may thus slightly deviate from previous published data.

3.4 Quality assurance
3.4.1 Results sample validation
During the data collection, TÜV received a dataset of randomly selected samples of 10% of the gathered data per country. At least one offer per country was provided. Moreover, TÜV received the necessary screenshots, website dumps and PDFs, thus enabling independent verification of the values entered. Finally, where required, language support was provided to TÜV.

3.4.2 Audit trail
The resolution of faults detected automatically and queries generated in sampled validation were logged. This procedure provided a comprehensive audit trail tracking study accuracy. A statistic of corrections was generated and used to review procedures and instruction of data gathering staff to further optimise quality.

3.4.3 Supervision by National Regulatory Authorities
National Regulatory Authorities for electronic communications (NRAs) were informed about the study and given the opportunity to review in a timely manner:

- the selection of ISPs,

26 See http://ec.europa.eu/eurostat/web/purchasing-power-parities/overview for more details.

27 See http://www.oecd.org/std/prices-ppp/ for more details
• the broadband retail offers including documentation,
• the analysis of the offers and
• other information the Commission requested to be provided.

By providing each NRA with this information and documentation on their market as well as being able to address various issues that were raised, has proven to be a very strong feedback loop, capable of correcting any possible misrepresentation of a national market.
4. ANNEX I - List of Internet Service Providers (ISPs) included in the study sample

<table>
<thead>
<tr>
<th>Country</th>
<th>ISP</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>Kabelplus</td>
</tr>
<tr>
<td>AT</td>
<td>LIWEST</td>
</tr>
<tr>
<td>AT</td>
<td>UPC Austria</td>
</tr>
<tr>
<td>AT</td>
<td>A1 Telekom Austria</td>
</tr>
<tr>
<td>AT</td>
<td>Salzburg AG</td>
</tr>
<tr>
<td>BE</td>
<td>Proximus</td>
</tr>
<tr>
<td>BE</td>
<td>Voo</td>
</tr>
<tr>
<td>BG</td>
<td>Vivacom</td>
</tr>
<tr>
<td>BG</td>
<td>Networx-Bulgaria</td>
</tr>
<tr>
<td>BG</td>
<td>Bulsatcom</td>
</tr>
<tr>
<td>BG</td>
<td>A1 Bulgaria</td>
</tr>
<tr>
<td>BG</td>
<td>Net 1</td>
</tr>
<tr>
<td>CA</td>
<td>Bell Canada</td>
</tr>
<tr>
<td>CA</td>
<td>Shaw Communications</td>
</tr>
<tr>
<td>CA</td>
<td>Rogers Communications</td>
</tr>
<tr>
<td>CA</td>
<td>Videotron</td>
</tr>
<tr>
<td>CA</td>
<td>Telus</td>
</tr>
<tr>
<td>CL</td>
<td>AT&amp;T</td>
</tr>
<tr>
<td>CL</td>
<td>Frontier</td>
</tr>
<tr>
<td>CL</td>
<td>Cox Communications</td>
</tr>
<tr>
<td>CL</td>
<td>Charter Communications</td>
</tr>
<tr>
<td>CO</td>
<td>CenturyLink (Qwest)</td>
</tr>
<tr>
<td>CO</td>
<td>Comcast</td>
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<tr>
<td>CO</td>
<td>Verizon</td>
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<td>Cytanet</td>
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<td>Cablenet</td>
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<td>Primetel</td>
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<td>o2 Czech Republic</td>
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<tr>
<td>CZ</td>
<td>UPC Česká republika</td>
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<td>CZ</td>
<td>T-Mobile Czech Republic</td>
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<tr>
<td>CZ</td>
<td>Starnet</td>
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<tr>
<td>CZ</td>
<td>Poda a.s. (incl. Coma s.r.o.)</td>
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<tr>
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<td>Vodafone / Kabel Deutschland</td>
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<td>TDC</td>
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<td>Stofa</td>
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<td>DK</td>
<td>Telia Denmark</td>
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<tr>
<td>DK</td>
<td>Dansk Kabel TV</td>
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<td>ES</td>
<td>Telefonica Spain (incl. Movistar, Tuenti)</td>
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</tr>
<tr>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>ES</td>
<td>Orange Spain (incl. Jazztel, Amena)</td>
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<tr>
<td>ES</td>
<td>Vodafone Spain (incl. Ono, Lowi)</td>
</tr>
<tr>
<td>ES</td>
<td>Grupo MASMOVIL</td>
</tr>
<tr>
<td>FI</td>
<td>Elisa (via Saunalahti, Anvia)</td>
</tr>
<tr>
<td>FI</td>
<td>Telia Finland</td>
</tr>
<tr>
<td>FI</td>
<td>DNA group</td>
</tr>
<tr>
<td>FI</td>
<td>Finnet group (Lounea, Tampereen Puhelin)</td>
</tr>
<tr>
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<td>Orange France</td>
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5. ANNEX II – Country Reports
Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Austria. For Telephony Double Play in the 12-30 Mbps speed basket, prices fell by 21%. In contrast, for Triple Play in the >100 Mbps speed basket, prices rose somewhat (by 8%). Nine out of twelve least expensive offers in Austria are below the EU average, while only two offers are above, positioning Austria among the relatively inexpensive countries.
Price breakdown
The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium
In Austria, adding fixed telephony to the least expensive Standalone Internet offer costs up to 7.5 EUR, depending on the speed basket. This is between 14 (>100 Mbps) and 30% (12-30 Mbps) less than the premium EU users pay on average: in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 42% more than in Austria. Adding TV services to the least expensive Standalone Internet offer costs up to 15.7 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 21% more expensive than on EU average, and for the >100 Mbps speed basket, 80% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 25.2 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 8% less expensive than on EU average, but for the >100 Mbps speed basket, 33% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

Very high speed premium
In Austria, consumers pay 7.1 EUR extra for a broadband offer of 30 - 100 Mbps, in respect of all service bundles offers. For all service bundles, this is between 238 (Standalone Internet) and 492% (Triple Play) more expensive than on EU average, and for the >100 Mbps speed basket, 24% more expensive compared to the EU average (i.e., 24% and 87% more in the two higher speed baskets of 30-100 Mbps and >100 Mbps) with the exception of the 12-30 Mbps basket, where adding TV services is about 15% less expensive. Likewise, adding both fixed telephony and TV services at the same time is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.

ISP competition
The market for inexpensive fixed internet services in Austria appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Salzburg AG has 8 of the 14 least expensive offers across all broadband categories (speed baskets and service bundles) in Austria. UPC Austria is the provider of the remainder (4) of the least expensive offers. There is a noticeable spread of prices among the offers of the largest providers in Austria, where none of the highest prices are more than twice as high as the least expensive offer. Of Kabelplus, LIWEST and A1 Telekom Austria, none has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

Notes
ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP: October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Belgium. For Telephony Double Play in the two lower speed baskets (12-100 Mbps), prices rose by 5%. In contrast, for TV Double Play in the two lower speed baskets (12-100 Mbps), prices fell somewhat (by 6%). Prices for all bundles in all speed baskets are above the European average, positioning Belgium among the relatively expensive countries.
The market for inexpensive fixed internet services in Belgium appears very strongly concentrated with all of the least expensive offers in the hands of one provider. Voo has all least expensive offers across all broadband categories (speed baskets and service bundles) in Belgium. Of Proximus and Telenet, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported here.

### Bundle Premium

In Belgium, adding fixed telephony to the least expensive Standalone Internet offer costs up to 22.2 EUR, depending on the speed basket. This is between 127 (12-30 Mbps) and 155% (>100 Mbps) more than the premiums EU consumers face on average: in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 61% less than in Belgium. Adding TV services to the least expensive Standalone Internet offer costs up to 17.6 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed bands, this is up to 102% more expensive than on EU average. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 37.2 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed bands, this is up to 119% more expensive than on EU average, and for the >100 Mbps speed band, 27% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

### Very high speed premium

In Belgium, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 5.6 and 23.7 EUR. For Standalone Internet and Telephony Double Play, this is up to 101% more expensive than on EU average, but for TV Double Play and Triple Play, about 51% less expensive. Averaging across the EU, consumers pay about 11.8 EUR to upgrade to an offer providing more than 100 Mbps. Overall in Austria the least expensive Standalone or Double Play offers in all speed baskets already include fixed telephony, whereas on EU average, adding fixed telephony costs between 5 EUR (12-30 Mbps) and 8.1 EUR (>100 Mbps). Adding TV services costs between 7.8 and 13 EUR depending on the speed range. This is more expensive compared to the EU average (i.e., 24% and 87% more in the two higher speed baskets of 30-100 Mbps and >100 Mbps) with the exception of the 12-30 Mbps basket, where adding TV services is about 15% less expensive. Likewise, adding both fixed telephony and TV services at the same time is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.
Recent development of broadband prices

Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Bulgaria. For Standalone Internet in the 30-100 Mbps speed basket, prices fell by 29%. In contrast, for TV Double Play in the 30-100 Mbps speed basket, prices rose noticeably (by 12%). Prices for all bundles in all speed baskets are below the European average, the Single Play 12-30 Mbps is the least expensive offer in the EU28.
The market for inexpensive fixed internet services in Bulgaria appears moderately strongly concentrated with half of the least expensive offers in the hands of one provider. Bulsatcom has 6 of the 12 least expensive offers in Bulgaria. Vescom provides none of the least expensive offers among the offers of the largest providers (within the same speed basket) and for different types of bundles (within the same speed basket) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium
In Bulgaria, adding fixed telephony to the least expensive Standalone Internet offer costs up to 12.3 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 24% less expensive than on EU average, but for the >100 Mbps speed basket, 41% more expensive. On average across the EU, consumers pay a premium of about 8.4 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 14.2 EUR, depending on the speed basket. For the 12-30 Mbps and >100 Mbps speed baskets, this is up to 18% more expensive than on EU average, and for the 30-100 Mbps speed basket, 63% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 23.1 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 32% more expensive than on EU average, but for the 12-30 Mbps speed basket, 4% less expensive. On average across the EU, consumers pay a premium of about 17.5 EUR to add both fixed telephony and TV services.

Very high speed premium
In Bulgaria, consumers pay a premium, depending on the service bundle concerned, of between 1.1 and 4.6 EUR for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps. For Telephony Double Play and Triple Play, this is up to 31% less expensive than on EU average, but for TV Double Play, 207% more expensive. Averaging across the EU, consumers pay about 1.6 EUR to upgrade to an offer providing 30 - 100 Mbps. For Standalone Internet, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 8 and 16.5 EUR. For Standalone Internet, Telephony Double Play and Triple Play, this is up to 45% more expensive than on EU average, but for TV Double Play, 30% less expensive. Adding TV services to the least expensive Standalone or Double Play offers in all speed baskets already include fixed telephony, whereas on EU average, adding fixed telephony costs between 5 EUR (12-30 Mbps) and 8.1 EUR (>100 Mbps). Adding TV services costs between 7.8 and 13 EUR depending on the speed range. This is more expensive compared to the EU average (i.e., 24% and 87% more in the two higher speed baskets of 30-100 Mbps and >100 Mbps) with the exception of the 12-30 Mbps basket, where adding TV services is about 15% less expensive. Likewise, adding both fixed telephony and TV services at the same time is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.

ISP competition
The market for inexpensive fixed internet services in Bulgaria appears moderately strongly concentrated with half of the least expensive offers in the hands of one provider. Bulsatcom has 6 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Bulgaria. Networx-Bulgaria, Mobiltel and Net 1 together provide the remainder of the least expensive offers (2, 1, and 3 respectively). There is a strong spread of prices among the offers of the largest providers in Bulgaria, where one or two of the highest prices are more than twice as high as the least expensive offer. Vivacom provides none of the least expensive offers in Bulgaria.

Notes
ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Cyprus. For Triple Play in the >100 Mbps speed basket, prices rose by 29%. In contrast, for Standalone Internet and TV Double Play in the 12-30 Mbps speed basket, prices fell somewhat (by 6%). Apart from the least expensive Triple Play offers with speeds between 12 Mbps and 100 Mbps, prices for all bundles in all speed baskets are above the EU average, especially in the 100+ Mbps basket.
The market for inexpensive fixed internet services in Cyprus appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Cablenet has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Cyprus. Cytanet is the provider of the remainder (4) of the least expensive offers.

In Cyprus, adding fixed telephony to the least expensive Standalone Internet offer costs up to 9.6 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 22% more expensive than on EU average, but for the >100 Mbps speed basket, no more expensive. On average across the EU, consumers pay a premium of about 8.4 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 16.1 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 46% less expensive than on EU average, but for the >100 Mbps speed basket, 85% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 22.3 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 46% less expensive than on EU average, but for the >100 Mbps speed basket, 87% more expensive.

Very high speed premium

In Cyprus, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 466 (Telephony Double Play) and 790% (Triple Play) as compared to the EU average. This is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.

Note: ISP marked with an `i` are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 remained nearly unchanged compared to the previous year, seen across speed baskets and service bundles in the Czech Republic. For Standalone Internet in the 30-100 Mbps speed basket, prices rose by 10%. In contrast, for Telephony Double Play and Triple Play in the 12-30 Mbps speed basket, prices fell somewhat (by 5%). Prices for all bundles in all speed baskets are below the European average, positioning the Czech Republic among the relatively inexpensive countries.
Price breakdown

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium

In the Czech Republic, adding fixed telephony to the least expensive Standalone Internet offer costs up to 15.8 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 41% more expensive than on EU average, and for the 12-30 Mbps speed basket, 88% more expensive. On average across the EU, consumers pay a premium of about 8.7 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 11.2 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 37% less expensive than on EU average, but for the 12-30 Mbps speed basket, 20% more expensive. On average across the EU, consumers pay a premium of 8.7 EUR to add TV services. Finally, adding both fixed telephony and TV services. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Very high speed premium

In the Czech Republic, consumers pay 5.7 EUR extra for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps, in respect of Standalone Internet offers. For Standalone Internet, this is 171% more expensive than on EU average, where consumers pay 2.1 EUR to upgrade to an offer providing 30 - 100 Mbps. For Telephony Double Play, TV Double Play and Triple Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 5.8 and 7.9 EUR. For all service bundles, this is between 31 (Triple Play) and 50% (Standalone Internet) less expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 300 Mbps. Overall, in Austria the least expensive Standalone or Double Play offers in all speed baskets already include fixed telephony, whereas on EU average, adding fixed telephony costs between 5 EUR (12-30 Mbps) and 8.1 EUR (>100 Mbps). Adding TV services costs between 7.8 and 13 EUR depending on the speed range. This is more expensive compared to the EU average (i.e., 24% and 87% more in the two higher speed baskets of 30-100 Mbps and >100 Mbps) with the exception of the 12-30 Mbps basket, where adding TV services is about 13% less expensive. Likewise, adding both fixed telephony and TV services at the same time is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.

ISP competition

The market for inexpensive fixed internet services in the Czech Republic appears moderately strongly concentrated with most of the least expensive offers in the hands of one provider. Poda has 9 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in the Czech Republic. UPC Česká republika and Starnet together provide the remainder of the least expensive offers (1 and 2 respectively). There is a strong spread of prices among the offers of the largest providers in the Czech Republic, where most of the highest prices are more than twice as high as the least expensive offer. Of the 12 largest providers, T-Mobile Czech Republic, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

Notes

ISP marked with an i are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
**Recent development of broadband prices**

Broadband prices in 2018 remained nearly unchanged compared to the previous year, seen across speed baskets and service bundles in Germany. For Double Play TV in the two lower speed baskets (12-100 Mbps), prices rose by 5%, whereas, in contrast, prices fell somewhat (by 7%) in the >100 Mbps speed basket.

Prices for eight out of twelve bundles are up to 25% below the European average.

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**ISPs in sample**

Vodafone / Kabel Deutschland  
United Internet  
Unitymedia  
Telefonica Germany (O2)  
Deutsche Telekom

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**Prices in Germany compared with EU average**

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<th>2 play Phone</th>
<th>2 Play TV</th>
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<td>-25%</td>
<td>-12%</td>
<td>-17%</td>
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*Deviation in percent from the EU average in the respective basket/bundle combination*

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**Take-up of broadband speeds - Germany**

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<td>100 Mbps</td>
<td>17.2%</td>
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</table>

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**Germany - Single Play**

![Graph showing broadband prices](image)

**Germany - Double Play Phone**

![Graph showing broadband prices](image)

**Germany - Double Play TV**

![Graph showing broadband prices](image)

**Germany - Triple Play**

![Graph showing broadband prices](image)
MDM

ISP competition
The market for inexpensive fixed internet services in Germany appears moderately strongly concentrated with half of the least expensive offers in the hands of one provider. Vodafone / Kabel Deutschland has 6 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Germany. United Internet, Unitymedia and Telefonica Germany (O2) together provide the remainder of the least expensive offers (2, 3 and 1 respectively). There is a moderate spread of prices among the offers of the largest providers in Germany, where none of the highest prices are more than twice as high as the least expensive offer. Deutsche Telekom provides none of the least expensive offers in Germany.

Notes
ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability. Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Denmark. For Standalone Internet in the 30-100 Mbps speed basket, prices rose by 24%. In contrast, for the two higher speed baskets (>30 Mbps), prices fell somewhat (by 8%). While prices in the 100+ Mbps basket are close to the EU28 average, prices for offers with speeds from 12-100 Mbps are about 20% higher, positioning Denmark among the relatively expensive countries.
The market for inexpensive fixed internet services on here.

categories (speed baskets and service bundles) of the 12 least expensive offers across all broadband providers. Telenor Denmark and Dansk Kabel TV, neither with the least expensive offers spread across two ISPs competition in Denmark, where none of the highest prices are more than twice as high as the least expensive offer. In Denmark appears not strongly concentrated in the respective country.

breakdown

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

In Denmark, adding fixed telephony to the least expensive Standalone Internet offer costs up to 13.3 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 29% more expensive than on EU average, and for the 12-30 Mbps speed basket, 58% more expensive. On average across the EU, consumers pay a premium of about 8.7 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 12.2 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 31% more expensive than on EU average, and for the >100 Mbps speed basket, 3% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 23.8 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 33% more expensive than on EU average, and for the >100 Mbps speed basket, 6% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

Very high speed premium

In Denmark, consumers pay a premium, depending on the service bundle concerned, of between 1.6 and 3.1 EUR for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps. For Standalone Internet, this is 48% more expensive than on EU average, and for TV Double Play, 7% more expensive. Averaging across the EU, consumers pay 2.1 EUR to upgrade to an offer providing 30 - 100 Mbps. For Telephony Double Play and Triple Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 4.8 and 7.1 EUR. For all service bundles, this is between 38 (Standalone Internet) and 58% (Triple Play) less expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps. Overall, in Austria the least expensive Standalone or Double Play offers in all speed baskets already include fixed telephony, whereas on EU average, adding fixed telephony costs between 5 EUR (12-30 Mbps) and 8.1 EUR (>100 Mbps). Adding TV services costs between 7.8 and 13 EUR depending on the speed range. This is more expensive compared to the EU average (i.e., 24% and 87% more in the two higher speed baskets of 30-100 Mbps and >100 Mbps) with the exception of the 12-30 Mbps basket, where adding TV services is about 15% less expensive. Likewise, adding both fixed telephony and TV services at the same time is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.

Notes

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.

ISP competition

The market for inexpensive fixed internet services in Denmark appears not strongly concentrated with the least expensive offers spread across two providers, TDC and Fibia (SEAS-NVE) each have 4 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Denmark. Stofa and Telia Denmark together provide the remainder of the least expensive offers in Denmark, where none of the highest prices are more than twice as high as the least expensive offer. Of Telenor Denmark and Dansk Kabel TV, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Estonia. For Triple Play in the >100 Mbps speed basket, prices rose by 21%. In contrast, for Standalone Internet and Telephony Double Play in the 12-30 Mbps speed basket, prices remained nearly unchanged. Prices for eight out of twelve bundles are below the European average, positioning Estonia in midfield of the table. Prices for Double Play TV in the 12-100 Mbps baskets are among the least expensive in the EU28.
The market for inexpensive fixed internet services in Estonia appears moderately strongly concentrated with half of the least expensive offers in the hands of one provider. STV has 6 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Estonia. Starman and Fill OÜ together provide the remainder of the least expensive offers (1 and 5 respectively). There is a noticeable spread of prices among the offers of the largest providers in Estonia, where one or two of the highest prices are more than twice as high as the least expensive offer. Telia Eesti AS provides none of the least expensive offers in Estonia.

Notes
ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
ISPs in sample
Telefonica Spain (Movistar)
Orange Spain
Vodafone Spain
Grupo MASMOVIL

Recent development of broadband prices
Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Spain. For Standalone Internet and Telephony Double Play in the >100 Mbps speed basket, prices fell by 24%. In contrast, for Triple Play in the 12-30 Mbps speed basket, prices rose somewhat (by 7%). Prices for all but one bundle are above the European average, positioning Spain among the relatively expensive countries. However, some of these offers may contain a mobile component, which makes prices not entirely comparable with the EU.
ISP competition

The market for inexpensive fixed internet services in Spain appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Telefonica Spain (incl. Movistar, Tuenti) and Grupo MASMOVIL, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

Notes

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Finland. For Standalone Internet in the >100 Mbps speed basket, prices rose by 30%. In contrast, for the two lower speed baskets (12-100 Mbps), prices fell somewhat (by 4%). Prices for all available bundles are below the European average. However, the lack of offers bundled with fixed telephony does not allow for a 1:1 comparison with the other Member States.
The market for inexpensive fixed internet services in Finland appears strongly concentrated with most of the least expensive offers in the hands of one provider. Elisa (via Saunalahti, Anvia) has 5 of the 6 least expensive offers across all broadband categories (speed baskets and service bundles) in Finland. DNA group is the provider of the remainder (1) of the least expensive offers. There is a noticeable spread of prices among the offers of the largest providers in Finland, where one or two of the highest prices are more than twice as high as the least expensive offer. Of Sonera and Finnet group (Lounea, Tampereen Puhelin), neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

**Bundle Premium**

In Finland, no offers including fixed telephony could be found for any speed basket. Adding TV services to the least expensive Standalone Internet offer costs 0.9 EUR in the >100 Mbps speed basket. This is very much less expensive than on EU average: for consumers in the EU, adding TV services costs on average 8.7 EUR, i.e. 867% more than in Finland. The least expensive Standalone Internet offers in the 12-30 Mbps and 30-100 Mbps speed baskets already include TV services, whereas on EU average, adding TV services costs up to 9.3 EUR. Finally, no offers including both fixed telephony and TV services could be found for any speed basket.

**Very high speed premium**

In Finland, for Standalone Internet and TV Double Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. In the case of Telephony Double Play and Triple Play, no offers are available which provide more than 30 Mbps. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 15.6 and 16.5 EUR. For Standalone Internet and TV Double Play, this is about 43% more expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps. For Telephony Double Play and Triple Play, no offers are available which provide more than 100 Mbps.

**Notes**

ISP marked with an `i` are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Broadband prices in 2018 rose noticeably compared to the previous year, seen across speed baskets and service bundles in France. For TV Double Play in the 12-30 Mbps speed basket, prices rose by 34%. In contrast, for Standalone Internet in the 30-100 Mbps speed basket, prices fell noticeably (by 16%). Prices for all bundles in every speed basket are below the European average, positioning France under the inexpensive countries. The 100+ Mbps Triple Play offer is among the least expensive in the EU28.
The market for inexpensive fixed internet services in France appears moderately strongly concentrated with most of the least expensive offers in the hands of one provider: Bouygues Télécom has 9 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in France. Free is the provider of the remainder (3) of the least expensive offers. There is a small spread of prices among the offers of the largest providers in France, where none of the highest prices are more than twice as high as the least expensive offer. Of the 12 least expensive offers of a single ISP (for different types of bundles (within the same speed basket)) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

**Bundle Premium**

In France, adding fixed telephony to the least expensive Standalone Internet offer costs up to 5.6 EUR, depending on the speed basket. This is about 39% less than the premium EU consumers face on average: in the EU28, adding fixed telephony costs on average about 8.4 EUR, i.e. up to 65% more than in France. The least expensive Standalone Internet offers in France do not include fixed telephony, whereas on EU average, adding fixed telephony costs up to 8.7 EUR. Adding TV services to the least expensive Standalone Internet offer costs up to 7.8 EUR, depending on the speed basket. For the 30 - 100 Mbps speed basket, this is 10% less expensive than on EU average, and for the 12 - 30 Mbps speed basket, 46% less expensive. On average across the EU, consumers pay a premium of 8.7 EUR to add TV services. The least expensive Standalone Internet offer in the >100 Mbps speed basket already includes both fixed telephony and TV services, whereas on EU average, adding both fixed telephony and TV services costs up to 17.9 EUR.

**Very high speed premium**

In France, consumers pay a premium, depending on the service bundle concerned, of between 0 and 2.8 EUR for a broadband offer of 30 - 100 Mbps compared to one providing more than 100 Mbps. For Telephony Double Play and Triple Play, the least expensive offer in the 30 - 100 Mbps speed bands already provides more than 100 Mbps, which is equivalent to no premium being charged. The premium to be paid to upgrade to an offer providing 30 - 100 Mbps is equivalent to no premium being charged. The premium to be paid to upgrade to an offer providing 30 - 100 Mbps is equivalent to no premium being charged. The premium to be paid to upgrade to an offer providing 30 - 100 Mbps is equivalent to no premium being charged.

**Notes**

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Greece. For Standalone Internet in the 30-100 Mbps speed basket, prices rose by 19%. In contrast, for Telephony Double Play in the 12-30 Mbps speed basket, prices fell noticeably (by 16%). Apart from Double Play Phone and Triple Play in the 12-30 Mbps basket, prices for all bundles are above the European average, especially in the 100+ Mbps speed basket.
**Greece**

**ISP competition**

The market for inexpensive fixed internet services in Greece appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Forthnet has 7 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Greece. Vodafone is the provider of the remainder (5) of the least expensive offers. There is a small spread of prices among the offers of the largest providers in Greece, where none of the highest prices are more than twice as high as the least expensive offer. OTE and Wind, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

**Notes**

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.

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**Price breakdown**

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

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**Bundle Premium**

In Greece, adding fixed telephony to the least expensive Standalone Internet offer costs 6.7 EUR in the 12-30 Mbps speed basket. This is slightly less expensive than on EU average: for consumers in the EU, adding fixed telephony costs on average 8.4 EUR, i.e. 25% more than in Greece. The least expensive Standalone Internet offers in the 30-100 Mbps and >100 Mbps speed baskets already include fixed telephony, whereas on EU average, adding fixed telephony costs up to 8.7 EUR. Adding TV services to the least expensive Standalone Internet offer costs up to 14.1 EUR, depending on the speed basket. For the 12-30 Mbps and >100 Mbps speed baskets, this is 52% more expensive than on EU average, but for the 30-100 Mbps speed basket, 15% less expensive. On average across the EU, consumers pay a premium of about 9.9 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 17.3 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 25% less expensive than 100 Mbps.

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**Very high speed premium**

In Greece, consumers pay a premium, depending on the service bundle concerned, of between 8.5 and 15.2 EUR for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps. For all service bundles, this is between 431 (Telephony Double Play) and 875% (Triple Play) more expensive than on EU average, where consumers pay up to 2.1 EUR to upgrade to an offer providing 30 - 100 Mbps. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 39.3 and 45.6 EUR. For all service bundles, this is between 237 (Telephony Double Play) and 297% (TV Double Play) more expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more on average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 17.3 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 25% less expensive than 100 Mbps.

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**Notes**

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.

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**Competence and Technology**

**ISP competition**

The market for inexpensive fixed internet services in Greece appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Forthnet has 7 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Greece. Vodafone is the provider of the remainder (5) of the least expensive offers. There is a small spread of prices among the offers of the largest providers in Greece, where none of the highest prices are more than twice as high as the least expensive offer. OTE and Wind, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.
Broadband prices in 2018 fell noticeably compared to the previous year, seen across speed baskets and service bundles in Croatia. For TV Double Play in the two lower speed baskets (12-100 Mbps), prices fell by 38%. The most different trend, in the same direction, is for Standalone Internet in the >100 Mbps speed basket, where prices fell by 5%. Prices for eight out of twelve bundles are below the European average, positioning Croatia among the relatively inexpensive countries.
The market for inexpensive fixed internet services in Croatia appears moderately strongly concentrated with all of the least expensive offers in the hands of two providers. Iskon and Vipnet (including B.net Hrvatska) each have 6 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Croatia. Of T-Hrvatski Telekom and OT Optima Telekom, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

**Bundle Premium**

In Croatia, adding fixed telephony to the least expensive Standalone Internet offer costs up to 4 EUR, depending on the speed basket. This is between 49 (30-100 Mbps) and 66% (>100 Mbps) less than the premiums EU consumers face on average: in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 190% more than in Croatia. The least expensive Standalone Internet offers in all speed baskets already include TV services, whereas on EU average, adding TV services costs up to 9.3 EUR. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 13.6 EUR, depending on the speed basket. This is about 29% less than the premiums EU consumers face on average: in the EU28, adding both fixed telephony and TV services costs on average about 17 EUR more to get a Triple Play premium, regardless of the speed basket.

**Very high speed premium**

In Croatia, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 3.2 and 4.2 EUR. For all service bundles, this is about 73% less expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps. Overall, in Austria the least expensive Standalone or Double Play offers in all speed baskets already include fixed telephony, whereas on EU average, adding fixed telephony costs between 5 EUR (12-30 Mbps) and 8.1 EUR (>100 Mbps). Adding TV services costs between 7.8 and 13 EUR depending on the speed range. This is more expensive compared to the EU average (i.e., 24% and 87% more in the two higher speed baskets of 30-100 Mbps and >100 Mbps) with the exception of the 12-30 Mbps basket, where adding TV services is about 15% less expensive. Likewise, adding both fixed telephony and TV services at the same time is more expensive in Austria compared to the EU average. While in Austria adding both services costs between 18.2 and 21.8 EUR depending on the speed range, on EU average, a customer pays about 17 EUR more to get a Triple Play premium, regardless of the speed basket.
ISPs in sample
Magyar Telekom (T-Home)
UPC Hungary
Digi Kabel
ViDaNet
Tarr

Recent development of broadband prices
Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Hungary. For Standalone Internet in the 12-30 Mbps speed basket, prices fell by 17%. In contrast, for TV Double Play in the >100 Mbps speed basket, prices rose somewhat (by 9%). Prices for all bundles in every speed basket are below the European average, positioning Hungary in the upper third of the table. Prices for Single Play in the 100+ Mbps basket are among the least expensive in the EU28.
Price breakdown

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium

In Hungary, adding fixed telephony to the least expensive Standalone Internet offer costs up to 7.2 EUR, depending on the speed basket. This is between 14 (12-30 Mbps) and 37% (>100 Mbps) less than the premiums EU consumers face on average; in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 58% more than in Hungary. Adding TV services to the least expensive Standalone Internet offer costs up to 18.7 EUR, depending on the speed basket. This is between 55 (30-100 Mbps) and 115% (>100 Mbps) more than the premiums EU consumers face on average; in the EU28, adding TV services costs on average about 9.3 EUR, i.e. up to 53% less than in Hungary. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 24.5 EUR, depending on the speed basket. This is about 37% more than the premiums EU consumers face on average; in the EU28, adding both fixed telephony and TV services costs on average about 17.9 EUR, i.e. up to 27% less than in Hungary.

Very high speed premium

In Hungary, consumers pay 1.7 EUR extra for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps, in respect of Standalone Internet offers. For Standalone Internet, this is 19% less expensive than on EU average, where consumers pay 2.1 EUR to upgrade to an offer providing 30 - 100 Mbps. For Telephony Double Play, TV Double Play and Triple Play, the least expensive offer in the 12 - 30 Mbps speed buckets already provides more than 50 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 0.2 and 5.1 EUR. For TV Double Play and Triple Play, this is between 56 and 98% less expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps. For Standalone Internet and Telephony Double Play, the least expensive offer in the 30 - 100 Mbps speed baskets already provides more than 100 Mbps, which is equivalent to no premium being charged.

Notes

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose noticeably compared to the previous year, seen across speed baskets and service bundles in Ireland. For Double Play Phone in the two higher speed baskets (>30 Mbps), prices rose by 34%. In contrast, for TV Double Play and Triple Play in the 12-30 Mbps speed basket, prices remained nearly unchanged. Prices for all bundles in every speed basket are above the European average, positioning Ireland among the more expensive countries.
ISP competition
The market for inexpensive fixed internet services in Ireland appears moderately strongly concentrated with most of the least expensive offers in the hands of one provider. Virgin Media has 9 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Ireland. Sky and Vodafone at home together provide the remainder of the least expensive offers (2 and 1 respectively). There is a small spread of prices among the offers of the largest providers in Ireland, where none of the highest prices are more than twice as high as the least expensive offer. Eircom provides none of the least expensive offers in Ireland.

Notes
ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Broadband prices in 2018 fell noticeably compared to the previous year, seen across speed baskets and service bundles in Italy. For TV Double Play in the two higher speed baskets (>30 Mbps), prices fell by 34%. In contrast, for Standalone Internet in the 12-30 Mbps speed basket, prices rose noticeably (by 16%). Prices for all but two bundles are below the European average - especially in the 100+ Mbps speed basket, positioning Italy among the relatively inexpensive countries.
Price breakdown

The bundle premiums reported here are set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium

In Italy, adding fixed telephony to the least expensive Standalone Internet offer costs 4.5 EUR in all speed baskets. This is about 48% less than the premiums EU consumers face on average: in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 93% more than in Italy. The least expensive Standalone Internet offers in all speed baskets already include TV services, whereas on EU average, adding TV services costs up to 5.3 EUR. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs 5.1 EUR in all speed baskets. This is about 72% less than the premiums EU consumers face on average: in the EU28, adding both fixed telephony and TV services costs on average about 17.9 EUR, i.e. up to 251% more than in Italy.

Very high speed premium

In Italy, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The

Recent development of broadband prices

Broadband prices in 2018 rose strongly compared to the previous year, seen across speed baskets and service bundles in Lithuania. For Triple Play in the two lower speed baskets (12-100 Mbps), prices rose substantially. In contrast, for Standalone Internet in the >100 Mbps speed basket, prices fell noticeably (by 18%). Prices for all bundles in every speed basket are below the European average, positioning Lithuania among the inexpensive countries.

<table>
<thead>
<tr>
<th>Prices in Lithuania compared with EU average*</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Single Play</td>
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<tr>
<td>2 Play Phone</td>
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<tr>
<td>2 Play TV</td>
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<td>3 Play</td>
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</tbody>
</table>

*Deviation in percent from the EU average in the respective basket/bundle combination.

Take up of broadband speeds - Lithuania

<table>
<thead>
<tr>
<th>Speed</th>
<th>Lithuania</th>
<th>All EU</th>
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</thead>
<tbody>
<tr>
<td>1-2 Mbps</td>
<td>4.3%</td>
<td>12.3%</td>
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<tr>
<td>3-5 Mbps</td>
<td>4.3%</td>
<td>10.8%</td>
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<tr>
<td>6-10 Mbps</td>
<td>9.5%</td>
<td>14.3%</td>
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<tr>
<td>11-20 Mbps</td>
<td>26.3%</td>
<td>25.2%</td>
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<tr>
<td>21-100 Mbps</td>
<td>23.3%</td>
<td>18.0%</td>
</tr>
<tr>
<td>&gt;100 Mbps</td>
<td>45.0%</td>
<td>45.0%</td>
</tr>
</tbody>
</table>
ISPs competition
The market for inexpensive fixed internet services in Lithuania appears moderately strongly concentrated, with more than half of the least expensive offers across all broadband categories (speed baskets and service bundles) provided by one provider. Init has 7 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) across all categories (speed baskets and service bundles) in Lithuania. Cgates and Splius provide the remainder of the least expensive offers (1 and 4 respectively). There is a noticeable spread of prices among the offers of the largest providers in Lithuania, where none of the highest prices are more than twice as high as the least expensive offer. Of Telia Lietuva and BALTICUM TV, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data due to normalisation processes to ensure comparability.

Notes
ISP marked with an ‘i’ are incumbents in the respective country.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Luxembourg. For Double Play TV in the two higher speed baskets (>30 Mbps), prices fell by 17%, whereas they remained nearly unchanged in the 12-30 Mbps speed basket. Prices for all but two bundles are above the European average, positioning Luxembourg among the relatively expensive countries.
Price breakdown

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium

In Luxembourg, adding fixed telephony to the least expensive Standalone Internet offer costs up to 10.3 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 62% less expensive than on EU average, but for the >100 Mbps speed basket, 18% more expensive. On average across the EU, consumers pay a premium of about 8.4 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 18.9 EUR, depending on the speed basket. This is between 78 (30-100 Mbps) and 117% (>100 Mbps) more than the premiums EU consumers face on average: in the EU28 adding TV services costs on average about 9.3 EUR, i.e. up to 54% less than in Luxembourg. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 23 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 12% more expensive than on EU average, and for the >100 Mbps speed basket, 31% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

Very high speed premium

In Luxembourg, consumers pay 1.4 EUR extra for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps, in respect of Standalone Internet and Telephony Double Play offers. For Telephony Double Play, this is 13% less expensive than on EU average, and for Standalone Internet, 33% less expensive. Averaging across the EU, consumers pay 1.6 EUR to upgrade to an offer providing 30 - 100 Mbps. For TV Double Play and Triple Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 0.6 and 7.8 EUR. For all service bundles, this is between 34 (Telephony Double Play) and 95% (Standalone Internet) less expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps.

Notes

ISPs marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP: October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Latvia. For Triple Play in the 12-30 Mbps speed basket, prices rose by 21%. In contrast, for TV Double Play in the >100 Mbps speed basket, prices fell noticeably (by 18%). Prices for all bundles in every speed basket are below the European average, positioning Latvia in the upper third of the table. Double Play TV offers in all speed baskets are among the least expensive in the EU28.
**ISP competition**

The market for inexpensive fixed internet services in Latvia appears not strongly concentrated with the least expensive offers spread across two providers: Baltcom TV and Livas KTV each have 5 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Latvia. Balticom is the provider of the remainder (2) of the least expensive offers. There is a moderate spread of prices among the offers of the largest providers in Latvia, where none of the highest prices are more than twice as high as the least expensive offer. Of Lattelecom and Dautkom TV, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

**Notes**

ISP marked with an i are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Malta. For Telephony Double Play in the two lower speed baskets (12-100 Mbps), prices fell by 21%. In contrast, for Telephony Double Play and Triple Play in the >100 Mbps speed basket, prices rose somewhat (by 8%). Prices for all bundles in every speed basket are above the European average, positioning Malta among the relatively expensive countries.
Price breakdown
The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium
In Malta, adding fixed telephony to the least expensive Standalone Internet offer costs up to 10 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to no more expensive than on EU average, but for the 12-30 Mbps speed basket, 19% more expensive. On average across the EU, consumers pay a premium of about 8.7 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 16.8 EUR, depending on the speed basket. This is between 51 and 81% more than the premiums EU consumers face on average: in the EU28, adding TV services costs on average about 9.3 EUR, i.e. up to 45% less than in Malta. The least expensive Standalone Internet offer in the >100 Mbps speed basket already includes TV services, whereas on EU average, adding TV services costs up to 9.3 EUR. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 29.6 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 65% more expensive than on EU average, but for the >100 Mbps speed basket, 50% less expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

Very high speed premium
In Malta, consumers pay 3.7 EUR extra for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps, in respect of Standalone Internet offers. For Standalone Internet, this is 76% more expensive than on EU average, where consumers pay 2.1 EUR to upgrade to an offer providing 30 - 100 Mbps. For Telephony Double Play, TV Double Play and Triple Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 6 and 25.6 EUR. For Standalone Internet and Telephony Double Play, this is up to 117% more expensive than on EU average, but for TV Double Play and Triple Play, between 13 and 47% less expensive. Averaging across the EU, consumers pay about 11.8 EUR to upgrade to an offer providing more than 100 Mbps.

ISP competition
The market for inexpensive fixed internet services in Malta appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. GO has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Malta. Melita is the provider of the remainder (4) of the least expensive offers. There is a moderate spread of prices among the offers of the largest providers in Malta, where none of the highest prices are more than twice as high as the least expensive offer. All large-share fixed internet providers in Malta have at least one of the least expensive offers on the market.

NOTES
ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
**Statistical Data**

ISPs in sample
- Ziggo
- BBNED / Tele2
- KPN

**The Netherlands Overview**

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in the Netherlands. For Triple Play in the 30-100 Mbps speed basket, prices rose by 24%. In contrast, for Telephony Double Play in the >100 Mbps speed basket, prices fell somewhat (by 6%). Ten out of twelve bundles are above the European average, especially in the >100 Mbps basket, positioning the Netherlands among the relatively expensive countries.
The market for inexpensive fixed internet services in the Netherlands appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. BBNED / Tele2 has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in the Netherlands. Ziggo and KPN together provide the remainder of the least expensive offers (2 each). There is a small spread of prices among the offers of the largest providers in the Netherlands, where none of the highest prices are more than twice as high as the least expensive offer. All large-share fixed internet providers in the Netherlands have at least one of the least expensive offers on the market.

**Bundle Premium**

In the Netherlands, adding fixed telephony to the least expensive Standalone Internet offer costs up to 14.1 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 23% less expensive than on EU average, but for the >100 Mbps speed basket, 62% more expensive. On average across the EU, consumers pay a premium of about 8.4 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 9.3 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 17% less expensive than on EU average, but for the >100 Mbps speed basket, 7% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 23.6 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 25% less expensive than on EU average, but for the >100 Mbps speed basket, 35% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

**Very high speed premium**

In the Netherlands, consumers pay a premium, depending on the service bundle concerned, of between 4.6 and 6.3 EUR for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps. For TV Double Play and Triple Play, this is up to 425% more expensive than on EU average, and for Standalone Internet and Telephony Double Play, between 119 and 188% more expensive. Averaging across the EU, consumers pay about 1.5 EUR to upgrade to an offer providing 30 - 100 Mbps. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 17.2 and 25.9 EUR. For all service bundles, this is between 50 (Standalone Internet) and 127% (Triple Play) more expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps.

**Notes**

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been modified from previously published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Poland. For Triple Play in the 12-30 Mbps speed basket, prices rose by 43%. In contrast, for Telephony Double Play in the >100 Mbps speed basket, prices fell strongly (by 22%). Prices for all bundles in every basket are below the European average, positioning Poland in the upper third of the table. Prices for bundles in the >100 Mbps basket are among the least expensive in the EU28.
The market for inexpensive fixed internet services in Poland appears moderately strongly concentrated with half of the least expensive offers in the hands of one provider. UPC Polska has 6 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Poland. Group Netia and MultiMedia Polska together provide the remainder of the least expensive offers (3 each). There is a noticeable spread of prices among the offers of the largest providers in Poland, where one or two of the highest prices are more than twice as high as the least expensive offer. Of Vectra and Orange (TP and PTK), neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

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ISP marked with an ‘i’ are incumbents in the respective country.
Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 fell noticeably compared to the previous year, seen across speed baskets and service bundles in Portugal. For Telephony Double Play in the >100 Mbps speed basket, prices fell by 26%. The most different trend, in the same direction, is for Standalone Internet in the 30-100 Mbps speed basket, where prices fell by 7%. Prices for all bundles in all speed baskets are above the European average, however only slightly so in the >100 Mbps basket.

Please note that some of these offers may contain a mobile component, which makes prices not entirely comparable with the EU.
The market for inexpensive fixed internet services in Portugal appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. MEO (PT Comunicações) has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Portugal. NOS and Vodafone Portugal together provide the remainder of the least expensive offers (1 and 3 respectively). There is a small spread of prices among the offers of the largest providers in Portugal, where none of the highest prices are more than twice as high as the least expensive offer. All large-share fixed internet providers in Portugal have at least one of the least expensive offers on the market.

ISP competition

The market for inexpensive fixed internet services in Portugal appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. MEO (PT Comunicações) has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Portugal. NOS and Vodafone Portugal together provide the remainder of the least expensive offers (1 and 3 respectively). There is a small spread of prices among the offers of the largest providers in Portugal, where none of the highest prices are more than twice as high as the least expensive offer. All large-share fixed internet providers in Portugal have at least one of the least expensive offers on the market.

Notes

ISP marked with an ‘i’ are incumbents in the respective country.

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Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Romania. For TV Double Play in the >100 Mbps speed basket, prices fell by 16%. In contrast, for Telephony Double Play in the two lower speed baskets (12-100 Mbps), prices rose somewhat (by 3%). Prices for all bundles in every speed basket are below the European average, positioning Romania in the upper third of the table. Single Play and Double Play Phone offers are among the least expensive in the EU28 in every speed basket.
Price breakdown

In Romania, adding fixed telephony to the least expensive Standalone Internet offer costs 5 EUR in all speed baskets. This is about 43% less than the premiums EU consumers face on average: in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 74% more than in Romania. Adding TV services to the least expensive Standalone Internet offer costs up to 10.8 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 13% more expensive than on EU average, and for the >100 Mbps speed basket, 24% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 15.8 EUR, depending on the speed basket. This is about 12% less than the premiums EU consumers face on average: in the EU28, adding both fixed telephony and TV services costs on average about 17.9 EUR, i.e. up to 13% more than in Romania.

Very high speed premium

In Romania, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps is 1 EUR, in respect of TV Double Play offers. For TV Double Play, this is 91% less expensive than on EU average, where consumers pay 11.5 EUR to upgrade to an offer providing more than 100 Mbps. For Standalone Internet, Telephony Double Play and Triple Play, the least expensive offer in the 30 - 100 Mbps speed baskets already provides more than 100 Mbps, which is equivalent to no premium being charged.

ISP competition

The market for inexpensive fixed internet services in Romania appears strongly concentrated with the least expensive offers in the hands of one provider. RCS & RDS has 10 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Romania. Telekom Romania Communications (Romtelecom) is the provider of the remainder (2) of the least expensive offers. There is a moderate spread of prices among the offers of the largest providers in Romania, where none of the highest prices are more than twice as high as the least expensive offer. Of Orange Romania, Nextgen Communications and UPC Romania, none has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

Notes

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. Historical data may have been slightly modified from previous published data to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
Recent development of broadband prices

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in Sweden. For Triple Play in the two lower speed baskets (12-100 Mbps), prices rose by 35%. In contrast, for Standalone Internet in the two lower speed baskets (12-100 Mbps), prices fell very strongly (by 41%). While prices are well below the European average for Single Play offers, all other bundles are above. This is the case especially for Triple Play bundles with speeds between 12 Mbps and 100 Mbps, positioning Sweden among the relatively expensive countries.
ISP competition

The market for inexpensive fixed internet services in Sweden appears moderately strongly concentrated with half of the least expensive offers in the hands of one provider. Telia Company AB has 6 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Sweden. Com Hem and Bahnhof together provide the remainder of the least expensive offers (3 each). There is a moderate spread of prices among the offers of the largest providers in Sweden, where one or two of the highest prices are more than twice as high as the least expensive offer. Of Telcom Sverige (Bredbandbolaget/Digicell) and Bredband & Telefon AB neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.
ISPs in sample
Telekom Slovenije
Telemach
A1 Slovenija
T-2

Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Slovenia. For TV Double Play in the >100 Mbps speed basket, prices fell by 19%. In contrast, for Telephony Double Play and Triple Play in the >100 Mbps speed basket, prices rose somewhat (by 5%). Apart from Double Play TV with >100 Mbps, all bundles in every speed basket are above the European average, positioning Slovenia among the relatively expensive countries.
The market for inexpensive fixed internet services in Slovenia appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. A1 Slovenija has 7 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Slovenia. Telemach and T-2 together provide the remainder of the least expensive offers (1 and 4 respectively). There is a noticeable spread of prices among the offers of the largest providers in Slovenia, where none of the highest prices are more than twice as high as the least expensive offer. Telekom Slovenije provides none of the least expensive offers in Slovenia.

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Bundle Premium
In Slovenia, adding fixed telephony to the least expensive Standalone Internet offer costs up to 23.1 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 84% less expensive than on EU average, but for the >100 Mbps speed basket, 166% more expensive. On average across the EU, consumers pay a premium of about 8.4 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 5.1 EUR, depending on the speed basket. This is about 56% less than the premiums EU consumers face on average: in the EU28, adding TV services costs on average about 9.3 EUR, i.e. up to 129% more expensive. For Standalone Internet offers in the >100 Mbps speed basket already include TV services, whereas on EU average, adding TV services costs up to 9.3 EUR. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 23.1 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 48% less expensive than on EU average, but for the >100 Mbps speed basket, 32% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

Very high speed premium
In Slovenia, consumers pay a premium, depending on the service bundle concerned, of between 1.6 and 5.5 EUR for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps. For Standalone Internet and TV Double Play, this is up to 187% more expensive than on EU average, and for Triple Play, 33% more expensive. On average across the EU, consumers pay about 2.1 EUR to upgrade to an offer providing 30 - 100 Mbps. For Telephony Double Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 3.1 and 28.7 EUR. For Telephony Double Play and Triple Play, this is up to 143% more expensive than on EU average, but for Standalone Internet and TV Double Play, between 40 and 73% less expensive. Averaging across the EU, consumers pay about 11.8 EUR to upgrade to an offer providing more than 100 Mbps.
Broadband prices in 2018 fell somewhat compared to the previous year, seen across speed baskets and service bundles in Slovakia. For TV Double Play in the 12-30 Mbps speed basket, prices fell by 29%. In contrast, for Standalone Internet in the 30-100 Mbps speed basket, prices rose noticeably (by 19%). Prices for all bundles in every speed basket are below the European average, positioning Slovakia in the upper third of the table. Bundles in the >100 Mbps basket are among the least expensive in the EU28.
Price breakdown
The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium
In Slovakia, adding fixed telephony to the least expensive Standalone Internet offer costs up to 9.5 EUR, depending on the speed basket. For the 30-100 Mbps and >100 Mbps speed baskets, this is up to 67% less expensive than on EU average, but for the 12-30 Mbps speed basket, 13% more expensive. On average across the EU, consumers pay a premium of about 8.7 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 4.3 EUR, depending on the speed basket. This is between 51 and 92% less than the premiums EU consumers face on average; in the EU28, adding TV services costs on average about 9.3 EUR, i.e. up to 1229% more than in Slovakia. The least expensive Standalone Internet offers in the >100 Mbps speed basket already include TV services, whereas on EU average, adding TV services costs up to 9.3 EUR. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 9.5 EUR, depending on the speed basket. This is between 47 (12-30 Mbps) and 83% (>100 Mbps) less than the premiums EU consumers face on average; in the EU28, adding both fixed telephony and TV services costs on average about 17.9 EUR, i.e. up to 503% more than in Slovakia.

Very high speed premium
In Slovakia, consumers pay a premium, depending on the service bundle concerned, of between 2.3 and 5.9 EUR for a broadband offer of 30 - 100 Mbps compared to one of 12 - 30 Mbps. For TV Double Play, this is 293% more expensive than on EU average, and for Standalone Internet, 10% more expensive. Averaging across the EU, consumers pay 1.5 EUR to upgrade to an offer providing 30 - 100 Mbps. For Telephony Double Play and Triple Play, the least expensive offer in the 12 - 30 Mbps speed baskets already provides more than 30 Mbps, which is equivalent to no premium being charged. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps is 4.3 EUR, in respect of Standalone Internet offers. For Standalone Internet, this is 63% less expensive than on EU average, where consumers pay 11.5 EUR to upgrade to an offer providing more than 100 Mbps. For Telephony Double Play, TV Double Play and Triple Play, the least expensive offer in the 30 - 100 Mbps speed baskets already provides more than 100 Mbps, which is equivalent to no premium being charged.

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Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.
ISPs in sample
- BT
- Sky
- Virgin Media
- EE
- Talk Talk

**Recent development of broadband prices**

Broadband prices in 2018 rose somewhat compared to the previous year, seen across speed baskets and service bundles in the UK. For TV Double Play in the 12-30 Mbps speed basket, prices rose by 37%. In contrast, for Telephony Double Play in the >100 Mbps speed basket, prices fell strongly (by 37%). Apart from Single Play and Double Play Phone offers in the >100 Mbps basket, all bundles in every speed basket are above the European average, positioning the UK among the relatively expensive countries.
Price breakdown
The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

**Bundle Premium**
In the UK, adding fixed telephony to the least expensive Standalone Internet offer costs 8.1 EUR in all speed baskets. For the 12-30 Mbps and >100 Mbps speed baskets, this is up to 7% less expensive than on EU average, but for the 30-100 Mbps speed basket, 3% more expensive. On average across the EU, consumers pay a premium of about 8.7 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs up to 23.6 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 27% less expensive than on EU average, but for the >100 Mbps speed basket, 171% more expensive. On average across the EU, consumers pay a premium of about 9.3 EUR to add TV services. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 32.2 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 17% less expensive than on EU average, but for the >100 Mbps speed basket, 84% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

**Very high speed premium**
In the UK, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 16.7 and 17.3 EUR. For TV Double Play and Triple Play, this is about 52% more expensive than on EU average, where consumers pay up to 11.8 EUR to upgrade to an offer providing more than 100 Mbps. For Standalone Internet and Telephony Double Play, the least expensive offer in the 30 - 100 Mbps speed baskets already provides more than 100 Mbps, which is equivalent to no premium being charged.

**Notes**
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Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data to ensure comparability.
Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2018 data.

ISP competition
The market for inexpensive fixed internet services in the UK appears strongly concentrated with most of the least expensive offers in the hands of one provider: TalkTalk has 10 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in the UK. Virgin Media is the provider of the remainder (2) of the least expensive offers. There is a moderate spread of prices among the offers of the largest providers in the UK, where one or two of the highest prices are more than twice as high as the least expensive offer. Of BT, Sky and EE, none has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.
Broadband prices in 2018 fell strongly compared to the previous year, seen across speed baskets and service bundles in Iceland. For Telephony Double Play in the >100 Mbps speed basket, prices fell by 63%. In contrast, for Standalone Internet in the >100 Mbps speed basket, prices rose very strongly (by 67%). While prices for all but one bundles with download speeds of 12-100 Mbps are below the European average, offers with speeds of >100 Mbps are up to 17% above, which would position Iceland among the relatively inexpensive countries.
Price breakdown

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

Bundle Premium

In Iceland, adding fixed telephony to the least expensive Standalone Internet offer costs up to 13.2 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 39% less expensive than on EU average, but for the >100 Mbps speed basket, 52% more expensive. On average across the EU, consumers pay a premium of about 8.4 EUR to add fixed telephony. Adding TV services to the least expensive Standalone Internet offer costs 10.6 EUR in the >100 Mbps speed basket. This is somewhat more expensive than on EU average: for consumers in the EU, adding TV services costs on average 8.7 EUR, i.e., 18% less than in Iceland. The least expensive Standalone Internet offers in the 12-30 Mbps and 30-100 Mbps speed baskets already include TV services, whereas on EU average, adding TV services costs up to 9.3 EUR. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 23.8 EUR, depending on the speed basket. For the 12-30 Mbps and 30-100 Mbps speed baskets, this is up to 72% less expensive than on EU average, but for the >100 Mbps speed basket, 36% more expensive. On average across the EU, consumers pay a premium of about 17.9 EUR to add both fixed telephony and TV services.

Very high speed premium

In Iceland, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid to move from an offer providing 30 – 100 Mbps to one providing more than 100 Mbps varies by service bundle between 15.7 and 34.3 EUR. For TV Double Play and Triple Play, this is up to 201% more expensive than on EU average, and for Standalone Internet and Telephony Double Play, between 37 and 102% more expensive. Averaging across the EU, consumers pay about 11.5 EUR to upgrade to an offer providing more than 100 Mbps.

ISP competition

The market for inexpensive fixed internet services in Iceland appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Siminn has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Iceland. Vodafone is the provider of the remainder (4) of the least expensive offers. There is a small spread of prices among the offers of the largest providers in Iceland, where none of the highest prices are more than twice as high as the least expensive offer. 365 provides none of the least expensive offers in Iceland.

Notes

ISP marked with an ‘i’ are incumbents in the respective country.

Recent trends in fixed broadband prices are based on the least expensive offer in EUR/PPP; October 2015/2016/2017/2018 data. - Historical data may have been slightly modified from previous published data due to normalisation process to ensure comparability.

Take-up data source: Electronic communications market indicators collected by Commission services, through National Regulatory Authorities, for the Communications Committee (COCOM), July 2017 data.
Recent Development of Broadband Prices

Broadband prices in 2018 rose strongly compared to the previous year, seen across speed baskets and service bundles in Norway. For Telephony Double Play in the 12-30 Mbps speed basket, prices rose by 70%. In contrast, for Standalone Internet in the >100 Mbps speed basket, prices fell somewhat (by 8%). Prices for all bundles in every speed basket are substantially higher than the EU28 average.

Statistical Data

ISPs in sample

Telenor
Lyse Fiber (Altibox)
Viken Fibernet (Altibox)
NexGen Tel
Get

Norway Overview

Prices in Norway compared with EU average*

- 12-30 Mbps
- 30-100 Mbps
- >100 Mbps

Take-up of broadband speeds - Norway

- 144 Mbps
- 2 Mbps
- 30 Mbps
- 50 Mbps
- 300 Mbps
- 100 Mbps

Norway - Single Play

Norway - Double Play Phone

Norway - Double Play TV

Norway - Triple Play
The market for inexpensive fixed internet services in Norway appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Get has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Norway. Lyse Fiber and Broadnet together provide the remainder (1 and 3 respectively). There is a small spread of prices among the offers of the largest providers in Norway, where none of the highest prices are more than twice as high as the least expensive offer. Of Telkom Norway and NextGenTel, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

The bundle premiums reported here set out from the least expensive offer for Standalone Internet in the country, comparing this with an offer which additionally includes fixed telephony, TV services or both. The offer compared is not necessarily from the same provider but is, for the extended service bundle, the least expensive offer in the country. NGA (speed) premiums are similarly based on the additional monthly payment a consumer would face when moving from a particular service bundle and speed basket to the least expensive offer providing the same service bundle in the next higher speed basket. A comparison of the least expensive offers of a single ISP for different types of bundles (within the same speed basket) and for different speed baskets (for the same bundle) provides the Bundle- and NGA premiums. Assuming that a customer would also change his/her current ISP to upgrade his/her speed range, the least expensive offers in the respective speed baskets and bundles are compared with the EU average.

In Norway, adding fixed telephony to the least expensive Standalone Internet offer costs up to 23.6 EUR, depending on the speed basket. This is between 126 (>100 Mbps) and 199% (30-100 Mbps) more than the premiums EU consumers face on average: in the EU28, adding fixed telephony costs on average about 8.7 EUR, i.e. up to 67% less than in Norway. Adding TV services to the least expensive Standalone Internet offer costs up to 41.7 EUR, depending on the speed basket. This is between 347 (12-30 Mbps) and 379% (>100 Mbps) more than the premiums EU consumers face on average: in the EU28, adding TV services costs on average about 9.3 EUR, i.e. up to 79% less than in Norway. Finally, adding both fixed telephony and TV services to the least expensive Standalone Internet offer costs up to 55.1 EUR, depending on the speed basket. This is between 174 (12-30 Mbps) and 215% (>100 Mbps) more than the premiums EU consumers face on average: in the EU28, adding both fixed telephony and TV services costs on average about 17.9 EUR, i.e. up to 68% less than in Norway.

In Norway, the least expensive offer in the slowest speed basket already provides more than 30 Mbps across all bundles of services. The premium to be paid to move from an offer providing 30 - 100 Mbps to one providing more than 100 Mbps varies by service bundle between 7.7 and 17.7 EUR. For Standalone Internet, TV Double Play and Triple Play, this is up to 55% more expensive than on EU average, but for Telephony Double Play, 35% less expensive. Averaging across the EU, consumers pay about 11.5 EUR to upgrade to an offer providing more than 100 Mbps.

ISP competition
The market for inexpensive fixed internet services in Norway appears moderately strongly concentrated with more than half of the least expensive offers in the hands of one provider. Get has 8 of the 12 least expensive offers across all broadband categories (speed baskets and service bundles) in Norway. Lyse Fiber and Broadnet together provide the remainder of the least expensive offers (1 and 3 respectively). There is a small spread of prices among the offers of the largest providers in Norway, where none of the highest prices are more than twice as high as the least expensive offer. Of Telkom Norway and NextGenTel, neither has any of the least expensive offers on the market for the service bundles and speed baskets reported on here.

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