

# Hungary

	Hungary				EU
	DESI 2017	DESI 2018	DESI 2019		DESI 2019
	value	value	value	rank	value
<b>1a1 Fixed broadband coverage</b>	<b>95%</b>	<b>95%</b>	<b>94%</b>	<b>21</b>	<b>97%</b>
% households	2016	2017	2018		2018
<b>1a2 Fixed broadband take-up</b>	<b>72%</b>	<b>78%</b>	<b>77%</b>	<b>11</b>	<b>77%</b>
% households	2016	2017	2018		2018
<b>1b1 4G coverage</b>	<b>92%</b>	<b>91%</b>	<b>96%</b>	<b>14</b>	<b>94%</b>
% households (average of operators)	2016	2017	2018		2018
<b>1b2 Mobile broadband take-up</b>	<b>43</b>	<b>49</b>	<b>59</b>	<b>28</b>	<b>96</b>
Subscriptions per 100 people	2016	2017	2018		2018
<b>1b3 5G readiness</b>	<b>NA</b>	<b>NA</b>	<b>8%</b>	<b>12</b>	<b>14%</b>
Assigned spectrum as a % of total harmonised 5G spectrum			2018		2018
<b>1c1 Fast broadband (NGA) coverage</b>	<b>81%</b>	<b>83%</b>	<b>87%</b>	<b>15</b>	<b>83%</b>
% households	2016	2017	2018		2018
<b>1c2 Fast broadband take-up</b>	<b>40%</b>	<b>49%</b>	<b>58%</b>	<b>6</b>	<b>41%</b>
% households	2016	2017	2018		2018
<b>1d1 Ultrafast broadband coverage</b>	<b>NA</b>	<b>76%</b>	<b>82%</b>	<b>10</b>	<b>60%</b>
% households		2017	2018		2018
<b>1d2 Ultrafast broadband take-up</b>	<b>22%</b>	<b>30%</b>	<b>40%</b>	<b>4</b>	<b>20%</b>
% households	2016	2017	2018		2017
<b>1e1 Broadband price index</b>	<b>82</b>	<b>85</b>	<b>87</b>	<b>11</b>	<b>87</b>
Score (0 to 100)	2016	2017	2018		2017

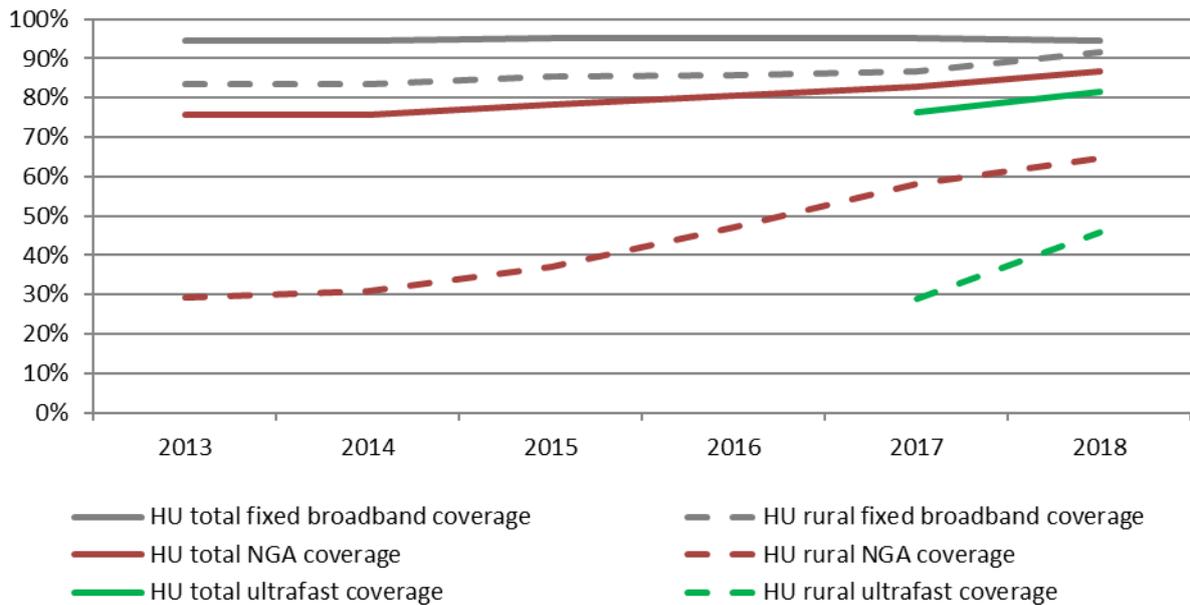
## 1. Progress towards a gigabit society

Hungary inched above the EU average for connectivity, and ranks 14th after a sustained relative improvement over the last few years. Although fixed broadband coverage was static at around 94 % of households, fast broadband coverage increased to 87 %. In addition, Hungary continues to score well on ultrafast connectivity, mainly as a result of its widespread cable networks, which cover 82 % of households (60 % in the EU).

The development of digital infrastructure is one of the pillars of Hungary's 2014-2020 national information communication strategy. This strategy was updated at the end of 2015 with the adoption of the digital success programme and the launch of the Superfast Internet Programme (SIP). The vast majority of projects under the SIP deployed FTTH technology, enabling speeds in line with the gigabit society targets. The project intends to cover all Hungarian households – almost 410,000 households are financed from EU Structural Funds while 382,000 households fully from private investments–, with networks supplying at least 30 Mbps broadband internet service by 2023. The project deployment is reflected in the increase of rural FTTP coverage from 4 % in 2015 to 7 % in 2017 and 16 % in 2018. In 2018 from the initially foreseen ambitious coverage of 350,000 households 142,497 was realised. This is reflected in the increase of rural FTTP coverage from 4 % in 2015, 7 % in 2017 to 16 % in 2018.

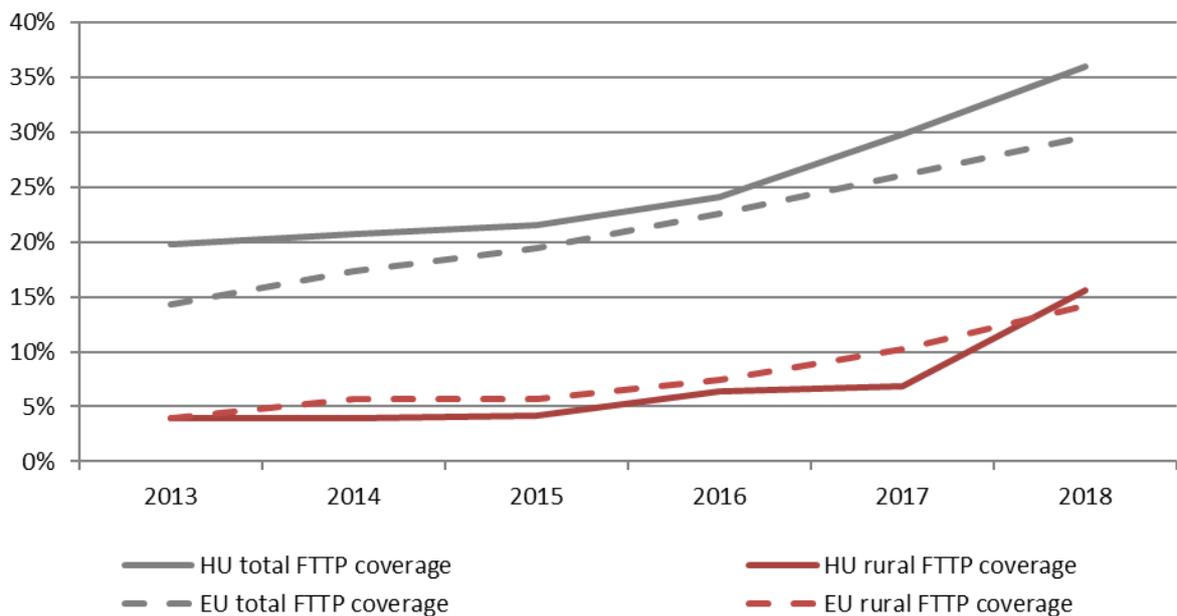
The SIP aimed to cover the entire country with NGA networks of at least 30 Mbps by the end of 2018. It gives preference to future-proof FTTH solutions and most of the participating undertakings are deploying this technology. The programme started in 2016 with a mapping exercise to identify areas in which telecom operators are expected to make the full investment on their own. For areas that are not economically viable, a €250 million State aid scheme has been developed to ensure broadband rollout. The programme is co-funded by the European Structural Funds and by the Hungarian State, except for Budapest and its suburban area, for which only national resources will be used.

**Fixed, NGA and ultrafast coverage, total and rural at Member State level (% of households), 2013-2018**



Source: Commission services, *Broadband coverage in Europe Study*, commissioned to IHS and Point Topic. 2013-2014 data as of end of December; 2015-2018 data as of end of June. Ultrafast coverage metrics are available for 2017 and 2018.

**Fibre-to-the-premises (FTTP) coverage, total and rural at Member State level (% of households), 2013-2018**



Source: Commission services, *Broadband coverage in Europe Study*, commissioned to IHS and Point Topic. 2013-2014 data as of end of December; 2015-2018 data as of end of June.

The main difficulties with respect to the deployment of high-speed networks have to do with lack of geographical information on existing infrastructure and lack of human resources in the deployment. The harmonisation of the applicable regulation for different utility constructions is another issue given the extensive use of electricity pole lines for broadband deployment.

Moreover, Hungary has put in place a new digital education strategy with high requirements as regards connectivity for schools, as well as a number of eGovernment services, such as ePrescription or eID, which are expected to drive demand for high-speed networks.

In Hungary, the penetration of public and private Wi-Fi hotspots is quite high. The WiFi4EU programme is very popular among the municipalities, with 600 having applied for funding. Several municipalities provide free Wi-Fi access in their areas, while in cities and large towns the majority of hotels and catering establishments also provide free or customer Wi-Fi access. Fixed-line operators have also expanded their services to Wi-Fi access. The digital welfare programme, launched by the State at the end of 2015, aims to establish a centrally managed national network of free Wi-Fi hotspots accessible in every settlement, primarily (but not exclusively) to promote the dissemination and use of e-administration services.

The 5G Coalition (5GC), initiated by the digital success programme, was formed with the aim of making Hungary a major European centre of 5G developments and of taking a leading role in the region in testing 5G-based applications. Based on its proposals, the 5G strategy will be adopted in 2019 by the Hungarian Government. A multi-band award process is being prepared for 2019 for the 5G pioneer bands. Hungary's national regulatory authority, the NMHH, organised an RSPG peer review workshop to that end in December 2018. The NMHH announced the tendering process for nationwide digital broadcasting service<sup>1</sup> in line with the National Roadmap. The public consultation on mobile/fixed communications networks (MFCN)<sup>2</sup> showed that for the moment there is no market demand for the 24.25-27.5 GHz band for 5G service because the providers have intensive microwave usage in these bands.

The NMHH has started preparations to implement the European Electronic Communications Code (EECC), even before its publication in the Official Journal. The regulator organised a stakeholder forum on 26 November 2018 to inform interested parties about the new Directive and to initiate a debate on the future legislation. Hungary has started working on the transposing legislation.

## **2. Market developments**

### **Competitive environment**

Digi, one of the largest cable service providers, and provider of audio-visual content through the previous acquisition of ITV, bought Invitel, the second largest fixed incumbent operator. The merger was cleared by the Hungarian competition authority, GVH, in May 2018, after Digi undertook two main commitments: (i) the divestment by 30 November of overlapping activities in 15 and a half settlements, in which the merger would reduce the number of players from 3 to 2; and (ii) the termination of audio-visual content distribution contracts with competing local cable networks in 25 out of the 89 settlements where both ITV and Invitel were present. However, it appears that Digi and Invitel were both present in other settlements not covered by the divestment obligation, and that in its comments to the draft decision clearing the merger Digi failed to inform the GVH that there were more than 25 settlements where both ITV and Invitel were present.

The local competitors challenged the clearance decision before its adoption on the grounds that they had not been consulted to ensure that they would maintain the access they had to the audio-visual content. Given the strong position of Digi in the audio-visual content market, the local providers argued that an obligation to provide wholesale access on a non-discriminatory basis would have been

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<sup>1</sup> [http://english.nmhh.hu/article/202741/Palyazat\\_orszagos\\_foldfelszini\\_digitalis\\_televiziomusorszoro\\_halozatok\\_uzemeltetesi\\_jogosultsaganak\\_megszerzesere\\_a\\_PALYAZATI\\_DOKUMENTACIO](http://english.nmhh.hu/article/202741/Palyazat_orszagos_foldfelszini_digitalis_televiziomusorszoro_halozatok_uzemeltetesi_jogosultsaganak_megszerzesere_a_PALYAZATI_DOKUMENTACIO)

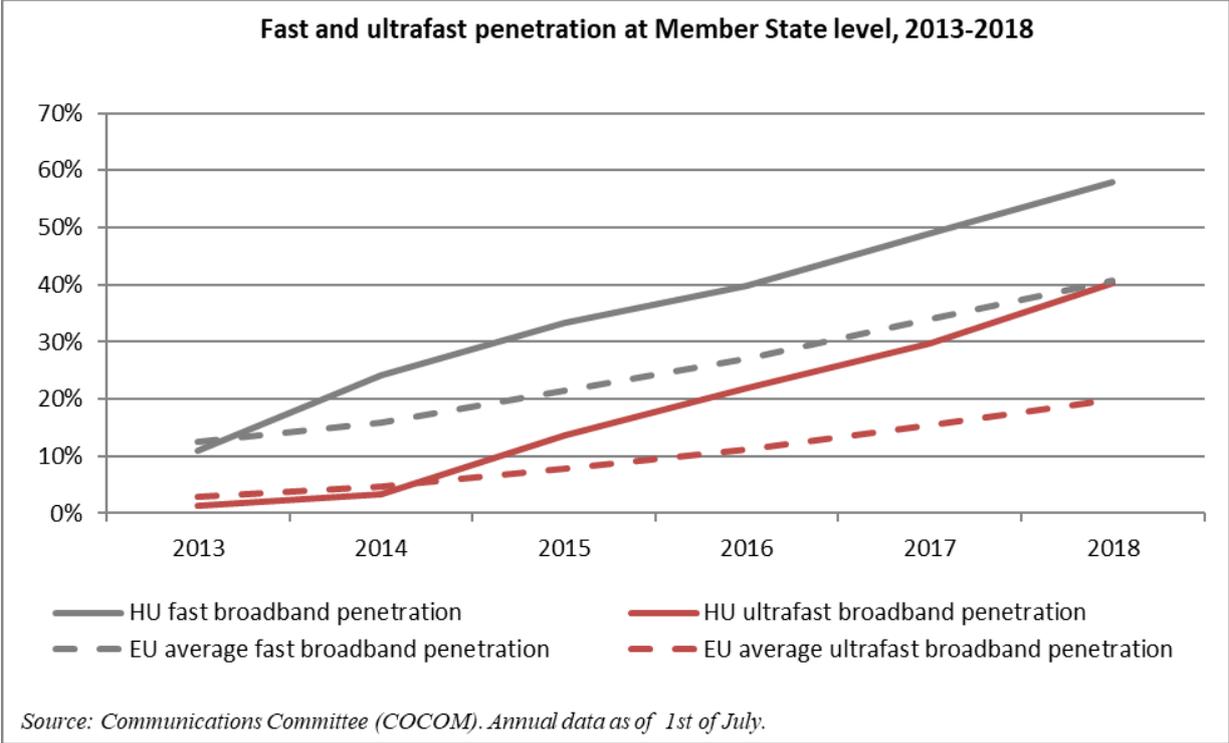
<sup>2</sup> [http://english.nmhh.hu/article/190953/Public\\_hearing\\_on\\_plans\\_regarding\\_the\\_frequency\\_bands\\_available\\_for\\_the\\_provision\\_of\\_wireless\\_broadband\\_services\\_and\\_the\\_future\\_use\\_of\\_the\\_VHF\\_III\\_band](http://english.nmhh.hu/article/190953/Public_hearing_on_plans_regarding_the_frequency_bands_available_for_the_provision_of_wireless_broadband_services_and_the_future_use_of_the_VHF_III_band)

more appropriate to allow them to compete with Digi. In November 2018, the GVH imposed on Digi a €280,000 fine for misleading the authority by remaining silent on its wrong calculation of the number of overlapping areas. In the meantime, implementation of the commitment to cease the content distribution contracts has been suspended.

Other acquisitions taking place in 2018 affected only smaller providers. The number of fixed service providers slightly dropped over the past year — going from 395 registered ISPs at the end of 2017 to 389 on 31 October 2018). The figures for registered fixed telephony operators are 168 and 165 respectively. The figures means that there are signs of consolidation, but for the moment, they have not changed the market shares of the main providers, given that the overlap between Digi and Invitel was very limited and the merger was cleared following appropriate divestment conditions.

Vodafone notified the Commission of its plans to acquire certain Liberty Global assets (including UPC Hungary). On 11 December, the Commission opened an in-depth investigation into the proposed acquisition by Vodafone of Liberty Global's business in Czechia, Germany, Hungary and Romania. If the acquisition is cleared, it could influence the competition dynamics in Hungary for fixed-mobile converged bundled offers. In July 2017 4-play services had a penetration of only 2 % of the households (EU average 11 %), against 28 % for triple-play (EU average 25 %).

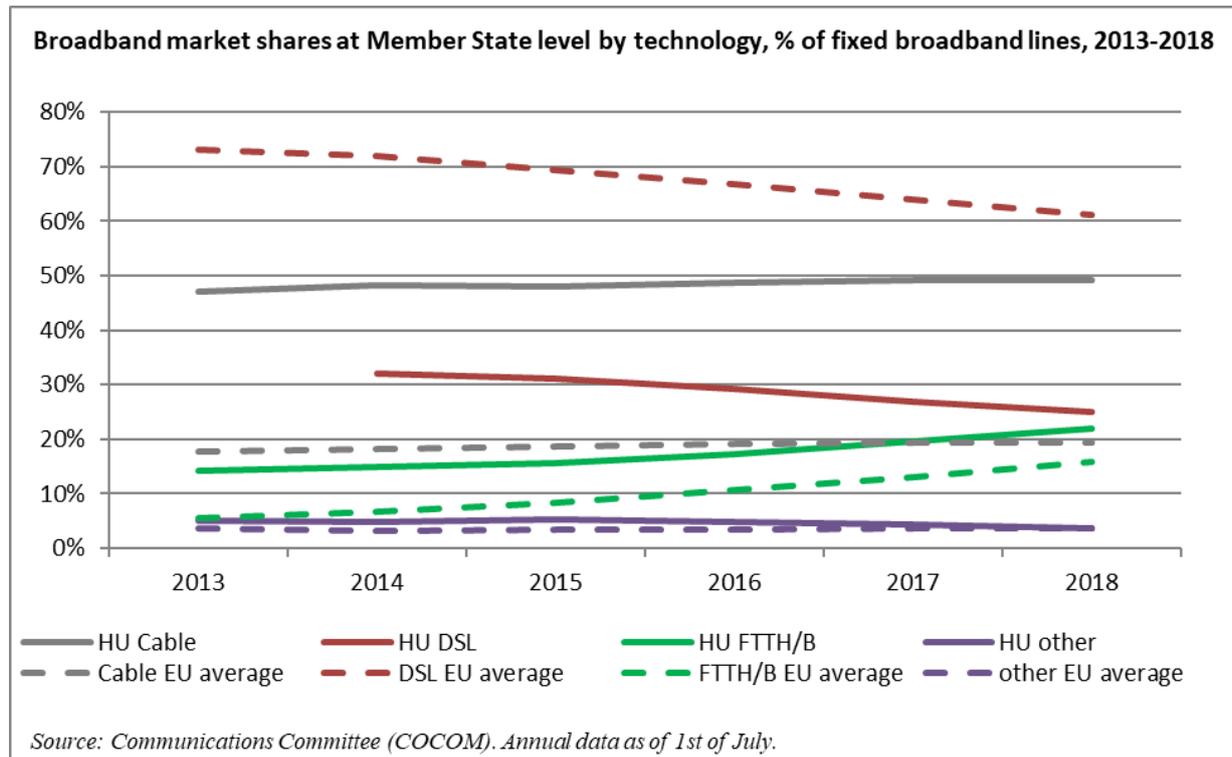
**2.1. Fixed markets**



While fixed broadband take-up was static (at 77 %), equal with the EU average, the quality of the connection significantly improved. The share of fast broadband subscriptions in all fixed broadband subscriptions rose from 11 % in 2013 (EU average 12.6 %) to 57.9 % in 2018, outscoring the EU average of 40.3 %. Ultrafast broadband penetration also grew faster than the EU average, from 1.4 % in 2013 (EU 2.9 %) to an impressive 40.3 % in 2018 (EU 19.9 %).

Cable modem subscriptions still continue to dominate, with 49.2 % of all broadband subscriptions, but their growth is very slow year on year since 2013. DSL follows with 25 % but is on a more pronounced downward trend, while fibre to the home/building (FTTH/B) with 22.1 % has made

significant progress in 5 years from 14.2 % in 2013. The trends in Hungary broadly follow the EU trends. The reason behind the steady growth of DOCSIS 3.0 technology is that the upgrade of the existing cable modem networks required less investment per end-point. In the same time, Magyar Telekom and Invitel plan to deploy vectoring in the near future. UPC (significant market power in area 29) is rolling out an FTTH (radio frequency over glass - RFOG) network throughout the whole territory, gradually phasing out the former xDSL technology. There is very strong platform-based competition, which is best illustrated by the fact that two of the three local incumbent telephony operators belong to cable operators.

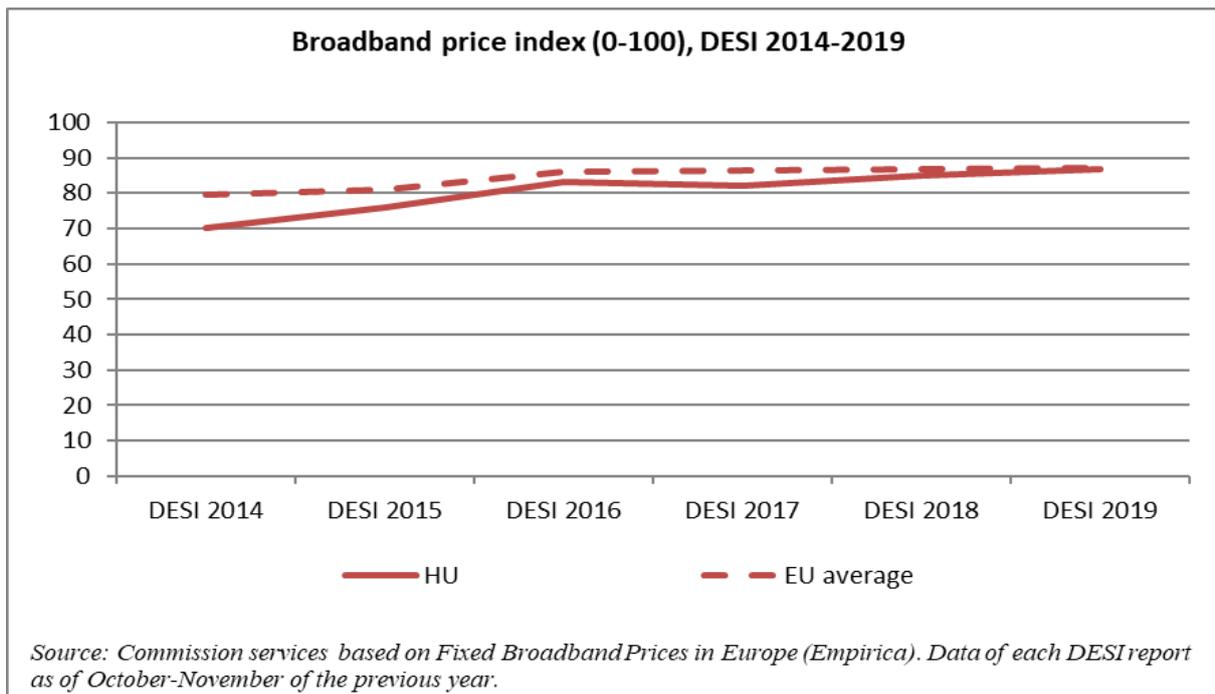


According to the data of the regulator, in the market for fixed broadband services, on 31 August 2018, the market shares based on the number of access points were 35.6 % for Magyar Telekom, 24.7 % for the DIGI group (former DIGI 16.3 % and Invitel 8.8 %) and 21.9 % for UPC (22.1 %), while small operators accounted for 17.8 %. In the business markets, given the slower adaptation of new technologies, the three incumbents have higher market shares than in the residential market.

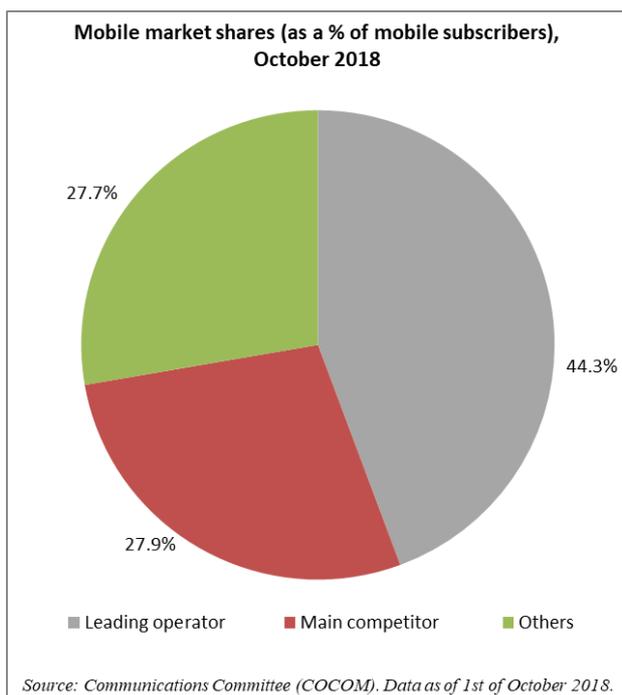
The broadband price index for Hungary is very close to the EU average<sup>3</sup>.

In Hungary, TV is not always bundled with other services. According to data from 2017, 53 % of the households subscribe to pay TV services as part of a bundle. Practically all households have a (pay or free-to-air) TV service, and 9 out of 10 have a pay TV service, while only two thirds have fixed-line internet. Moreover, 25 % of subscribers for pay TV and internet, and 32 % of subscribers for pay TV and fixed phone, are clients of two different operators.

<sup>3</sup> The fixed broadband price index weighs the cheapest retail offers from: standalone, double play (BB + TV, BB + fixed telephony) and triple play (BB+TV+fixed telephony) and three speeds categories - 12-30 Mbps, 30-100 Mbps and +100 Mbps. This indicator presents values from 0 to 100 (which should not be read as prices) and the higher the values, the better the country performs in terms of affordability of prices relative to purchasing power.



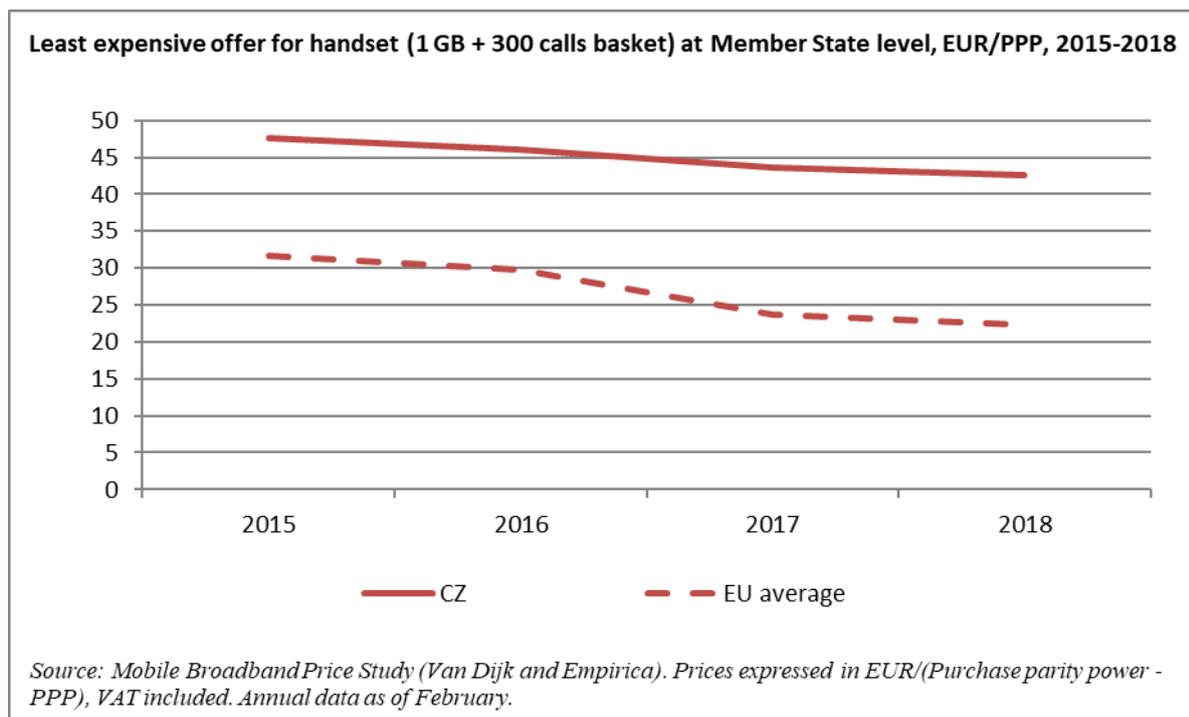
## 2.2. Mobile markets



share of 27.7 %.

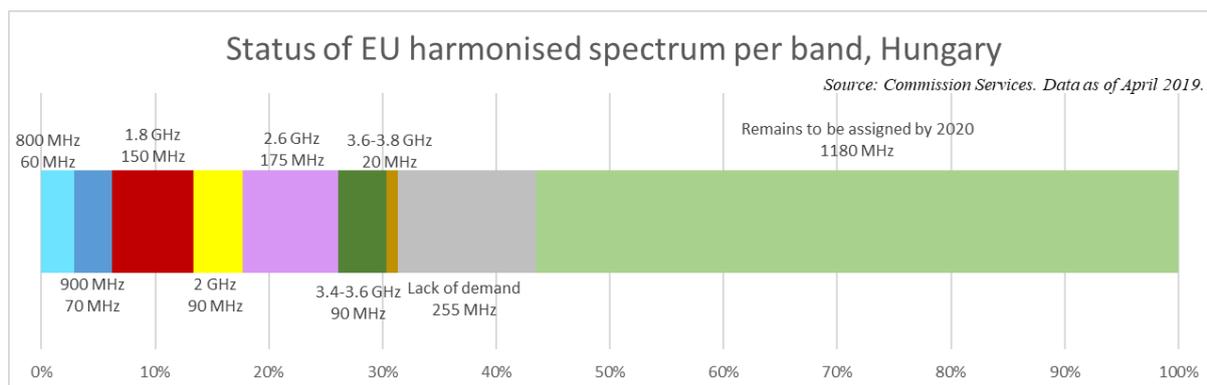
4G coverage in Hungary stands at 96 %, above the EU average (94 %). However, despite a significant improvement, mobile broadband take-up is still the lowest in the EU (59 subscriptions per 100 people compared with 96 in the EU). This may be because prices for mobile phone users are persistently among the highest in Europe. Despite the drop in mobile broadband prices for handset offers, from €61.80 to €47.40, these are more than double the EU average of €22.30. According to the NMHH in Hungary almost 40 % of the overall sales in the residential market are concluded on the basis of negotiated prices (“fleet offers”).

The leading mobile operator in Hungary has a market share of 44.3 %, while its main competitor follows with 27.9 %. The third operator shares with the MVNOs a market



### 3. Regulatory developments

#### 3.1. Spectrum



In Hungary, 31 % of the spectrum harmonised at EU level for wireless broadband<sup>4</sup> has been assigned<sup>5</sup>. This percentage is mainly due to the lack of an assignment procedure for 700 MHz and 1500 MHz, and partially for the 3400-3800 MHz and 26 GHz bands.

There was no new licence granted for wireless broadband in harmonised bands in 2018. There were two requests for the renewal of licences in the 26 GHz band, but after negotiations only one of the assignees accepted the renewal on the NMHH's conditions. Furthermore, the NMHH concluded the process of extending the current licences for 2100 MHz.

The NMHH is preparing a multi-band award process for the 700 MHz, 2100 MHz, 2600 MHz and 3400-3800 MHz bands. The tender procedure is scheduled to take place by September 2019. In

<sup>4</sup> This includes the 5G pioneer bands but not the extension of 1.5 GHz so the total is 2090 MHz.

<sup>5</sup> The 5G spectrum readiness indicator is based on the amount of spectrum already assigned and available for use for 5G by 2020 within the '5G pioneer bands' in each EU Member State. For the 3.4-3.8 band this means that only licences aligned with the technical conditions annexed to Commission Decision (EU) 2019/235 are considered 5G-ready. However, the percentage of harmonised spectrum takes into account all assignments in all harmonised bands for electronic communications services (including 5G pioneer bands), even if this does not meet the conditions of the 5G readiness indicator.

February 2019, the NMHH launched a public consultation on the draft decree<sup>6</sup> on frequency allocation. The decree entered into force in 30 March 2019.

The 700 MHz band will be available for wireless broadband services after 6 September 2020 when the administrative contract between Antenna Hungária Zrt. and NMHH on operating five digital television broadcasting multiplexes will expire. Under Hungarian law, the rights of use of frequency for the operation of a national-wide DTT network should be assigned through a tender procedure. The National Roadmap<sup>7</sup> specifies that in order to ensure uninterrupted broadcast service, the tender will have to be carried out sufficiently in advance (at least 1 year before the current contract expires, i.e. by 5 September 2019) for the winning bidder to prepare for the provision of the service. The tendering procedure, excluding the 700 MHz band, was launched on 10 April<sup>8</sup>.

### 3.2. Regulated access

In 2018, the NMHH managed to catch up on its delay to conduct the analysis of relevant markets which had prompted the Commission to send a letter of formal notice in 2017. In August, the NMHH notified the last outstanding analysis of the market for wholesale high-quality access provided at a fixed location (Market 4 of the 2014 Recommendation on relevant markets<sup>9</sup>).

In its draft measure, NMHH significantly redefined the scope of the relevant market. The defined market, besides analogue and TDM leased lines, also included Ethernet leased lines, but excluded both the terminating segments of leased lines used to provide mobile backhaul and the leased lines provided by law by operators MVM NET and NISZ to the government and to the owner of the electricity grid<sup>10</sup>. Further, unlike in its previous market review, NMHH considered that the relevant wholesale market should not be divided according to bandwidths. NMHH proposed to designate MT as the operator with significant market power (SMP) and to impose on it the full set of remedies.

On 17 September 2018, the Commission expressed serious doubts as to the compatibility with EU law of NMHH's draft measure concerning the designation of an operator with SMP and concerning the imposition of remedies on Magyar Telekom.

Regarding the SMP designation, the Commission noted that large parts of the relevant market, on which NMHH designated Magyar Telekom as having SMP, did not meet the three criteria on the occasion of the previous market review. The NMHH did not carry out a three-criteria assessment and did not sufficiently explain the changes in market circumstances that led it to reach a different conclusion. The Commission observed that the evidence presented by the NMHH with regard to the SMP assessment was inconclusive. However, BEREC considered that the Commission's serious doubts about the SMP assessment were not justified. The Commission lifted its reservations as regards the designation of the SMP operator.

As for remedies, the Commission considered that the price control mechanism, as proposed for

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<sup>6</sup>[http://nmhh.hu/cikk/201237/Rendelettervezet\\_az\\_egyes\\_frekvenciagazdalkodasi\\_targyu\\_NMHH\\_rendeletek\\_modositasarol](http://nmhh.hu/cikk/201237/Rendelettervezet_az_egyes_frekvenciagazdalkodasi_targyu_NMHH_rendeletek_modositasarol)

<sup>7</sup>[http://english.nmhh.hu/article/189920/National\\_Roadmap\\_for\\_the\\_utilisation\\_of\\_the\\_VHF\\_III\\_174230\\_MHz\\_and\\_the\\_UHF\\_470790\\_MHz\\_frequency\\_bands](http://english.nmhh.hu/article/189920/National_Roadmap_for_the_utilisation_of_the_VHF_III_174230_MHz_and_the_UHF_470790_MHz_frequency_bands)

<sup>8</sup>[http://english.nmhh.hu/article/202743/Announcement\\_concerning\\_the\\_acquisition\\_of\\_the\\_operating\\_licences\\_of\\_national\\_terrestrial\\_digital\\_television\\_broadcasting\\_networks](http://english.nmhh.hu/article/202743/Announcement_concerning_the_acquisition_of_the_operating_licences_of_national_terrestrial_digital_television_broadcasting_networks)

<sup>9</sup> Commission Recommendation 2014/710/EU of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services Text with EEA relevance, OJ L 295, 11.10.2014, p. 79-84.

<sup>10</sup> The two operators are obliged by law to provide leased lines services to the above-mentioned customers, which in turn can only purchase leased lines services from the two operators. Therefore, this exclusive right effectively grants MVM NET and NISZ a legal monopoly in this part of the market.

wholesale high quality services, led to the under-recovery of the costs of those services, and was therefore not in accordance with Article 8(2) of the Framework Directive and Article 13(1) and (2) of the Access Directive. The Commission considered that its serious doubts were sufficiently addressed through the discussions with the NMHH and BEREC during the Phase II investigation, and by the NMHH's pledges on how it would address the under-recovery of Magyar Telekom's joint and common costs<sup>11</sup> in its final measure<sup>12</sup>. The Commission therefore, withdrew its serious doubts regarding the recovery of Magyar Telekom's joint and common costs<sup>13</sup>.

The Commission also had serious doubts that the level of weighted average cost of capital (WACC) as applied by the NMHH would reflect the currently prevailing competitive conditions, taking into account the risk incurred by the investing undertakings. In its opinion, BEREC shared the Commission's serious doubts on the WACC calculation. Since the NMHH maintained its notified draft measure at the end of the three-month period following the Commission's notification of its serious doubts in accordance with Article 7a(1) of the Framework Directive, the Commission considered that the reservations expressed in its serious doubts letter regarding the NMHH's approach to calculating the WACC remained valid and made a recommendation: the NMHH should amend or withdraw the remedies relating to price regulation of Magyar Telekom's leased lines in Hungary. This would bring its WACC calculations in line with the policy objectives set out in Article 8(2)(a) and 8(5)(d) of the Framework Directive, and therefore comply with Article 13(1) and (2) of the Access Directive<sup>14</sup>. Furthermore, the NMHH should avoid overestimating the cost of equity, in particular by ensuring that the size premium mark-up is not included in the WACC calculation. On 21 December 2018 the NMHH released its WACC calculation with the view to comply with the recommendation of the Commission.

Fixed termination rates (FTRs) are fully symmetrical in Hungary for historical reasons linked to the existence of a significant number of providers. In March 2018, the NMHH notified the Commission of its draft analysis of the market for wholesale call termination on individual public telephone networks provided at a fixed location (Market 1 of the 2014 Recommendation on relevant markets). The NMHH concluded that each of the 144 fixed network operators has SMP on its own market, and proposed to impose the standard regulatory remedies. Based on its bottom-up long-run incremental cost (BU-LRIC) model for cost estimates for the forward looking period, the regulator proposed to reduce the regulated maximum wholesale termination rate from approximately 0.13 euro cent/min to approximately 0.08 euro cent/min (EU average 0.21 euro cent/min<sup>15</sup>). The Commission did not make any comments<sup>16</sup>.

In February 2018, the NMHH also provided notification of its draft decision to deregulate the market for wholesale call origination on the public telephone network provided at a fixed location (Market 2 of the 2007 Recommendation on relevant markets<sup>17</sup>). After conducting the three-criteria test, the

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<sup>11</sup> BEREC concluded in its opinion (Case HU/2018/2107) that the doubts of the Commission regarding the non-recovery of costs of passive infrastructure were the result of a misunderstanding and was thus not justified. To follow BEREC's advice, NMHH made an effort to clarify its interpretation of direct costs in the final decision .

<sup>12</sup> The final measure was issued on 27<sup>th</sup> of February, 2019.

<sup>13</sup> Commission case HU/2018/2107, C(2018) 8650. The NMHH committed to clarify in its final measure that MT will be able to recoup the costs of passive infrastructure and that they would be included in the regulated rates. The NMHH also agreed to clarify in its final measure that MT will be able to recover a fair share of relevant joint and common costs through the wholesale charges. Finally, the NMHH proposed to apply a mark-up on the regulated rates to account for a proportion of joint common costs.

<sup>14</sup> Commission case HU/2018/2107, C(2018) 8500.

<sup>15</sup> BoR (18) 218, Berec report on Termination rates at European level, July 2018

<sup>16</sup> Commission case HU/2018/2057, C(2018) 1587.

<sup>17</sup> Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European

NMHH found that no operator holds a SMP position anymore and proposed to withdraw regulation in the market. The Commission had no comments<sup>18</sup>.

Directive 2014/61/EU (the Broadband Cost Reduction Directive or ‘BCCRD’) has been transposed in national legislation, designating the NMHH as the dispute resolution body and Lechner Nonprofit Kft. as the single information point. Shared use of infrastructure cross-sector is quite significant in Hungary, as approximately two thirds of the new broadband investment uses existing electricity network poles for one or even more ECS networks. However, in many settlements, local building regulations discourage installation of new cables above ground, and electricity utility companies often ask excessively high prices for infrastructure sharing, so when new ducts are built for ECS<sup>19</sup> networks, empty pipes are also placed underground to account for potential future demand. Mobile service providers also increasingly share the use of masts.

Since the transposition of the Directive, the NMHH resolved four access disputes, two between electronic communications network and/or services (ECNS) providers and two with electricity distribution operators. The disputes between ECNS providers concerned two cases of not responding to a request for access to masts; the disputes were finally settled between the parties. The other two cases concern disputes with network operators providing electricity services. One dispute was closed because the electricity network operator did not own the referred physical infrastructure. The other ended with a binding decision, by which NMHH granted the applicant the right to use the electricity network infrastructure (according to the offer). This decision was challenged in court, with proceedings ongoing.

#### **4. End-user matters**

In the first two quarters of 2018, the NMHH received 139 complaints from end-users. Most of the complaints relate to billing, but these are often indicative of other problems with contracts. In general, end-users often complain about insufficient information when contracts are concluded or amended, and also about late and formalistic answers by service providers to complaints. 27 % of complaints related to internet access services, 41 % to mobile services and 18 % to broadcasting services.

According to the 2018 Consumer Markets Scoreboard<sup>20</sup>, the market performance indicator for the provision of internet access services in Hungary was 90.5, (13.7 above the EU average), and 89.9 for mobile telephone services (12.8 above the EU average). Both services are above the Hungarian average for all services markets (88.7).

##### **a. Net neutrality**

In 2018, the NMHH collected information relating to net neutrality via an annual survey targeting end-users. According to the results of the survey, 14 % of end-users subscribed to zero-rated plans of mobile ISPs; in 2017, 58 % of fixed internet access service (IAS) end-users experienced some problems with their IAS. The most common problem was connection failure, i.e. when it is not possible to access the internet at all. Slow internet speeds were also a common problem, with the number of customers satisfied with their internet speeds unchanged on previous years: 75 % of fixed IAS end-users and 66 % of mobile IAS end-users declared that their ISP more or less provided the offered speed. Consumer awareness of net neutrality increased by 22 % compared to the previous reporting period. Based on these findings, the NMHH announced measures to improve awareness e.g.

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Parliament and of the Council on a common regulatory framework for electronic communications networks and services (notified under document number C(2007) 5406) (Text with EEA relevance), OJ L 344, 28.12.2007, p. 65-69.

<sup>18</sup> Commission Case HU/2018/2058, C(2018) 1594.

<sup>19</sup> Electronic communication services.

<sup>20</sup> 2018 Consumer Market Scoreboard, published on 12 October 2018; [https://ec.europa.eu/info/publications/consumer-markets-scoreboard\\_en](https://ec.europa.eu/info/publications/consumer-markets-scoreboard_en)

via social media. In its annual net-neutrality report, the NMHH reconfirmed its finding from last year that the average speed of some IASs is often below the advertised speed during peak times.

Following an appeal launched by Telenor against the NMHH decision to cease offers which allowed end-users to continue having full access to zero-rated applications while all other content was throttled once the applicable data-cap was reached, the competent court, Fővárosi Törvényszék, decided to stay the proceedings and submit a preliminary ruling request to the Court of Justice of the European Union. The court is asking whether such practice would infringe Article 3(2) of Regulation (EU) 2015/2120, and whether an assessment of the impact of the practice on the market is required to establish whether and to what extent the measures applied limit the choice of end-users.

#### **b. Roaming**

The NMHH found 4 (four) cases of non-compliance with the roam-like-at-home (RLAH) rules. All of the cases involved optional data bundles offered by Magyar Telekom, the additional data volume was only available for domestic consumption but not for roaming. The NMHH formally requested the operator to bring its offers into compliance with the Regulation (EU) 2015/2120. There was no impact of RLAH on domestic prices. Hungarian end-users consumed 1.5 times more roaming minutes (calls made) in Q4-2017 (RLAH) than in Q4-2016 (before RLAH). The same increase was noted between Q1-2017 and Q1-2018. As regards data, end-users consumed 4.9 times more roaming data in Q4-2017 than in Q4-2016. Between Q1-2017 and Q1-2018, consumption increased 5.1 times.

#### **c. Emergency communications — 112**

In 2018, the Commission continued to look into the functioning of emergency communications and the 112 number in Hungary, with particular regard to equivalent access to emergency services for end-users with disabilities. As a result of the Commission's investigation in December 2018 the 112 SOS mobile application went live in Hungary, ensuring an appropriate means of communication for end-users with disabilities through two-way interactive communication and user location functions.

Hungary is part of the HELP 112 II project financed by the Commission, which aims to deploy the advanced mobile location (AML) handset-derived location solution by July 2020.

#### **d. Universal service**

In 2018, the NMHH designated four service providers to provide elements of the universal service (connection to a public electronic communications network, operation of public telephone stations, access to directory enquiry service) in different numbering areas of the country, effective from 1 January 2019. Of the four service providers appointed in 2018, only one had not been designated in the previous decisions taken in 2014. The respective decisions were challenged in court by one of the designated service providers, and the cases are still ongoing. The national directory enquiry service was awarded to a single provider, and the contract between the NMHH and this service provider to provide national enquiry service entered into force already in August 2018.

While broadband is not included in the current scope of universal service, internet connection is included at data rates that are sufficient to permit functional internet access, taking into account prevailing technologies used by the majority of subscribers and technological feasibility. The government introduced special discounted tariffs for new users of broadband to facilitate take-up. This is available to the new subscriber for a limited period only and results in savings of at least 15 % compared to the cheapest market-based offers. Concerning the speed of access, the services packages should provide unlimited data, a nominal download speed of 4 megabits/second and a guaranteed download speed of 1 megabits/second. In the case of mobile internet access, the expectation for the basic package is to include second-fourth generation (2G-4G) and future 5G services and a monthly

data allowance of at least 500 megabytes. Additionally, due to the earlier changes in tax law, the VAT rate for broadband internet access services is 5 % in order to increase its affordability. The rate decreased from 27 % to 18 % in 2017, then to 5 % in 2018.

## **5. Institutional issues**

In 2018, most appeals were filed against decisions related to consumer protection. There was one case where the court upheld the NMHH's decision to penalise a provider for, among other things not ensuring termination to certain numbers and appropriate number portability. The decision was appealed in second instance. In another case NMHH's approved the settlement concerning the secondary trading of frequency use rights between two mobile market operators. A third mobile operator appealed to the NMHH against the administrative approval of the settlement (the appeal was filed in 2017, but the decision on second instance was passed in 2018). The appellant third party challenged the final administrative decision before the court. The claim was rejected at the first judicial instance.

Both regulatory decisions adopted for markets 3a and 3b were brought before court by a major provider. The appeals were rejected.

An electricity network operator filed an appeal against the NMHH's decision which awarded the requested rights of use to a service provider. The court annulled the NMHH's decision, the judgment was challenged by the NMHH at the supreme court of Hungary. The case is pending.

## **6. Conclusion**

While significant advancements were achieved in fixed broadband coverage through the superfast internet programme, mobile network coverage and take-up are not improving at the required pace. The multi-band auction planned for this year will play a key role for the deployment of 5G in Hungary.