

Cyprus

Market developments

1. Competitive environment

The incumbent operator CYTA dominates both the fixed and mobile market but faces increasing competition that has led to eroding market shares.

CYTA expressed its intention to launch a new retail high-speed broadband service in early 2018, utilising FTTH (GPON, currently in pilot phase) and copper (using vectoring/ bonding). At the same time CYTA has expanded its coverage of 4.5G.

The mobile operator MTN has progressively entered the fixed (telephony & broadband) market and offers also pay TV services.

Both CYTA and MTN have made substantial progress deploying their LTE networks and in fact have already fulfilled or are close to fulfilling all relevant coverage obligations.

The mobile operator Primetel has gradually gained market share and has exercised some competitive pressure, which resulted in reduced retail prices. Its offering covers the entire range of services (fixed, mobile, internet and pay TV).

The cable TV provider Cablenet covers most major cities (Nicosia, Limasol, Larnaca) with its own network (Docsis 3.0). It also offers services to selected customers in other cities, utilising CYTA's wholesale access products. Cablenet has also launched mobile telephony services (MVNO agreement with CYTA).

No major changes to the market structure occurred in 2017, with only a small operator (offering fixed & mobile services as MVNO) ceasing operations.

All major market players focus on bundling to leverage a competitive advantage; in fact they increasingly seek to offer converged (fixed and mobile) services. They all perceive content as an important competitive driver and therefore integrate a pay TV offering in their packages. Most of them have sought to acquire rights, particularly related to football games. However, football related rights come with substantial costs that cannot always be recovered by the corresponding revenues. The Commission for the Protection of Competition (CPC) investigates potential infringements of competition law relating to the retail pricing of pay TV services. Pirate services, particularly covering sports events, have disrupted the operators' plans and are a major issue of concern.

Operators in general did not pursue co-investment strategies, despite their tendencies to expand their footprints either geographically or across markets. However, there are occasional joint projects (e.g. CYTA and Cablenet co-investing to install a network connecting Limassol and Pafos; Primetel and MTN making a Radio Access Network (RAN) sharing agreement on MTN's network).

Based on the observed trends and plans of the main operators, it is expected that Cyprus will meet the national targets regarding coverage of high-speed broadband networks. On the other hand, the take-up of high-speed broadband services is still lagging behind. Demand side measures are therefore envisaged in the national Broadband plan, to increase digital awareness and encourage broadband adoption.

a. Fixed Markets

Fixed broadband market shares	CY-2016	CY-2017	EU-2017
Incumbent market share in fixed broadband	60.4%	57.6%	40.3%
Technology market shares			
DSL	79.6%	79.6%	64.2%
Cable	20.3%	20.4%	19.4%
FTTH/B	0.03%	-	12.9%
Other	0.1%	0.05%	3.6%

Source: Communications Committee. Data as of July 2016 and July 2017.

The data reflect stability in the technology market shares and coverage, which remain higher than the EU average in all categories. The incumbent's market share in broadband continues reducing at approximately three percentiles, i.e. at the same pace as in past years. The cable TV network has emerged as an important alternative infrastructure, retaining a stable 20% market share in fixed broadband, slightly above the EU average.

New entrants' DSL subscriptions by type of access (VDSL excluded)	CY-2016	CY-2017	EU-2017
Own network	-	-	0.5%
Full LLU	54.4%	47.4%	72.8%
Shared Access	0.04%	0.02%	4.1%
Bitstream	45.5%	52.5%	14.7%
Resale	-	-	7.8%

Source: Communications Committee. Data as of July 2016 and July 2017.

Current new entrants' trend seems to favour service based competition, moving away from LLU and towards bitstream, increasing the share of the latter by seven percentile points.

Coverage	CY-2016	CY-2017	EU-2017
Fixed broadband coverage (total)	> 99.5%	> 99.5%	97.4%
Fixed broadband coverage (rural)	> 99.5%	> 99.5%	92.4%
Fixed NGA coverage (total)	87.5%	87.5%	80.1%
Fixed NGA coverage (rural)	60.0%	60.0%	46.9%
Ultrafast coverage (total)	no data	85.1%	57.8%
4G coverage (average of operators)	64.2%	77.3%	90.8%

Source: Broadband Coverage Study (IHS and Point Topic). Data as of October 2016 and October 2017.

While mobile 4G coverage lags behind the EU average, fixed broadband coverage (including NGA and ultrafast) are substantially higher. However, take up of high-speed services remains low, with only 11.5% of broadband access lines subscribing to services at speeds between 30 Mbps and 100 Mbps, and only 0.3% to services at speeds above 100 Mbps¹.

¹ Source: Communications Committee, data as of July 2017.

Fixed broadband prices	CY-2016	CY-2017	EU-2017
Fixed broadband price index [values between 0-100]	62	65	87

Source: Commission Services based on Fixed Broadband Prices in Europe (Empirica). Digital Economy and Society Index 2018.

Fixed broadband prices² in Cyprus are in general higher than the EU average for high-speed baskets (above 10 Mbps) but close to and often lower than the EU average for low speed baskets (below 10 Mbps). This is fully reflected in the distribution of broadband subscriptions by speed, as Cyprus is the only EU Member State, where the majority of broadband lines (58%) are at speeds below 10Mbps, and this percentage remains practically stable since last year.

At The current lack of attractive retail offerings for ultra-high speed services (at and above 100 Mbps) can explain the very low uptake³, despite their relatively high coverage, which exceeds the EU average.

On the other hand, 3-play offers are more attractively positioned. For example, in the 12-30 Mbps basket the least expensive price (PPP) in Cyprus is 6.8% higher than the EU average for 3-play services but 31.8% higher for Internet + telephony and 45.4% higher for Internet only services; in the 30-100 Mbps basket the least expensive price (PPP) in Cyprus is 2.9% higher than the EU average for 3-play services but 24% higher for Internet + telephony and 31.9% higher for Internet only services. This reflects an emphasis from the part of operators to push bundles, particularly including TV services.

b. Mobile market

Mobile market	CY-2016	CY-2017	EU-2017
Market share of market leader	58.5%	54.4%	35.4%
Market share of second largest operator	34.1%	36.0%	28.5%
Number of MNOs	3	3	-
Number of MVNOs	2	1	-
Market share of MVNO (SIM cards)	0.8%	0.9%	-

Source: Communications Committee. Data as of October 2016 and October 2017.

The mobile market in Cyprus is duopolistic, with the two largest operators having a combined market share of above 90% (compared to just under 64% in the EU). Mobile operators invest in 4G coverage, which is currently estimated to 77% of households (compared to 64% a year ago) and is being expanded. Despite such progress, Cyprus is still lagging behind, as all other Member States exhibit coverage well above 90% of households.

Mobile broadband prices [EUR/PPP]	CY-2016	CY-2017	EU-2017
Least expensive offer for handset (1 GB + 300 calls basket)	€35.8	€26.4	€23.6
Least expensive offer for tablet and laptop (5 GB basket)	€43.4	€42.4	€16.7

Source: Mobile Broadband Price Study (Van Dijk and Empirica). Prices expressed in EUR/PPP, VAT included. Data as of February 2016 and February (handset) 2017 - July (tablet-laptop) 2017.

² Source: Study for fixed broadband prices in Europe 2017 (Empirica, project SMART 2016/0044) - forthcoming.

³ In 2017 only 0.2% of households subscribe to broadband services with speeds at and above 100 Mbps.

Mobile prices seem to remain a barrier to a wider uptake of mobile broadband. Increasing competition has led to a rapid reduction in prices for bundles (mobile voice & data), by more than 25% compared to 2016, and a progressive convergence towards the EU average. On the other hand prices for data only packages (for tablet and laptop) remain excessively high, more than 2.5 times the EU average. This reflects a possible lack of interest from the part of operators to promote mobile broadband only products and could be related also to the overall tendency in favour of bundles (see also section 1a on the fixed market).

Regulatory developments

2. Supporting measures for deployment and investment in high-speed networks

a. Spectrum

Overall, Cyprus has assigned 44.5% of the overall harmonised spectrum for broadband, compared to the average of 69% EU-wide.

LTE roll-out has proceeded ahead of schedule. Mobile operators had already reached the coverage target for end 2018 (50% of Cyprus territory) since mid-2016 and have reached the 2020 target (75% of the territory) since mid-2017.

During 2017 there have not been any major developments concerning spectrum assignments for wireless broadband, including the granting of any licences.

Cyprus plans to initiate, within the first semester of 2018, the procedure for authorising available (free) spectrum for WBB within the following frequency bands: 800 MHz (20 MHz), 1.5 GHz (40 MHz), 2 GHz (30 MHz) and 2.6 GHz (55 MHz). These represent 13.3% of the harmonised spectrum.

For the 700 MHz band, Cyprus is currently seeking secure frequencies below 700 MHz, in order to migrate a national DTV operator, who transmits exclusively within the 700 MHz band. For this purpose, Cyprus has processed new assignments to ITU, through the procedures described in the GE06 Plan, and has concluded the coordination procedure with all neighbouring States⁴, except Turkey, which refuses to enter into any coordination discussions with Cyprus. An EU-assistance under Article 10(2) of the Radio Spectrum Policy Programme (RSPP) has been requested on 22 August 2017. The issue has also been communicated to the ITU.

At the time of writing, there were no specific plans concerning the use of the sub-700 MHz band.

5G trials are not yet planned, as it does not appear to be a priority either for the State or for the market players; the latter focus mostly towards expanding and commercially exploiting their 4G and 4.5G networks. On the other hand, there are no technical or administrative barriers, as the first band likely to be used for 5G use would be the 3.4-3.8 GHz band, which is already free.

There are no plans in Cyprus for 2G/3G network phase-out or spectrum refarming, as 2G technology will likely continue to be utilised for M2M applications.

⁴ Greece, Israel, Palestine, Lebanon, Syria and Egypt.

b. National and EU investment in broadband

The Cyprus Broadband Plan sets targets in line with the Digital Agenda for Europe, specifically: 100% coverage at 30 Mbps by 2020; 50% take-up rate for 100 Mbps. However, it is not adjusted to the targets of the European Gigabit Society⁵ or to the 5G Action Plan⁶.

The Plan does not provide for supply side measures, having taken into account the market players' stated intention to expand their broadband networks. However, it is acknowledged that the deployment of fast and ultra-fast broadband networks in remote, rural areas is not commercially viable.

Furthermore, the relevant Action Plan 2015-17 within the framework of the Digital Strategy includes awareness campaigns, training programmes for the general population to enhance their digital skills, building of confidence in the security of online transactions, crucial reduction on broadband price, the digitalisation of the government, the digitisation of companies, and the provision of (limited) free Wi-Fi access in public buildings and all villages.

The implementation of the plan lags behind schedule and for several of the projects the money still has to be committed. Among the challenges faced in its timely execution are the court actions customarily taken during most public procurements and causing delays (e-government projects), until relevant decisions are issued. Against this background, market participants have expressed their concern on the persisting low demand for high-speed services.

c. Implementation of the Broadband Cost Reduction Directive

The Broadband Cost Reduction Directive⁷ had already been transposed since last year through the Regulation of Electronic Communications and Postal Services (Amendment) Law of 2016⁸ and several actions for its practical implementation are under way.

OCECPR has developed a Geographic Information System (GIS) portal (operational since March 2017) that serves the transparency of existing physical infrastructure. The portal provides information on infrastructure elements of electronic communications networks such as duct routes and number of ducts, location and type of manholes, and location of poles and cabinets. It also provides information on location and route of utilities infrastructures (those available in electronic form). Future plans include making it interoperable with an electronic fully automated permit granting procedure, and adding duct availability and broadband ready buildings. OCECPR has requested information on existing physical infrastructure of any network operator (location and route, type and current use, contact point) from all competent agencies (Sewage Boards, Water Supply Boards, Electricity Authority, Water Development Department and Public Works Department). So far however, no information is available, except from contact details.

⁵ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Connectivity for a Competitive Digital Single Market — Towards a European Gigabit Society (COM (2016) 587 final)

⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — 5G for Europe: An action plan (COM (2016) 588 final)

⁷ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks (OJ L 155, 23.5.2014, p. 1)

⁸ "Ο περί Ρυθμίσεως Ηλεκτρονικών Επικοινωνιών και Ταχυδρομικών Υπηρεσιών (Τροποποιητικός) Νόμος του 2016", 104(I)/2016 (14/10/2016).

In order to promote broadband ready buildings, there is consideration for the introduction of a 'broadband ready' label for buildings equipped with the appropriate, high-speed ready in-building infrastructure.

By the end of 2017 no use has yet been made of the exception to the access to passive infrastructure (Article 3(f) nor of any other exemptions foreseen in the Directive. Also, there have not been any requests for dispute resolution.

Infrastructure sharing involving other network operators is already used and in fact precedes the transposition of the Directive. One mobile operator has been using the Electricity Authority's (EA) poles.

On the other hand, mobile operators continue to report about the long time needed to obtain a permit and have expressed concerns on how the four month deadline, stipulated in the Directive and the transposing Law can be enforced in practice.

3. Regulatory function

Following the OCECPR Market Analysis Decision on Market 3a (wholesale local access)⁹, CYTA has started to develop a reference offer and prices for a VULA wholesale product. In parallel CYTA has stated its intention to launch a retail high-speed broadband service in early 2018, which will be based on FTTH (GPON) or copper with vectoring.

A pilot for the interconnection of CYTA with alternative operators was successfully concluded in mid-November 2017 (phase 1). The final plan, as to where they intend to deploy fiber network, the draft reference offer and the final wholesale prices were anticipated in December 2017¹⁰.

The market players see the introduction of VULA as a positive development but are concerned with the complete lack of information on the prices and terms of the product. Their main concern is the possibility of a very short deadline, which in their view would disallow them to properly prepare and introduce their own retail products.

In Cyprus, eight markets are still subject to SMP regulation

- All markets identified in the Commission Recommendation on relevant markets of 2014, i.e. Market 1 (Wholesale call termination on individual public telephone networks provided at a fixed location), Market 2 (Wholesale voice call termination on individual mobile networks) Market 3a (Wholesale local access provided at a fixed location), Market 3b (Wholesale central access provided at a fixed location for mass-market products), and Market 4 (Wholesale high-quality access provided at a fixed location)
- The following markets of the 2003 Recommendation: Market 14 (Wholesale trunk segments of leased lines), Market 15 (Access and call origination on public mobile

⁹ "Η περί των αποτελεσμάτων Εξέτασης Αγοράς και της Επιβολής Ρυθμιστικών Μέτρων στον Οργανισμό με Σημαντική Ισχύ στη σχετική Αγορά χονδρικής παροχής τοπικής πρόσβασης σε σταθερή θέση (Αγορά 3α), Απόφαση του 2017" 91/2017

¹⁰ Until early March 2018, CYTA communicated the relevant information and data to OCECPR. OCECPR expects to complete the evaluation in April 2018.

telephone networks) and Market 18 (Broadcasting transmission services, to deliver broadcast content to end users)

All those markets have been analysed within the last three years. New market analysis notifications are expected in 2018.

The adopted regulated fixed termination rates (FTR) cap for 2017 has been 0.1033 €cents per minute for local termination. For single and double transit termination the caps have respectively been 0.1363 and 0.2075 €cents per minute. These rates apply symmetrically to all operators. The adopted regulated mobile termination rates (MTR) cap for 2017 has been 0.99 €cents per minute for all MNOs/ MVNOs, with one exception. For Primetel, which has acquired spectrum rights in 2014, a glidepath has been imposed, allowing MTR 20% higher than the regulated cap for 2017 but reaching complete symmetry in 2018.

MTRs are currently regulated based on a benchmark approach (average of all EU countries that have applied a BULRIC model). However, for 2018 both MTRs and FTRs are expected to be revised on the basis of the results of a BULRIC model developed for OCECPR.

Following the analysis of markets 3a (wholesale local access) and 3b (wholesale central access), the Regulator has issued two decisions (April 2017) designating CYTA as an SMP in both markets and imposing regulatory remedies, including price control.

Two dispute resolution cases were reported during 2017, both following complaints by Primetel against CYTA. The first concerned alleged denial of provision of collocation at the subloop level (non-compliance with regulatory obligations in Market 3a). It resulted to the imposition of a fine (€ 000) on CYTA. The second concerned an alleged discrimination by CYTA with regard to fault repairs and timeframes in provision of services (non-compliance with obligations arising from reference offers on LLU and bitstream access). OCECPR rejected the request, on the ground of non-substantiation, and informed the applicant in detail about the information and data missing, leading to such rejection.

A new dispute resolution mechanism was established in 2017, following the transposition of the Broadband Cost Reduction Directive. However, there were not any specific cases referred to OCECPR in the framework of such new dispute resolution mechanisms.

4. Consumer matters

In 2017 the Commissioner received 174 complaints most of which were resolved through the mediation of the Commissioner. The majority concerned billing (91), contracts (30), quality of service (18), and security (13). According to the consumer association, among the main issues for consumer complaints are the quality of service, internet speed and financial penalties imposed by some (mobile) operators when switching.

a Roaming

The new roaming rules, which introduce Roam Like at Home (RLAH) and abolish retail roaming charges, are applicable in all EU Member States as of 15 June 2017¹¹. In Cyprus, this

¹¹ Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public mobile communications networks within the Union (OJ L 172, 30.6.2012, p. 10), as amended by Regulation (EU) 2015/2120 and Regulation (EU) 2017/920.

has led to a substantial increase in roaming consumption. Specifically, Cypriot subscribers consumed 1.9 times more voice services when travelling in the EU in summer 2017 compared to summer 2016. They also consumed 18.5 times more data roaming services when travelling in the EU in summer 2017 compared to summer 2015.¹² In this transition there have not been any derogation requests. No increases were observed in domestic prices before or after 15 June 2017. Also, no complaints were received during the summer period and after the new rules took effect on 15 June 2017, either by Cypriots roaming within in EU or by EU consumers roaming in Cyprus, regarding the quality of service. Finally, there have not been any cases of confirmed or potential non-compliance with the new roaming rules (since 15 June 2017).

b Net neutrality

OCECPR issued secondary legislation¹³ on net neutrality, which came into force on 3rd March 2017. The Decree is intended to support the implementation of the Net Neutrality provisions in the Regulation (EU) 2015/2120¹⁴ ("TSM Regulation") and to provide guidance on the monitoring and enforcement of compliance with the provisions of the Regulation. It takes into account the provisions of the Regulation, and the interpretation, recommendations and guidance provided in the BEREC Net Neutrality Guidelines¹⁵.

Among others, the Decree imposes an obligation on ISPs to include speed values (minimum, standard and maximum speed, as percentage of advertised or estimated maximum speed) in their contracts or in their websites. It also interprets the notion of "*significant discrepancy, continuous or regularly recurring*", so as to facilitate the implementation of the Regulation. It also sets out the rules on penalties applicable, in case of infringements of the Net Neutrality rules. Penalties may reach the amount of €170 000 and can be doubled in case of recurrence. Furthermore, OCECPR may suspend the General Authorisation of the provider who violates the Law or the European Regulation.

Further to the issuance of secondary legislation, OCECPR has made available on its web site a free tool for the evaluation of performance of Broadband Connection Services (2B2T)¹⁶ which is aligned with the BEREC Net Neutrality Guidelines. 2B2T is introduced in the provisions of OCECPR's secondary legislation as the only measurement tool approved for the performance evaluation of internet access services.

At the time of writing OCECPR was investigating three cases of potential infringement of net neutrality legislation. Two of them concern the use of zero-rating, specifically Facebook zero (a stripped-down text version of Facebook for which data charges are waived) and Akazoo (a music service offered as add-on to mobile contracts that enables subscribers to listen to unlimited ad-free music without being charged for the data traffic). The third is a case of loss

¹² Figures compare Q3/2017 with Q3/2016 retail roaming volumes according to the BEREC International Roaming Benchmark Report, April 2017-September 2017, published on 14 March 2018. For the case of data services, the comparison is with Q3/2015, due to unavailability of data for Q3/2016.

¹³ "Το Περί της Πρόσβασης στο Ανοικτό Διαδίκτυο Διάταγμα του 2017" 72/2017 (3/3/2017)

¹⁴ Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union (OJ L 310, 26.11.2015, p. 1).

¹⁵ BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality Rules BoR (16) 127

¹⁶ <http://2b2t.ocecpr.org.cy>

of service following a cyber-attack and involves potential infringements of both security legislation (obligation for taking measures to ensure the security of their network) and NN legislation.

c 112

For mobile caller location the accuracy is calculated based on the coverage and characteristics of individual cellular cells (maximum possible distance from the base-station) and it is about 30 meters from the cell ID. The average time for network based caller location identification is 20 sec. Two alternative means for access to emergency services are currently available, by fax and SMS to a long number (99510408). As part of the eCall upgrade, a 112 smartphone application was developed that allows users to send location data to the PSAP, with the use of the mobile phone's built in GPS unit. Official launch of the service is expected in 2018.

d Universal service

There were no new developments or changes to report since last year in the scope of universal service¹⁷ or the designation process. Broadband is not included and its possible inclusion within the US scope is currently not under consideration. The financing of unfair burden is shared between providers. However, the financing mechanism has not yet been activated.

5. Conclusion

Fixed broadband coverage (including NGA and ultrafast) is above EU average in Cyprus. The stated intention of CYTA to introduce services based on FTTH or vectoring and the preparation of a corresponding VULA wholesale product is an important step towards achieving the Gigabit Society objectives. Adherence to the relevant OCECPR Market Analysis Decisions can ensure that such initiative does not threaten competition.

Mobile 4G coverage lags behind the EU average. An accelerated launch of additional spectrum assignment procedures in the first semester of 2018 can help operators (particularly small ones and new entrants) further deploy wireless broadband networks, particularly for high and ultra-high speed networks. Progress is observed towards the effective implementation of the Broadband Cost Reduction Directive. Its impact in the deployment of high-speed broadband infrastructure remains to be seen, particularly relating to the time needed for issuing permits for antenna constructs.

The main challenge remains to foster the take-up of high-speed broadband, influenced by factors, such as pricing, lack of compelling content and low digital literacy. Updating the Broadband Plan as foreseen provides an important opportunity to bring it in line with the objectives of the Gigabit Society and the 5G action plan, to define focused actions, effectively utilising instruments available at European level, and to set out its efficient and closely monitored execution.

¹⁷ Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (OJ L 108, 24.4.2002, p. 51).