

Responses to Public Consultation

Fixed Markets

1 Introduction

1. Orange Fixed objects to both the methodology and the data used for the market review analysis in the TRC consultations documents. In this section we provide some general comments. Thereafter we provide our specific responses to each consultation question.
2. The responses contain confidential business information of Orange Fixed. **Confidential information that should not be disclosed is put between square brackets.** Orange Fixed objects to disclosure of confidential information in the way it was done in the consultation. TRC reports market shares of Orange Fixed in 2018 and in 2017 and it does mark them as confidential.¹ As TRC decided not to disclose market shares of other operators in its consultations, Orange Fixed is surprised that it treats Orange Fixed market share in such a discriminatory manner.

1.1 Lack of market context

3. The market review regulations should be forward-looking, i.e. they should take into account market trends and they should aim to ensure competition and good outcomes for customers in future. However, by overregulating fixed markets, TRC is undermining future competition and the future of the Jordanian digital society; the effect of overregulating fixed networks will be to hamper the healthy infrastructure competition that has developed since the last market review.² Rather than contributing to efficient provision of telecommunication and information technology services, TRC focuses on regulating obsolete services (traditional fixed telephony, TI dedicated capacity) which will hamper technological development by slowing down migration to modern services (fibre, VoIP, MI dedicated capacity).³

¹ TRC Public Consultation on Fixed Markets, pages 82 and 125.

² See Section 9.1, for evidence of infrastructure competition in the fixed market in Jordan.

³ See Section 14.1 for a discussion of the negative impact of regulation on the development of fibre and Sections 16 and 17 for a discussion of VoIP.

4. TRC did not recognise the specific features and trends in the electronic communications markets in Jordan, most notably:
 - Fixed to mobile substitution, the leading role of mobile communication for ensuring access to telecommunication, and information technology services.⁴
 - Mobile communications are more important than fixed: 1. only 1% of call volumes originate on fixed; 2. mobile phone ownership is high (while fixed penetration is low (3.33% in 2017)) and decreasing; and 3. fixed broadband subscriptions are around 4% of all broadband subscriptions (fixed and mobile).
 - The development of infrastructure competition in fixed markets.
5. TRC's focus on regulating fixed and leaving mobile unregulated may have its origin in regulation in other countries, such as in Western Europe. However, TRC has not considered the substantial differences between these countries and Jordan. Western European countries are usually characterised by high fixed penetration, and the presence of one or at most two fixed operators with a ubiquitous network. In these countries, consumers access internet primarily through their fixed broadband connection, and use mobile for voice services and to access internet outside home and where Wi-fi is not available. Appropriate regulation of fixed infrastructures is therefore important to ensure that the incumbent fixed operator does not abuse its dominant position, and consumers can access the internet access at a reasonable price.
6. In Jordan, however, the situation differs substantially. Most consumers rely on mobile rather than fixed for internet access, and there are several fixed networks with high coverage provided over FBWA, a technology which is negligible in Europe.⁵ This has important implications for the competitive situation:
 - First, to a much larger extent than its West European counterparts, the fixed incumbent in Jordan is not able to exploit its incumbency as it is constrained in its behaviour by the competitive pressure from mobile and FBWA.
 - Second, the dominant mobile operator is subject to much less competitive pressure from fixed than in Europe.
 - Third, due to the crucial role of mobile communication in ensuring connectivity in the Jordanian society, adequate regulation preventing the abuse of dominant position in mobile and ensuring sufficient investments is much more important than in Europe.

⁴ See Response to Question 1, Section 2.2 for evidence of fixed-to-mobile substitution in voice services.

⁵ Only 1.5% of all fixed subscriptions in Europe are wireless; see: <https://blog.telegeography.com/changing-faces-an-overview-of-europes-broadband-sector>.

7. All regulators should consider best regulatory practice developed in other countries and to build on established robust methods and rigorous analysis. However, country-specific factors need to be taken into account, particularly if decisions relate to different market conditions. We would note that in respect of methodology, the TRC reviews fall substantially below best international practice, as we discuss in subsequent sections.
8. TRC may have also built on current regulation in Jordan. However, previous decisions were published in 2010; the period between decisions is three times as long as is considered to be the best international practice, which recommends conducting market reviews every 2-3 years. Both the mobile and the fixed markets have changed substantially, and they are expected to continue changing in future:
 - First, the increased penetration of mobile broadband (absent in 2010) has made mobile a substitute for fixed for both voice and internet services.⁶
 - Second, the rise of voice over broadband (fixed and mobile) has decreased the importance of traditional voice services. Increasingly, voice services are an add-on to broadband rather than being the lead product as in the past.
 - Third, the leading position of the copper network on fixed has disappeared. FBWA has more subscribers than copper (41.3% vs. 39.3%), which now accounts for much less than half of fixed subscriptions. Orange Fixed's market share in fixed access fell from more than 90% in 2010 to 52% in 2018 (given the downward trend, likely less than 50% in 2019 and will fall further in future).
9. TRC did not take into account the importance of these trends for current and future competition, and to investigate how the proposed regulation will interact with the market trends. **Had it done so, TRC would have had to acknowledge that the focus on regulating fixed and lack of regulation of mobile services is inappropriate for the current market situation in Jordan.**

1.2 Incorrect information

10. The consultation contains incorrect information that is not reflective of the actual market situation, and some information is missing (see Section 19 for an overview). TRC's use of incorrect data and information has led to incorrect conclusions in the TRC consultation. For instance, TRC reports that the market share of Orange Fixed on WBA is above 70%, while in fact it was [Confidential: x] already in 2018.⁷ TRC

⁶ See response to Question 2, Section 3.1 for evidence of fixed-to-mobile substitution in broadband.

⁷ TRC Public Consultation on Fixed Markets, page 82 reports 70%. Exhibit XIII-2, marked as confidential in the consultation and provided separately to Orange Fixed, shows [Confidential: x].

also sometimes bases its conclusions on figures from 2017, while figures for 2018 are reported elsewhere in the report.

1.3 Timeframe of the analysis

11. The previous market review was conducted nine years ago. Given that best international practice is to conduct market reviews every two to three years, the Jordanian telecoms market has been subject to obsolete regulation for the past six to seven years. As a result, TRC should have considered a much longer time horizon for its prospective analysis.
12. Even if a two to three-year period was considered, TRC has not taken into account key market trends:
 - The draft decision on mobile markets contains a description of mobile market in which future developments increase mobile broadband speeds making it more comparable to fixed. However, this is not included in TRC's analysis of fixed broadband.
 - TRC did not consider the pace at which the market share of Orange Fixed in the fixed market has been decreasing, and to draw a logical conclusion that given this trend and the market share of [Confidential: x] in 2018 (down from more than 90% in 2010, the market share is likely to fall way below 50% within 2-3 years (and may have fallen below the threshold already in 2019).
 - TRC did not take into account the decline of the fixed telephony and the fact that it is becoming an add-on to the broadband connection. **It appears likely that the number of broadband subscriptions has exceeded the number of fixed telephony subscriptions.**⁸
 - TRC did not take into account that regulation of old and more and more outdated technologies (such as traditional fixed voice telephony and TI dedicated capacity) will decrease consumers' incentives to migrate and slow down technological development.

1.4 Lack of transparency

13. The draft decisions generally lack any supporting evidence and the use of sources is not transparent.
14. TRC's overall approach to market definition and competitive assessment is high level, lacks detail and generally is not substantiated with evidence. Only modest

⁸ See Response to Question 1 in Section 2.1.

data are available on market structure (shares/trends) and there is no supporting evidence on substitution trends (e.g. customer surveys). The consultation documents contain numerous statements that lack references to sources and have no supporting evidence. It is therefore not possible to assess the quality of the sources used by TRC, and whether the data contained in these sources (if any) justify the TRC conclusions.

15. The lack of evidence in this consultation is remarkable, particularly when compared to TRC's approach in the 2010 market reviews. The TRC 2009 White Paper describes the information that was used at that time. This included:
 - Quantitative data, such as: the number of subscribers at the end of each calendar year, annual traffic volumes, annual turnover, the level of churn, and retail pricing data.
 - Qualitative data, gathered through a questionnaire. This included *“the nature and extent of distribution channels, the level of marketing and advertising expenses, the extent of minimum contract periods, the degree to which contracting occurs with large business customers, and the advantages which any operator may have over another in terms of various factors such as control of essential facilities, access to capital markets, economies of scale and scope, and so forth. In addition, the questionnaires provide an opportunity to highlight commercial practices and difficulties in negotiating and concluding wholesale agreements.”*
16. TRC states that it collected data from operators and met with operators to take account of their experiences in the market. The draft decisions do not present any information on, say, for example, churn that would be relevant both for the market definition and for the competitive analysis. Moreover, and unlike in 2009, TRC did not gather qualitative information through a questionnaire. TRC notes that some operators did not provide data. TRC should have ensured that all operators responded appropriately.
17. It is further not clear how the information collected from operators in interviews has been used for the analysis.
18. The lack of transparency and thorough research is even more striking when compared to international best practice such as Ofcom market reviews:
 - First, Ofcom provides an overview of the sources of the evidence used and the documents are extensively referenced in the decisions. Ofcom also provides annexes to its statements, providing detailed descriptions of the documents used. This enables the operators to assess the evidence used and whether it supports statements by the regulator. In contrast, TRC decisions are poorly referenced and lack appropriate detail.

- Second, Ofcom (and other regulators e.g. in the Netherlands and Austria) regularly conduct additional in-depth research including consumer surveys, econometric analysis (e.g. price correlations), quantitative hypothetical monopoly tests, detailed analysis of geographical coverage, and in-depth assessments of the impact of regulation. No such analysis has been reported in the TRC draft reviews.
- Third, as can be seen from the list of documents used, Ofcom makes extensive use of, publicly available information, such as publications by the European Commission, publicly available reports, press releases, operator annual reports, operator press releases, operator price lists, national statistics and other information. The TRC decisions contain very few references to such documents, suggesting that TRC did not make use of publicly available information.

1.5 Lack of impact assessment

19. TRC has not conducted a formal impact assessment of its proposed regulatory interventions to compare the regulatory costs to benefits.

1.6 Conclusion

20. **Given the above concerns, Orange Fixed requests that the TRC puts on hold the market review consultation for further study and data investigation to avoid uncertain conclusions that could harm the telecom business, competition and future market developments.**
21. **We next provide our responses to each of the consultation questions, notwithstanding our view that the consultation should be halted.**

2 Question 1 Market definition - retail market for fixed access and call origination

22. *Question 1: Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for retail FACO services?*
23. TRC defines one retail market for fixed access and call origination services ("FACO"). Fixed access is a physical connection that enables the customer to make use of fixed voice services or broadband internet. The market comprises PSTN and ISDN access, services provided over all infrastructures (copper, fibre and fixed LTE), and services provided to residential and business customers. Calls to all types of numbers are included in the same market. The FACO market comprises managed VOIP but excludes unmanaged VOIP (OTT). Retail mobile access and call

origination are not included in the market. The geographic market is defined as national.

24. The current market definition differs from that adopted in 2010 where separate markets were defined for access, domestic calls and international calls. In the current proposal, access and call origination are included in the same market as, according to TRC, they cannot be purchased separately (while broadband internet is not necessarily bundled with fixed access).
25. TRC has not properly substantiated its product and geographical market definitions.
26. *Product markets.* Orange Fixed disagrees with defining separate markets for narrowband and broadband, and with excluding voice services from the relevant market. On page 32 of the review, TRC states:

“The TRC expects to see a continuing decline in the volume of legacy fixed voice calls, and the downward trend is clear from the analysis above. It is not the case that people no longer make voice calls, but rather that there are now various alternative ways of making a voice call. These alternatives are likely to continue to grow over the next few years. They include making voice calls over broadband (both managed and unmanaged VoIP) and using a mobile to make a voice call.” (Emphasis added.)

27. However, in its analysis of relevant markets and the competitive assessment, TRC does not take these market developments sufficiently into account. We discuss this further below in Sections 2.1 and 2.2.
28. *Geographic markets.* Orange Fixed considers that TRC has not conducted sufficient research into the possibility of defining local geographic markets. We discuss these issues in Section 2.3.

2.1 Broadband and fixed telephony should be in the same market

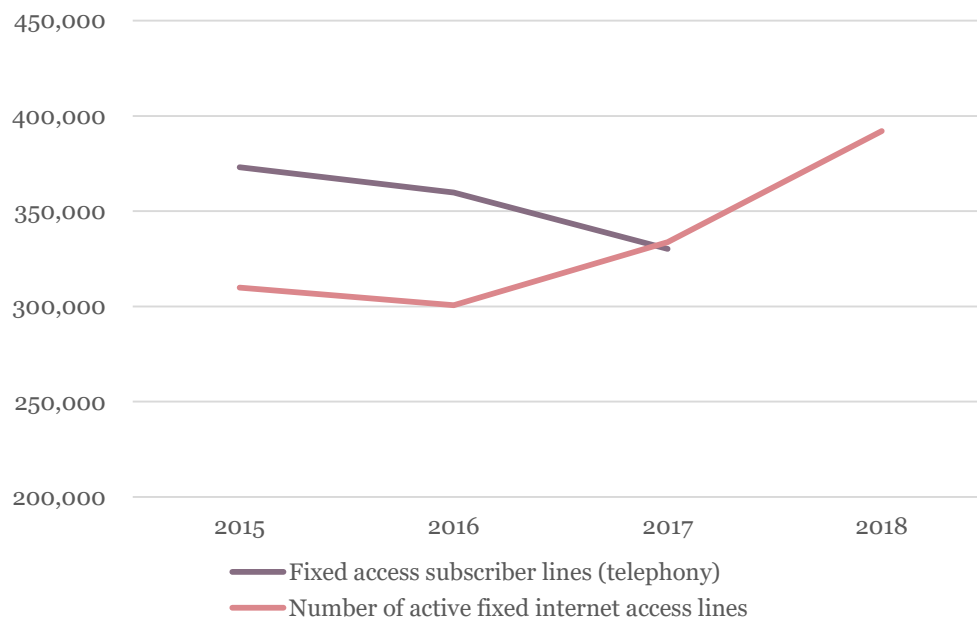
29. On page 13 of the decision, TRC states:

“The previous market reviews distinguished between fixed narrowband and fixed broadband services, and this consideration of developments in fixed services takes that as the starting point for assessing the market structure and trends. As will be set out when defining the relevant markets, the TRC is of the view that changes, particularly in technology, have made this distinction less relevant.”

30. However, this observation, while accurate, is not reflected in the market assessment, as TRC continues to define a separate market for narrowband. TRC defines a FACO market which comprises fixed connections and fixed voice

origination but excludes broadband. This is because, as TRC states, fixed access and fixed call are always sold together, while broadband is sold separately. However, this statement is not consistent with the market figures presented by TRC in its decision. As can be seen from data presented by TRC (see Figure 2-1), the number of fixed telephony subscriptions has been falling whereas the number of fixed internet lines has been increasing. By 2017 the number of internet lines slightly exceeded the number of fixed telephony subscriptions. This suggests that already in 2017 some customers subscribed to fixed access and internet, without subscribing to fixed telephony.⁹

Figure 2-1: Evolution of fixed telephony and fixed internet subscriptions



Source: TRC Public Consultation on Fixed Markets 2019, Exhibits III.1 and III.11.

31. As stated, TRC does not indicate the number of fixed telephony subscriber lines in 2018. Given historic trends, if these continue, the number of internet lines would now substantially exceed the number of fixed telephony lines.¹⁰ The data trends confirm that the primary service desired by consumers is internet, while fixed-telephony is an add-on. As fixed-telephony is provided for free, it plays no role in the customer's decision to take up a subscription. Hence, TRC should have defined one retail market for fixed services, comprising a bundle of access, broadband and narrowband.

⁹ It is not clear why TRC provides 2018 data for internet subscriptions but not telephony subscriptions.

¹⁰ TRC does not state why it has not provided the 2018 data.

32. The second reason for including broadband and narrowband in the same market is that broadband is alternative service for fixed telephony, as consumers can use broadband for voice communication. Similarly, as per the 2010 consultation, TRC preliminary conclusion is that unmanaged VoIP using OTT is not a suitable substitute for fixed calls. TRC repeats its argument from 2010 that the quality of unmanaged VoIP is lower than the quality of “traditional” fixed calls. However, this is not supported by any recent customer studies or other evidence showing that customers see this an obstacle. Unlike other regulators, TRC has not conducted any consumer research to support this (or any other) conclusion on the relevant markets.¹¹
33. Orange Fixed considers that OTT services are a suitable substitute for traditional voice telephony, which makes broadband an alternative to traditional fixed telephony. Since 2010, broadband speeds have increased hugely, as shown by TRC data, improving the quality of voice calls.¹² This is supported by the fact that OTT voice applications have been gaining ground. TRC acknowledges that OTT is a suitable alternative to fixed telephony and has played a role in the decreased demand for wholesale call origination and the decreased use of calling cards.¹³ Orange Fixed has no data on the usage of OTT services on fixed broadband. [Confidential: x]. Substitution to OTT (next to substitution to mobile) may be one of the reasons why call volumes fell faster than the number of subscriptions: between 2015 and 2017, the former fell by 27% while the latter fell by 11%.¹⁴
34. The third reason for including broadband in the same market as fixed voice services is supply-side substitution. Any provider of broadband, particularly those with their own infrastructure (the majority providers of broadband in Jordan) can use it to provide fixed telephony through managed VoIP (which TRC includes in the FACO).

¹¹ For example, Ofcom conducted a consumer survey as input to its WLA market review. The survey gathered information on the usage of broadband services (e.g. frequency, purpose), consumer preferences regarding speeds, migrations, past and planned switching, and the impact of price increases on switching etc. This information was used to conduct a SSNIP test, i.e. to assess whether consumers would switch to a different service after a price increase.
See: https://www.ofcom.org.uk/data/assets/pdf_file/0020/112466/wla-statement-slide-pack.pdf

¹² Exhibit III.15 in TRC Public Consultation on Fixed Markets 2019, shows the development of broadband speeds.

¹³ TRC Public Consultation on Fixed Markets 2019, page 131 and page 173.

¹⁴ Based on Exhibit III.1 and III.28, TRC Public Consultation on Fixed Markets 2019.

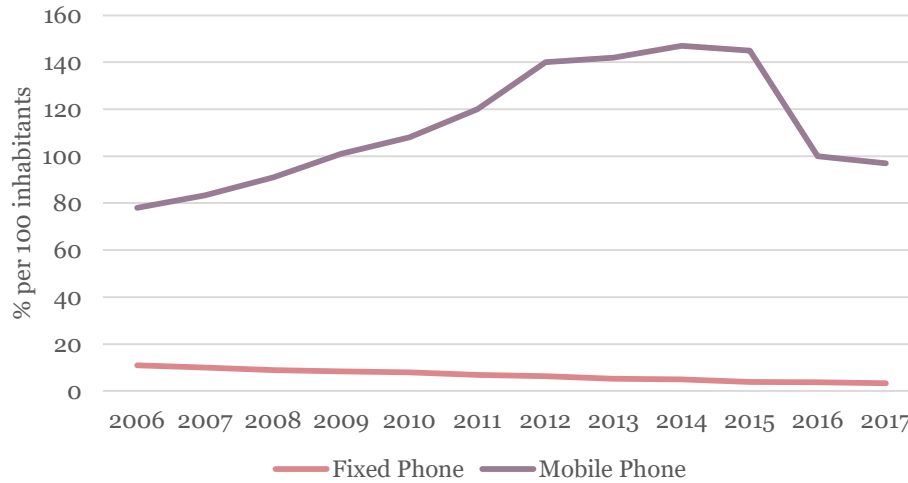
2.2 Mobile access and calls should be included in the market

35. TRC's preliminary conclusion is that mobile access and calls are not a substitute for fixed access and calls. Its main reasons are:
- Difference in use: fixed telephony is used by everyone in the household, while mobile is personal.
 - Fixed is bound to a location, while mobile can be used anywhere where there is network coverage.
36. However, TRC also states:¹⁵
- "If there was a significant price increase on fixed access, then a fixed access user may find mobile access to be a functional substitute."*
37. TRC states further that substitution is one way, i.e. while mobile can be an alternative for fixed, the opposite is not true.¹⁶ It also points to other differences between fixed and mobile:
- Considering that fixed can be used by all household members, there is a considerable difference between the price per user of mobile and fixed services; however, TRC presents no price analysis to support this statement.
 - The quality of mobile calls is more variable, as it depends on the location. In locations where a fixed connection is available and mobile coverage is poor, it is more likely that one would choose to make a fixed call.
 - Substitution from a fixed to a mobile call requires obtaining a mobile connection, which increases the cost of substitution. It is difficult to compare prices of fixed and mobile because of a different pricing structure.
 - For most users, mobile and fixed are used on a complementary basis, rather than being substitutes.
38. Orange Fixed disagrees with this conclusion and considers that mobile and fixed voice services should be included in the same market. For many years, the fixed telephony market has been in decline, and that the reason for this is the rise in subscriptions in mobile telephony (see Figure 2-2).

¹⁵ TRC Public Consultation on Fixed Markets 2019, page 46.

¹⁶ TRC Public Consultation on Fixed Markets 2019, page 35.

Figure 2-2: Evolution of fixed telephony and mobile subscriptions



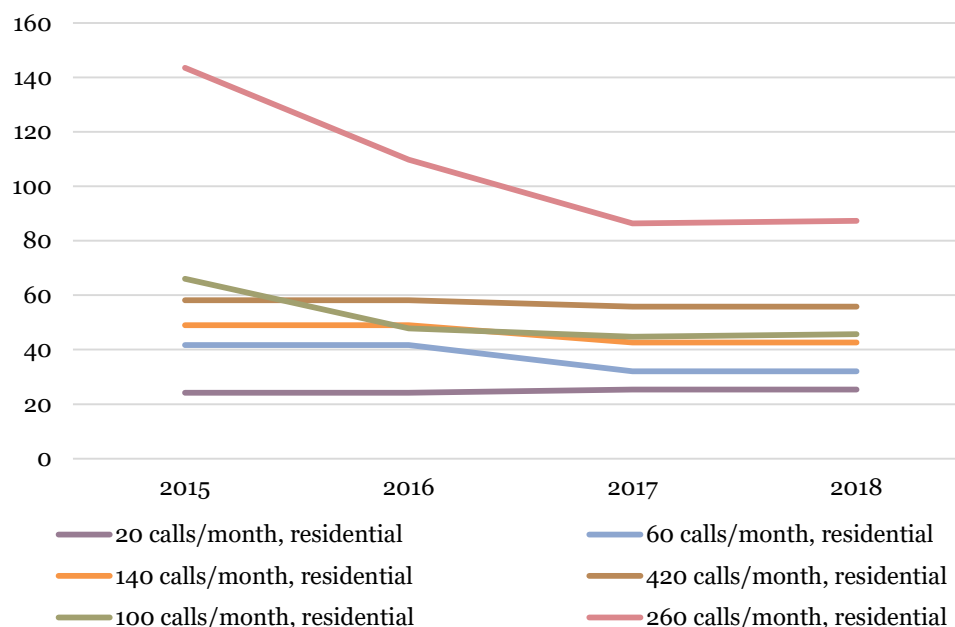
Source: Analysis of TRC data. The decrease of mobile penetration in 2016 is due to a change in the estimation methodology.

39. Competition from mobile has become more pronounced following the introduction of 4G, which increased the quality of calls and enabled consumers to access the internet without a fixed subscription. Between 2015 and 2017, fixed call volumes fell by 28%, and they now represent 1% of the total call volumes in Jordan.¹⁷ The prices of fixed telephony services have decreased since 2015. See Figure 2-3.

¹⁷

TRC Public Consultation on Fixed Markets 2019, Exhibit III.5.

Figure 2-3 Fixed telephony prices



Source: Strategy Analytics, *Telecommunications Retail Price Benchmarking for Arab countries, 2018*.

40. TRC acknowledges that mobile may be a substitute for fixed but not the other way around, and concludes that because of this, these are separate markets. However, the TRC approach to asymmetric substitution is not consistent with international best practice. According to the OECD document on defining relevant markets, there are two possible approaches to asymmetric substitution:¹⁸
 - First, the focal product should be identified, based on where the competitive problems are thought to lie; if the asymmetric substitution is from the focal product away to another product, then this other product should be included in the market.
 - Alternatively, two different markets can be defined but asymmetric substitution should be taken into account in the competitive analysis (three criteria test).
41. TRC analysis does not incorporate either of these two approaches. Instead TRC selects fixed voice services as the starting point and states that substitution between mobile and fixed voice is likely to be one way (from fixed to mobile) yet concludes

¹⁸

See: https://www.oecd.org/daf/competition/Defining_Relevant_Market_in_Telecommunications_web.pdf, page 26.

that they are not in the same market.¹⁹ **Nor does TRC take into account the competitive pressure from mobile when analysing competition in the wholesale transit and retail FACO market.**

42. Several international regulators acknowledge that competition from mobile is sufficiently strong such that there is no need to define a separate market for fixed telephony. For example:
- In 2017, the regulator in the Czech Republic considered fixed and mobile voice services (Low penetration of Fixed & High penetration of Mobile almost same as Jordan) to be in the same retail market.²⁰
 - In 2017, the regulator in Latvia considered fixed and mobile voice services (Low penetration of Fixed & High penetration of Mobile almost same as Jordan) to be in the same retail market.²¹
 - In December 2006, the FCC reviewed and approved a merger between AT&T and BellSouth – two large US fixed-line operators. The FCC noted that the rapid growth of intermodal competitors, from cable telephony, mobile wireless service providers and providers of certain VoIP services, was likely to continue to provide end-users with viable alternatives.²²
43. In conclusion, Orange Fixed considers that there is one market for voice services, whether mobile or fixed. Even if separate markets are defined, then the competitive pressure from mobile should be taken into account in the analysis of whether markets are susceptible to ex ante regulation, in the SMP analysis, and in the imposition of remedies.

2.3 Insufficient analysis of geographic markets

44. TRC defined one national market for FACO services. On the one hand, TRC acknowledged that there may be the potential for localised competition pressure, due to the roll out of fibre networks in some regions. However, it decided that this is not sufficient to define regional markets, for the following reasons:
- Fibre networks are developing, so there are no stable boundaries to regions with and without fibre networks.

¹⁹ TRC Public Consultation on Fixed Markets 2019, page 46.

²⁰ BEREC (2017), “Report on the convergence of fixed and mobile networks”, page 21.

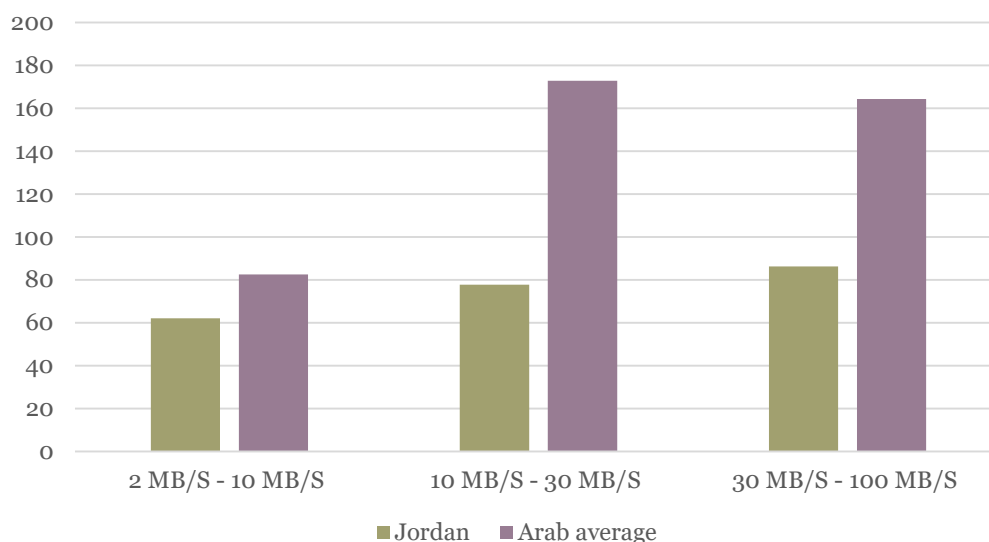
²¹ BEREC (2017), “Report on the convergence of fixed and mobile networks”, p.21.

²² OECD (2014), “Defining the Relevant Market in Telecommunications fixed and mobile networks”, page 24.

- Operators do not differentiate fixed telephony prices or offers by region.
45. Orange Fixed considers that the geographic market definition is not adequately substantiated, and that TRC should have conducted appropriate research into the possibility of the existence of local geographic markets. The White Paper states that to assess the similarity of competitive conditions across markets, the following indicators should be used:
- The number of principal operators and their development (excluding niche operators with no impact on competitive conditions).
 - The leading operators' market shares and their evolution.
 - Barriers to entry and their development (including evidence of new entry).
 - Pricing and product strategies (differences in pricing and marketing).
46. The White Paper and Competition Safeguard Instructions state that the market should be considered national unless there is evidence of different competitive conditions and a lack of a common pricing constraint. However, this statement does not excuse TRC from conducting a proper analysis of the market.
47. There are clear indications that competitive situation in various regions of Jordan differs. For example, a number of operators have rolled out their own networks in Amman , including Damamax, Umniah, Zain, Vtel , Fibertech and JEIS. In its draft market review, TRC refers to the investment in fibre in Amman on several occasions:
- *“The last few years have seen the emergence of fibre-to-the-home (FTTH) and fibre-to-the-building (FTTB) networks in Jordan, mainly focused in denser urban areas such as parts of Amman.”* (Page 33.)
 - Mobile operators are developing their own fixed broadband networks (specifically, FttH in Amman areas). (Page 34.)
 - Investment in alternative networks is strong in Amman but weaker elsewhere. (Page 100.)
48. **TRC has therefore acknowledged distinct differences in the competitive conditions in Amman and the rest of country.** TRC should have conducted further analysis of such differences. Such an investigation may have confirmed that fixed markets in Amman are characterised by stronger competition than elsewhere, and therefore it is even more disproportional to impose regulation in this region.
49. TRC argues that there is no fixed telephony price differentiation across the regions of the country. However, fixed telephony is a minor element of the telephony service; the main driver of fixed access is internet access. Jordan is among a number of countries in the Arab region with low-priced high-speed internet, as shown in

Figure 2-4. High speed internet is available only on fibre networks, and therefore low prices for such internet indicate that competition in areas where fibre networks are available, is strong.

Figure 2-4: Fixed broadband prices, Jordan and average across Arab countries



Source: Strategy Analytics, *Telecommunications Retail Price Benchmarking for Arab countries, 2018*

50. Defining local geographic markets with sufficient competition between fibre networks and not imposing regulation in such areas would be in line with best international practice. In a 2012 report for FttH Council Europe, the consultant notes that deregulating areas with sufficient network competition has a positive impact on investment.²³ In the UK, Ofcom defined three types of local geographic markets: competitive, potentially competitive and non-competitive, and applied alternative regulatory approaches:²⁴

- In competitive areas, regulation was completely removed.
- In potentially competitive areas, where investment can lead to competition, regulation was limited to low bandwidths.
- In non-competitive areas, where network competition is unlikely to emerge, regulation was maintained.

²³ DotEcon (2012), “Regulatory policy and the roll-out of fibre-to-the-home networks, A report for the FTTH Council Europe, July 2012”, Section 2.5.3.

²⁴ Ofcom, (2018), “Promoting investment and competition in fibre networks: approach to geographical markets”, 2 December 2018.

51. Other international examples of defining local markets include:
- Italy, where the regulator considered Milano as a distinctive market in markets for wholesale local access and wholesale broadband access due the presence of alternative wholesale access networks in that city.²⁵
 - In Finland, the regulator defined 150 different geographical markets based on the level of competition in each area. 18 geographic markets were deregulated, mainly covering small municipalities where (potentially state-subsidised) open access local fibre networks are available.²⁶
52. TRC sees as an obstacle to defining local geographic markets that boundaries of fibre networks are not fixed because the networks are still being rolled out. However, it is not clear why it would be an obstacle in Jordan while it is not in other countries. It should be possible to define local geographic markets that are already competitive based on the presence of fibre, as it is clear that these markets would not become less competitive in future. During the next regulatory review, as fibre roll out progresses, the competitive, deregulated geographic market could be expanded to include additional areas.

3 Question 2 Market definition - retail broadband

53. *Question 2. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for retail fixed broadband services?*
54. TRC defines a market for retail broadband fixed services, which excludes fixed access. To use broadband services, a customer needs to have such access, which TRC includes in the market for fixed voice services. TRC notes further that broadband internet is sometimes bundled with physical access and fixed telephony, and sometimes not; the market definition comprises both bundled a stand-alone broadband services.
55. The market for broadband internet comprises services provided over all fixed infrastructures (copper, fibre and fixed LTE), various download speeds, and services for business and residential users. However, it does not include mobile broadband or leased lines.

²⁵ See <https://www.cullen-international.com/product/documents/FLTEIT20190002>

²⁶ See <https://www.cullen-international.com/product/documents/CTTEEU20190087>

56. The market definition differs to that in the 2010 consultation as the defined market included internet access as well as internet services. In this consultation, access (for both voice services and broadband) has been included in the retail market for FACO.
57. Orange Fixed disagrees with the following conclusions regarding the market definition:
- Defining separate markets for broadband and fixed telephony. This is already discussed in the answer to Question 1, Section 2.1.
 - Excluding mobile broadband from the retail market. This is discussed in Section 3.1 below.
 - The geographic market definition i.e. a single national market. This is discussed in Section 3.2 below.

3.1 Mobile broadband should be included in the market

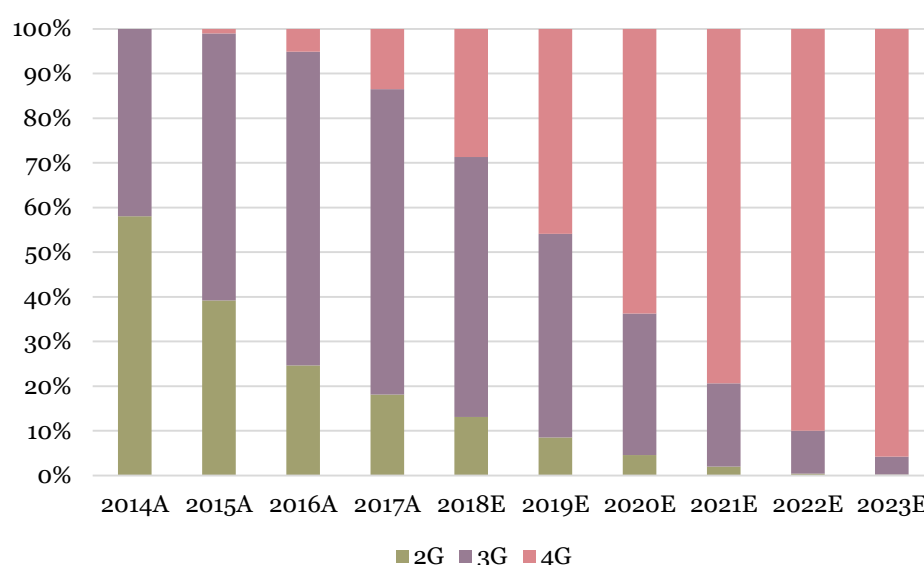
58. TRC preliminary conclusion is that mobile broadband offered as a stand-alone subscription is not a part of the same market as fixed broadband, based on the following reasoning:
- Mobile broadband is not offered with guaranteed or promised download speeds and is subject to data use caps. Above the cap, users face additional charges or lower speeds. Given the data caps, users would not use mobile broadband for data intensive applications (e.g. Netflix).
 - Mobile broadband subscriptions have a much lower data allowance for the same price than FWA.
 - Mobile broadband is not bound to a location.
59. Orange Fixed disagrees with this market definition and considers that fixed and mobile broadband should be a part of the same market.
60. Mobile broadband penetration is around 85%.²⁷ Data consumption has increased rapidly in recent years (a 575% increase between 2015 and 2018).²⁸ The rise of mobile broadband usage was driven by the introduction of new generation technologies, first 3G in 2010-2012 and then 4G in 2015-2016. These technologies allow mobile download speeds on a par with those via ADSL. Speeds are expected

²⁷ Based on number of mobile broadband subscribers as per Exhibit II.2 and the total population as on page 11.

²⁸ TRC Public Consultation on Fixed Markets 2019, Exhibit II.8.

increase further with the introduction of new advanced speed mobile technologies. Mobile ownership in Jordan is near universal and hence so is access to mobile internet. By 2023 it is expected that most subscriptions will be able to access 4G services, as shown in Figure 3-1.

Figure 3-1: Mobile subscriptions by technology



Source: Global Data, Mobile Broadband Forecast, September 2018. A: actual. E: expected.

61. Mobile broadband characteristics make it an attractive alternative to fixed.
62. First, as Table 3-1 shows, all Jordanian operators offer 3G and 4G nationwide, making mobile broadband available to all users currently using Orange Fixed's ADSL.

Table 3-1: Mobile operators' coverage by technology

Operator	Coverage 3G	Coverage 4G (LTE)
Zain	99%	92%
Orange Mobile	96%	92%
Umniah	90%	80%

Source: Telegeography, 2018

63. Second, mobile broadband speeds are comparable to ADSL speeds, with download speeds reaching up to 18 Mbit/s.²⁹
64. **Third, the MoICT Household Survey 2017 confirms that consumers consider that mobile broadband as a suitable alternative to fixed:**
- **97% consumers use mobile to connect to the internet, compared to 7.2% consumers using FBWA and 4.3% ADSL.**
 - The main reason for not having a fixed connection is that customers consider it unnecessary (as they have a mobile connection).
65. Substitution between fixed and mobile internet has also been noticed by various international institutions. The development of mobile broadband is seen as a challenge to the further development of fixed services and fibre:
- *“After the launch of commercial 3G services in Jordan in September 2010, the annual growth of fixed broadband penetration dropped to –0.5 per cent and between 2011 and 2013 was only 2.5 percent.”*³⁰
 - According to MENA Panorama 2018, high mobile broadband penetration is one of the main challenges to the deployment of fibre in Jordan.³¹
66. There are international examples of including fixed and mobile broadband in the same market. For instance, in Austria, the residential retail market for broadband access include mobile broadband and cable TV (“CATV”) connections in addition to copper-based DSL connections.
67. Summing up, Orange Fixed considers that retail mobile and fixed broadband should be included in one relevant market. At the very least, the substantial competitive pressure from mobile broadband on fixed should be taken into account in the competitive analysis and should significantly influence the conclusion on the susceptibility to ex ante regulation and the presence of SMP.

3.2 Insufficient analysis of geographic markets

68. TRC concludes that the relevant market is national, based on the following reasons:
- The same products and services are offered throughout the country.

²⁹ See: <https://www.speedtest.net/global-index/jordan#mobile>. Accessed on 11 December 2019.

³⁰ World Bank, “Broadband Networks in the Middle East and North Africa”, page 48. See: <https://openknowledge.worldbank.org/handle/10986/16680>

³¹ FttH Council for Middle East and North Africa, FttH MENA Panorama 2018, p.20.

- There is largely no differentiation of prices. There are some exceptions, namely that prices tend to be higher where many operators are present (areas of Amman). TRC comments that if the different prices were the result of a different competitive pressure, then prices in Amman should have been lower.
- 69. Orange Fixed disagrees with the geographical market definition and considers that TRC should define a separate market at least for Amman/mid region, where many competing fibre networks are present.
- 70. The White Paper states that to assess the similarity of competitive conditions across markets, the following indicators should be used:
 - The number of principal operators and their development (excluding niche operators with no impact on competitive conditions).
 - The leading operators' market shares and their evolution.
 - Barriers to entry and their development (including evidence of new entry).
 - Pricing and product strategies (differences in pricing and marketing).
- 71. The White Paper and Competition Safeguard Instructions state that the market should be considered national unless there is evidence of different competitive conditions and a lack of a common pricing constraint. However, this statement does not excuse TRC from conducting a proper analysis of the market.
- 72. There are clear indications that competitive situation in various regions of Jordan differs. For example, a number of operators have rolled out their own networks in Amman, including Damamax, Umniah, Zain, Vtel, Fibertech and JEIS. In its draft market review, TRC refers to the investment in fibre in Amman on several occasions:
 - *"The last few years have seen the emergence of fibre-to-the-home (FTTH) and fibre-to-the-building (FTTB) networks in Jordan, mainly focused in denser urban areas such as parts of Amman."* (Page 33.)
 - Mobile operators are developing their own fixed broadband networks (specifically, FttH in Amman areas). (Page 34.)
 - Investment in alternative networks is strong in Amman but weaker elsewhere. (Page 100.)
- 73. TRC has therefore acknowledged differences in the competitive conditions in Amman and the rest of the country. TRC should have conducted further analysis of such differences. Such an investigation would be likely to confirm that fixed markets in Amman are characterised by stronger competition, and therefore it is even more disproportional to impose regulation in this region. One of the indications is that Jordan is among a number of countries in the Arab region with low-priced high-

speed internet, as shown above in Figure 2-4. High speed internet is available only on fibre networks, and therefore low prices for such internet indicate that competition in areas where fibre networks are available, is strong.

74. Defining local geographic markets with sufficient competition between fibre networks and not imposing regulation in such areas would be in line with best international practice. In a 2012 report for FttH Council Europe, DotEcon notes that deregulating areas with sufficient network competition has a positive impact on investment.³² Separate geographic markets have been defined in many European countries including the UK, Italy and Finland.³³
75. Regarding prices being higher in Amman than elsewhere, the fact that operators are able to maintain differential prices suggests that these may be different markets. Higher prices in Amman may be due to higher demand, in which case prices may be higher even if competition is stronger.

4 Question 3 Market definition – wholesale local access

76. *Question 3. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for Wholesale Local Access services?*
77. TRC defines a market for wholesale local access, which comprises any physical access to the network which enables its purchaser to offer fixed voices services and/or broadband internet, and which includes: ULL over copper, VULA over fibre, wholesale access products over FBWA. The market does not include WLA products offered on mobile networks or leased lines. It is defined as national in scope.
78. Orange Fixed disagrees with this definition as it objects to defining artificial wholesale markets when there are no competition problems in the retail market. Retail markets in Jordan are competitive, and as the retail competition is based on infrastructure competition, they would be competitive absent regulation. See further the answer to Question 8, Section 9, for a competitive analysis of the fixed markets.

³² DotEcon (2012), "Regulatory policy and the roll-out of fibre-to-the-home networks, A report for the FTTH Council Europe, July 2012", Section 2.5.3.

³³ See Ofcom, (2018), "Promoting investment and competition in fibre networks: approach to geographical markets", 2 December 2018. Italy: <https://www.cullen-international.com/product/documents/FLTEIT20190002>. Finland: <https://www.cullen-international.com/product/documents/CTTEEU20190087>. Also paragraphs 50-51 above.

79. Therefore, there should be no need to analyse upstream markets as the purpose of any upstream remedies is to ensure there is competition at the retail level. If that competition is already in place without upstream measures, then an analysis of competition in artificial upstream markets is redundant.
80. Historically there was no demand for ULL on copper networks. Given that since 2010 considerable infrastructure competition has developed, it is unlikely that such demand will ever arise. Defining and regulating artificial markets such as for WLA can lead to substantial regulatory costs for Orange Fixed. Moreover, this approach does not benefit competition which is best stimulated by enabling infrastructure competition to develop. Competition may be enhanced further by removing unnecessary regulatory burdens, encouraging investment.
81. Orange Fixed also considers that TRC has not conducted sufficient research into the possibility of defining local geographic markets.
82. There are clear indications that competitive situation in various regions of Jordan differs. For example, a number of operators have rolled out their own networks in Amman, including Damamax, Umniah, Zain, Vtel, Fibertech and JEIS. In its draft market review, TRC refers to the investment in fibre in Amman on several occasions:
- “The last few years have seen the emergence of fibre-to-the-home (FTTH) and fibre-to-the-building (FTTB) networks in Jordan, mainly focused in denser urban areas such as parts of Amman.” (Page 33.)
 - Mobile operators are developing their own fixed broadband networks (specifically, FttH in Amman areas). (Page 34.)
 - Investment in alternative networks is strong in Amman but weaker elsewhere. (Page 100.)
83. TRC has therefore acknowledged differences in the competitive conditions in Amman and the rest of country. TRC should have conducted further analysis of such differences. Such an investigation may have confirmed that fixed markets in Amman are characterised by stronger competition, and therefore it is even more disproportional to impose regulation in this region. This is confirmed by the fact that Jordan is among a number of countries in the Arab region with low-priced high-speed internet, as shown in Figure 2-4. High speed internet is available only on fibre networks, and therefore low prices for such internet indicate that competition in areas where fibre networks are available, is strong.
84. Defining local geographic markets with sufficient competition between fibre networks and not imposing regulation in such areas would be in line with best international practice. In a 2012 report for FttH Council Europe, the consultant notes that deregulating areas with sufficient network competition has a positive

impact on investment. Separate geographic markets have been defined in many European countries including the UK, Italy and Finland.³⁴

85. TRC sees as an obstacle to defining local geographic markets that boundaries of fibre networks are not fixed because the networks are still being rolled out. However, it is not clear why it would be an obstacle in Jordan while it is not in other countries. It should be possible to define local geographic markets that are already competitive based on the presence of fibre, as it is clear that these markets would not become less competitive in future. During the next regulatory review, as fibre roll out progresses, the competitive, deregulated geographic market could be expanded to include additional areas.

5 Question 4 Market definition - WBA

86. *Q4 Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for Wholesale Broadband Access services?*
87. TRC defines a WBA market (bitstream), which is a wholesale product that, in TRC's view, allows the purchaser to offer retail broadband access (while WLA allows the purchaser to offer the full range of retail services.³⁵ WLA can be used to provide WBA and is therefore located upstream of WBA. WBA can in theory be obtained at different network levels: DSLAM, ATM and IP level. Orange Fixed currently only offers bitstream at IP level.
88. The market definition comprises WBA offered on copper, fibre and fixed LTE, but not on mobile networks.
89. TRC also defines one national market, because:
- WBA products are offered nationally; although this is limited by network coverage, the network coverage boundaries are not stable enough to be a basis for market definition.

³⁴ See Ofcom, (2018), "Promoting investment and competition in fibre networks: approach to geographical markets", 2 December 2018. Italy: <https://www.cullen-international.com/product/documents/FLTEIT20190002>. Finland: <https://www.cullen-international.com/product/documents/CTTEEU20190087>. Also paragraphs 50-51 above

³⁵ TRC Public Consultation on Fixed Markets, page 78. Footnote 63 clarifies that "While IP telephony can be offered over a Bitstream-based broadband connection, the full range of managed VoIP services (including the use of geographic numbers) may not be available."

- Competitive conditions are similar – Orange Fixed market share is above [Confidential: x] independent on whether there are fibre and FBWA networks present.³⁶
90. We first note that information that Orange Fixed market share is above [Confidential: x] across the country, is incorrect. According to TRC data, the joint market share of Orange Fixed and Orange Data in WBA in 2018 was [Confidential: x] in subscriber lines, and [Confidential: x] in revenues.³⁷
91. Further, Orange Fixed disagrees with the following aspects of the market definition:
- Excluding mobile broadband. As stated in the answer to Question 2 (Section 3.1), retail mobile broadband is a substitute for retail fixed broadband, and therefore the same conclusion should be reached at the wholesale level.
 - TRC has not conducted sufficient research into the possibility of defining local geographic markets. Competitive conditions in Amman are different from those elsewhere in the country, because of the presence of competing fibre networks. TRC says that the market shares of Orange Fixed are similar across the country, however it does not show any data to support this claim. TRC should conduct a proper analysis of competitive conditions in different geographic regions, which could lead to defining a local geographic market for Amman or other areas with a substantial fibre presence.

6 Question 5 Market definition – wholesale fixed call termination

92. *Q5. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for Wholesale Fixed Voice Call Termination services?*
93. TRC defines fixed voice call termination markets on individual networks of each fixed telephony operator in Jordan.
94. Orange Fixed has no comments on this market definition.

³⁶ TRC Public Consultation on Fixed Markets, page 82.

³⁷ TRC Public Consultation on Fixed Markets, Exhibit XIII-2 and XIII-3. Data marked as confidential in the consultation and provided separately to Orange Fixed.

7 Question 6 Market definition- wholesale fixed voice call origination

95. *Q6 Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for Wholesale Fixed Voice Call Origination services?*
96. TRC defines the market for wholesale fixed voice call origination, comprising call origination on all fixed infrastructures (copper, fibre and FBWA), and all types of calls. The market is defined as national in scope.
97. Orange Fixed disagrees with this market definition as follows:
- Orange Fixed considers that VoIP and “traditional” fixed telephony are substitutes (see answer to Question 1, Section 2.1), and therefore WBA, that can be used to provide VoIP, is a substitute for call origination. Consequently, there is no need to define a separate market for call origination. This is in line with the approach of the European Commission, which in 2013 removed the wholesale market for call origination from the list of markets susceptible of regulation because fixed telephony can be provided using own local access infrastructure and bitstream.
 - As the retail market for voice services should comprise both fixed and mobile services, wholesale call origination should include both fixed and mobile calls; see also answer to Question 1, Section 2.2.
 - TRC has not conducted sufficient research into the possibility of defining local geographic markets; see answer to Question 1 (Section 2.3).

8 Question 7 Market definition – wholesale fixed transit

98. *Q7 Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for Wholesale Fixed Transit services?*
99. TRC defines the market for wholesale fixed transit services, comprising transit services on all fixed infrastructures (copper, fibre and FBWA), and all types of calls. The market is national in scope.
100. Orange Fixed disagrees with this market definition, for the same reasons as it disagrees with the definition of the wholesale market for call origination. Because voice services can be provided using wholesale broadband, there is no need to define separate wholesale markets for voice services; see also the answer to

Question 6, Section 7. Furthermore, mobile voice services should be included in the market as well; see answer to Question 1, Section 2.1).

9 Question 8 Susceptibility to ex ante regulation - wholesale markets

101. *Q8 Do you agree with the TRC's preliminary conclusions regarding the wholesale fixed telecommunications markets found to be susceptible to ex ante regulation?*
102. TRC finds the following wholesale markets to be susceptible to ex ante regulation:
 - WLA and WBA.
 - Wholesale call termination, origination and transit.
103. The main reasons why TRC finds the wholesale fixed markets susceptible of regulation are:
 - High barriers to entry, due to economies of scale and scope, and the necessity of access to infrastructure which requires large investments involving sunk costs.
 - Lack of trend towards effective competition, based on:
 - Orange Fixed's high market share.
 - Investment in alternative networks is limited to Amman.
 - The wholesale products are either not provided in the market or are only available from Orange Fixed.
 - The lack of WLA access limits competition in WBA, and in wholesale call origination and transit markets.
 - Inadequacy of competition law.
104. Orange Fixed agrees that the market for wholesale fixed call termination is susceptible to regulation, but disagrees that the remaining markets (WLA, WBA, call origination and transit) are susceptible to regulation. Contrary to TRC claims, barriers to entry are not significant, and the markets are already competitive or tending towards effective competition in the near future. This is discussed further in the following sections.

9.1 WLA and WBA

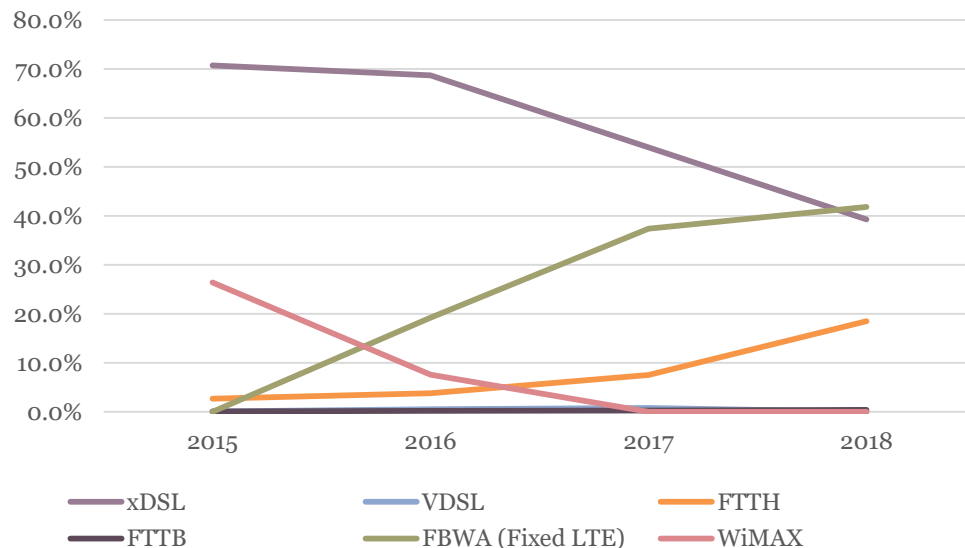
105. Orange Fixed disagrees that there are high barriers to entry into the WLA and WBA markets. According to TRC, apart from Orange Fixed, the following operators provide retail internet using their own infrastructure (and are therefore competing in the WLA market including self-supply):³⁸ Umniah, Zain, Al-Nayi, Damamax, Jordan European Internet Services Co, V-Tel and Mada. One of the operators, Al-Nayi, has recently entered the market (in 2017). In October 2019, TRC issued a license to a new Umniah/JEPCO fibre JV company (Fibertech) which starts providing retail and wholesale broadband access service to the market.³⁹ A market with high barriers to entry would not be expected to host such a large number of competing infrastructures nor face a recent entry.
106. Furthermore, the market not only tends towards effective competition, but is already effectively competitive. What is notable, is the pace at which DSL, a legacy technology, has been losing market share to competing infrastructures. In 2010, more than 90% of all lines were DSL lines,⁴⁰ with FBWA accounting for approximately 5%, and FttH less than 1% of the lines. By 2015, the share of DSL fell to 70%, and then, in just three years, to 39%.
107. Trends in the shares of access technology are shown in Figure 9-1.

³⁸ TRC Public Consultation on Fixed Markets 2019, page 23.

³⁹ <https://www.telegeography.com/products/commsupdate/articles/2019/10/08/trc-issues-licence-to-new-umniahjepco-fibre-jv/>

⁴⁰ According to the TRC 2010 decision on fixed broadband markets.

Figure 9-1: Share of lines by access technology



Source: TRC Public Consultation on Fixed Markets 2019, Exhibit III.14.

108. The current leading operators provide broadband over FBWA (Umniah and Mada), which now accounts for 42% of all lines, exceeding Orange Fixed legacy technology, DSL. Including FttH lines, the market share of Orange Fixed in active subscriber lines (and therefore in WBA and WLA) fell from [Confidential: x] in 2017 to [Confidential: x] in 2018.⁴¹ Such rapid decrease are a strong indicator of vigorous and intensifying competition, which is fully based on own-infrastructure of competitors.

- ! On page 82, TRC says that the market share of Orange Fixed in WBA is in excess of 70%, which is inconsistent with data in Exhibit XIII-3 and is evidently an error, leading to incorrect conclusions on competition in WBA.

109. The market share of Orange Fixed is most likely to be already below [Confidential: x] as of 2019, and it will most certainly fall substantially below this threshold within 2-3 years. The same applies to market shares in revenues, which fell from [Confidential: x] in 2015 to [Confidential: x] in 2018. Taking additionally into account the competitive pressure from mobile broadband as described in the answer to Question 2 (Section 3.1), it becomes clear that WLA/WBA not only tends towards effective competition, but already is effectively competitive. This is even more pronounced in Amman and other areas where, next to Orange Fixed and FBWA providers, several FttH operators are active.

⁴¹ Exhibit XIII-3. Data marked as confidential in the consultation and provided separately to Orange.

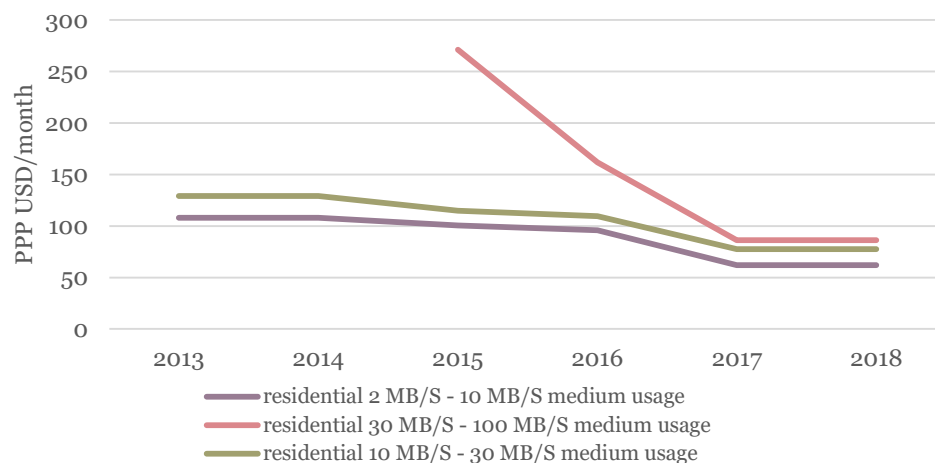
110. Competition is expected to increase further in future, given other operators' investment in fibre:
- In April 2019, Umniah/JEPCO fibre JV company (Fibertech) obtained the licence from TRC to roll out FTTH using infrastructure in areas where JEPCO has electricity infrastructure including electricity poles. It will enable Umniah to reach 1.4 million homes and businesses.⁴²
 - Zain signed agreements with several municipalities to install poles and cabinets for FttH roll out:⁴³
 - In April 2019, Zain signed an agreement with Irbid municipality, foreseeing an investment to install 20,000 poles.
 - Zain has also signed agreements with the municipalities of Zarqa and Rusaifah.
111. Additional competitive pressure will arise when the public National Broadband Network ("NBN") is developed and made available to operators.⁴⁴ Recently, the MoDEE announced its intension to publish a tender to assign a company for NBN operation and maintenance, and to manage providing access to the NBN by the licensed operators.
112. This development of fibre networks clearly shows that, contrary to TRC conclusions, barriers to entry and expansion of fibre networks are low and markets not only tend towards effective competition, but are already effectively competitive and will become even more competitive in future. With respect to the FBWA, TRC remarks that the cost of spectrum is a barrier to entry. However, TRC does not take into account the exemptions on annual spectrum fees granted to FBWA licensees.
113. The presence of vigorous competition is confirmed by pricing. The prices of fixed broadband have been falling and are substantially below the Arab countries average. See Figure 9-2 and Figure 9-3.

⁴² Telegeography, Umniah inks fibre deal with utility firm, 5 Apr 2019

⁴³ See e.g. a press release at <https://alghad.com/بمليون-وزين-إربد-بلدية-بين-اتفاقية-دي/#:~:targetText=%D8%A7%D8%AA%D9%81%D8%A7%D9%82%D9%8A%D8%A9%20%D8%A8%D9%8A%D9%86%20%D8%A8%D9%84%D8%AF%D9%8A%D8%A9%20%D8%A5%D8%B1%D8%A8%D8%AF%20%D9%88%E2%80%9D%D8%B2%D9%8A%D9%86%E2%80%9D%20%D8%A8%D9%85%D9%84%D9%8A%D9%88%D9%86%20%D8%AF%D9%8A%D9%86%D8%A7%D8%B1&>

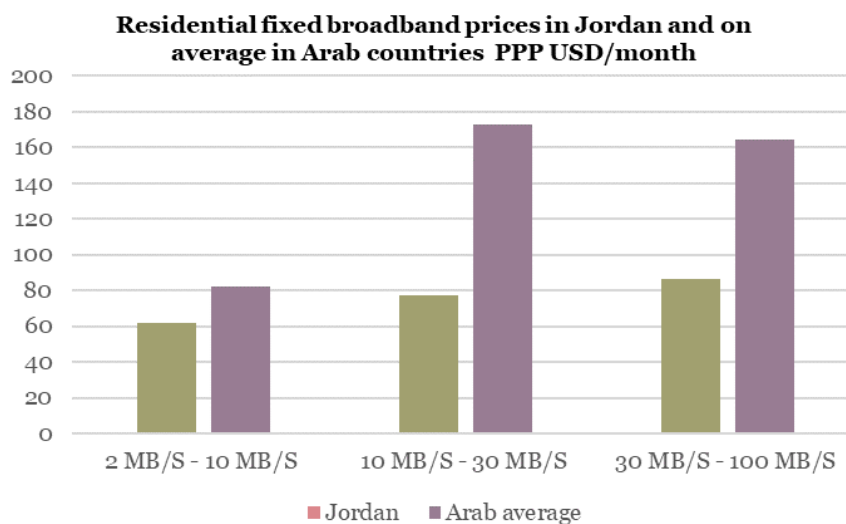
⁴⁴ TRC Public Consultation on Fixed Markets 2019, p. 34-35.

Figure 9-2: Trends in fixed broadband prices



Source: Strategy Analytics, Telecommunications Retail Price Benchmarking for Arab countries, 2018

Figure 9-3: Residential fixed broadband prices in Jordan and on average in Arab countries, PPP USD/month



Source: Strategy Analytics, Telecommunications Retail Price Benchmarking for Arab countries, 2018

114. This competition developed because of own-infrastructure operators, as the use of Orange Fixed WBA by alternative operators is limited. The number of WBA lines purchased by other operators declined by [Confidential: x] from [Confidential: x] in

2015 to [Confidential: x] lines at the end of August 2019, which represents less than 1% of all internet lines.⁴⁵

115. To conclude, Jordan has already developed infrastructure competition. Regulatory solutions which were conceived for very different markets, namely those characterised by omnipresent legacy infrastructures, should not be implemented in Jordan. In European markets dominated by one (or sometimes two) fixed infrastructures, wholesale access was designed as a temporary solution until infrastructure competition arose.⁴⁶ In Jordan all competition is already based on infrastructure. TRC should not apply regulation that pushes Jordan back to the stage of service competition on one infrastructure (which in some countries was the only way to achieve some competition). Any remaining competition problems can be solved by the application of the competition law.

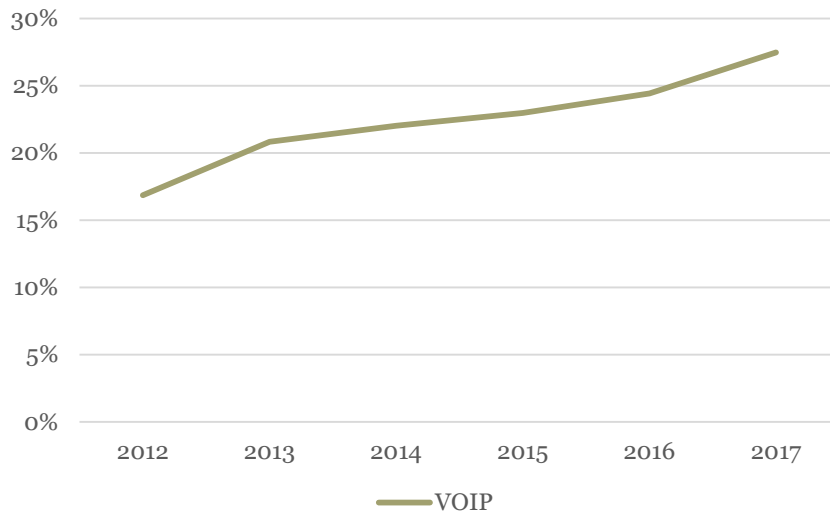
9.2 Wholesale fixed call origination and transit

116. Orange Fixed disagrees that the markets for fixed call origination and transit are susceptible to regulation.
117. First, there are no high barriers to entry. As fixed telephony becomes increasingly IP-based, the capability to provide PSTN/ISDN telephony, which may have been a barrier in the past, has become irrelevant. Currently more than 25% of fixed telephony lines are based on VoIP technology (see Figure 9-4). [Confidential: x]

⁴⁵ Source: Orange Jordan.

⁴⁶ Through a so called “ladder of investment”. See M. Cave (2006), “Encouraging infrastructure competition via the ladder of investment”, Telecommunications Policy, vol. 30, issue 3-4, 223-237.

Figure 9-4: Share of VOIP in all fixed telephony



Source: Telegeography, 2018.

118. Any operator with its own infrastructure that currently provides broadband can provide (managed) fixed voice services over IP. In 2018, alternative operators provided nearly [Confidential: x] of fixed access connections, and the market share is rapidly increasing.⁴⁷ As, according to TRC, fixed access is always combined with fixed telephony, that means that the market share of alternative operators in fixed telephony subscriptions was also nearly [Confidential: x] in 2018, and likely to exceed this figure by now.
119. The most serious obstacle to the development of effective competition in the fixed telephony market is the declining market; as a result it is not commercially attractive for any operator to enter the stand-alone fixed telephony segment. Fixed telephony is increasingly an add-on to internet connectivity. It is therefore no longer valid to analyse competition in the fixed telephony market alone; broadband must also be considered. The wholesale markets for fixed telephony, if viewed in isolation, may not be tending towards a narrow view of effective competition (defined as the absence of an operator with a high market share). However, the market for electronic communication services comprising of internet with additional voice functionality, both fixed and mobile, is subject to effective competition. Regulation that is focused on individual legacy markets with no consideration of the broader context risks perpetuating obsolete and inefficient market structures.

⁴⁷ According to TRC, Orange Fixed's market share in WBA was [Confidential: x] in 2018. The market shares in retail fixed access connections must be similar.

10 Question 9 Susceptibility to ex ante regulation – retail markets

120. *Q9 Do you agree with the TRC's preliminary conclusions regarding the retail fixed telecommunications markets found to be susceptible to ex ante regulation?*
121. TRC's preliminary conclusion is that the retail market for FACO is susceptible to ex ante regulation. It also concludes that the retail market for broadband services is not susceptible to regulation in the presence of wholesale regulation.
122. The retail market for FACO is found susceptible to ex ante regulation because:
- There are strong economies of scale, scope and density.
 - Entry with own infrastructure requires high fixed and sunk costs.
 - Wholesale remedies are not expected to be effective within the regulatory period.
 - There is no tendency towards effective competition: wholesale remedies are not effective; entry has occurred only in Amman; and Orange Fixed's market shares are high.
123. The retail market for internet services is found not susceptible to ex ante regulation in the presence of wholesale regulation.
124. Orange Fixed disagrees that the retail market for FACO is susceptible to ex ante regulation.
- First, as explained in the answer to Question 8 (Section 9), there are many providers who provide fixed services using their own infrastructure, of which some have entered the market recently. This shows that there are no high barriers to entry.
 - Second, we have explained above that market for fixed access, both broadband and voice services, not only tends towards effective competition, but is already characterised by effective infrastructure competition. Orange Fixed's market share in fixed access lines is [Confidential: x] and decreasing. There is no reason to treat fixed voice services differently to fixed broadband, on which TRC concludes is not susceptible to regulation.
 - Third, there is a strong competitive pressure from OTT services over broadband. On page 45, TRC states that "Given the trends observed in the markets over the last few years and the increasing number of OTT services, the impact of unmanaged VoIP services on the FACO market will be considered again in the three criteria assessment and in the competition assessment."

Contrary to this statement, neither the analysis on susceptibility to regulation, nor the SMP analysis in the FACO take the impact of OTT into account.

- Fourth, fixed voice services are subject to a strong competitive pressure from mobile services.

125. Orange Fixed agrees that the retail market for broadband services is not susceptible to ex ante regulation but disagrees that this is only in the presence of wholesale regulation. As explained in the answer to Question 8 (Section 9.1), the fixed access and broadband market in Jordan is characterised by effective infrastructure competition. Any remaining problems can be solved using competition law.
126. TRC states that the wholesale remedies contribute to competition in the market for retail broadband.⁴⁸ TRC has not provided data on the number of broadband services provided using wholesale WBA. Orange Fixed estimates that it is less than 1%; therefore, it is unlikely to have a significant impact on competition. Wholesale regulation has a negligible impact on the market, it has not played any role in driving current competition and removing it would have no effect on the retail market.

11 Question 10 Competition and SMP - wholesale markets

127. *Q10 Do you agree with the TRC's preliminary conclusions regarding the competition assessment and SMP findings in the wholesale fixed markets?*
128. TRC preliminary conclusion is that Orange Fixed has SMP in all wholesale fixed markets. We discuss these markets in turn.

11.1 WLA

129. TRC concludes that Orange Fixed has SMP in this market, based on:
 - High market shares of Orange Fixed: [Confidential: x] in 2017 in the retail FACO market (FACO).⁴⁹ TRC states that “*Orange Fixed has lost some market share during the past three years but it remains high and is unlikely to fall below the threshold within the period of the review*”.⁵⁰

⁴⁸ TRC Public Consultation on Fixed Markets 2019, page 115.

⁴⁹ TRC Public Consultation on Fixed Markets 2019, page 122.

⁵⁰ TRC Public Consultation on Fixed Markets 2019, page 118.

- Insufficient potential competition: there are large economies of scale and scope and entry requires large and sunk investments. Orange Fixed has an advantage as its copper infrastructure gives it access to poles that can be used to develop fibre infrastructure. Development of FBWA faces barriers such as the cost of spectrum.
- High vertical integration (all levels of the value chain), and a ubiquitous network.

130. Orange Fixed disagrees with this conclusion:

- Orange Fixed's market share in WBA in 2018 was [Confidential: x] on the basis of active subscriber lines, which means that the market share in WLA must be similar, as there is WBA provided based on physical access. The market share is also quickly decreasing.
 - The FACO market share of [Confidential: x] reported by TRC seems to be the share in fixed telephony traffic volumes. This is clearly an incorrect way of calculating market shares for WLA, where it is the number of connections that matters as wholesale purchasers of WLA would purchase connections, not minutes.
- As explained in the answer to Question 8 (Section 9), the fixed markets are characterised by effective, infrastructure-based competition which demonstrates that there are no high barriers to entry or expansion.
- *All* providers compete with own infrastructure and are vertically integrated, not just Orange Fixed. Therefore, vertical integration does not give Orange Fixed a competitive advantage.
- Moreover, Orange Fixed is not the only operator with a ubiquitous network. FBWA providers also have universal coverage, which TRC does not appear to take into account.
- Any advantage in access to poles has been eliminated in light of Zain agreements with municipalities to erect its poles, as well as the new Umniah/JEPCO licence that will enable Uminah to roll out the FTTH over electricity poles which covers 1.4 million homes and businesses.⁵¹

131. TRC states that it is unlikely that alternative operators would increase their market share sufficiently during the time under review. However, Orange Fixed's market

⁵¹ See paragraph 110 above.

share has fallen rapidly from [Confidential: x] in 2015 to [Confidential: x] in 2018, i.e. within just three years.⁵² TRC's conclusion is clearly incorrect.

11.2 WBA

132. TRC concludes that Orange Fixed has SMP in this market, based on:
- Orange Fixed's market share (based on the share in retail broadband) was [Confidential: x] in 2018, which is above the 50% threshold.
133. TRC notes that given its market share, Umniah may be dominant as well under certain circumstances.
- Economies of scale, scope, density, Orange Fixed's ubiquitous copper network cannot be easily replicated.
 - Other providers remain reliant on Orange Fixed outside their coverage
134. Orange Fixed disagrees that it has SMP in the WBA market. Fixed markets in Jordan are effectively competitive, as explained in the answer to Question 8 (Section 9.1) and Question 10 for WLA (Section 11.1). Furthermore, TRC states that other providers rely on Orange Fixed outside their area of coverage. However, FBWA providers have a ubiquitous coverage, and therefore the area outside their coverage is minimal.
135. If any regulation on fibre is imposed, it should apply equally to all operators with the only fibre network in any particular area. This is discussed further in the answer to Question 13 (Section 14).

11.3 Wholesale fixed voice termination

136. TRC concludes that every fixed telephony operator has SMP on the market for termination of calls on its own network.
137. Orange Fixed has no comments on this conclusion.

11.4 Wholesale fixed voice call origination

138. TRC concludes that there is no SMP in the market for wholesale fixed voice call origination. This is because it is expected that there will be no demand for these wholesale services.

⁵² See TRC Public Consultation on Fixed Markets 2019, Exhibit XIII-2. Data marked as confidential in the consultation and provided separately to Orange Fixed by TRC.

139. Orange Fixed agrees that there is no SMP operator in this market. However, this is not only because there is no demand for the service, but because alternative providers have almost [Confidential: x] share in the market for fixed access and their share is increasing; the competition is infrastructure-based; there is competitive pressure from broadband at the retail and wholesale level, and from mobile. See also the answer to Question 8 (Section 9.2).

11.5 Wholesale transit

140. TRC concludes that Orange Fixed has SMP in the market for wholesale transit. This is because:
- Orange Fixed has a high market share (above the SMP threshold).
 - Orange Fixed has control over an essential facility. It is the only operator with implemented interconnection agreements with all operators.
 - Orange Fixed enjoys economies of scale, scope and density, not easily replicated infrastructure.
 - It has a ubiquitous network, no one else can provide transit with such scope
 - It is vertically integrated.
141. Orange Fixed disagrees that it has SMP in this market. Alternative providers have almost [Confidential: x] share in the market for fixed access and their share is increasing; the competition is infrastructure-based; there is competitive pressure from broadband at the retail and wholesale level, and from mobile. See also the answer to Question 8 (Section 9.2).

12 Question 11 Competition and SMP – retail markets

142. *Q11 Do you agree with the TRC's preliminary conclusions regarding the competition assessment and SMP findings in the retail fixed markets?*
143. TRC concluded that Orange Fixed has SMP in the retail market for FACO:
- Orange Fixed has lost some market share while Umniah gained some, but Orange Fixed market share remains well above the threshold;
 - Unlikely that alternative operators will increase the market share sufficiently during the time of the review to compete effectively against Orange Fixed.

- OTT not included in the market, but its presence is reflected in the remedies in the FACO market.
144. Orange Fixed disagrees that it has SMP in the FACO market and considers that the market for fixed telephony is effectively competitive. It is not clear why in its competitive analysis, TRC considers market shares in calls, and not in subscriptions. In the FACO bundle, it is the fixed access that is the primary service that drives the consumer take up, while fixed telephony is an add-on provided free of charge. Therefore, market shares in fixed access are more informative about operators' market power.
145. Alternative providers have almost [Confidential: x] of fixed access connections, and this share is rapidly increasing; the competition is infrastructure-based; there is competitive pressure from broadband at the retail and wholesale level, as well as from mobile. See also the answer to Question 8 (Section 9.2). Therefore, it is immaterial whether, as TRC states, the wholesale remedies will be implemented and make a material impact during the time of the review.⁵³

13 Question 12 Remedies - WLA

146. *Q12 Do you agree with the TRC's preliminary proposals for remedies in the Wholesale Local Access market?*
147. TRC has proposed the following remedies:
- Access upon reasonable request. This covers all products and associated facilities that fall within the market for Wholesale Local Access (WLA), thus including (but not limited to) LLU, SLU, VULA and wholesale products offered over FBWA.
148. Access to VULA and CEI (Civil Engineering Infrastructure).
- Non-discrimination.
 - An obligation to provide an annual Statement of compliance with non-discrimination obligation.
 - Transparency, including:
 - Obligation to publish reference offers for all products provided as a result of reasonable request (or other wholesale products provided on commercial basis).

⁵³ TRC Public Consultation on Fixed Markets 2019, page 118.

- Obligation to inform operators at least 6 months before introducing a new wholesale product, and 3 months in advance about changes to products. TRC should be additionally notified a month earlier.
 - Providing information to TRC on KPIs.
 - Accounting separation.
 - Obligation to provide accounting information to be specified by TRC.
 - Price control and cost accounting.
 - Obligation to maintain a suitable top-down cost accounting system.
 - Cost-based pricing; WLA on fibre is exempted from price regulation but will be monitored.
 - Margin squeeze tests, details to be developed subsequently by TRC.
149. Orange Fixed disagrees with the designation of Orange Fixed as the SMP operator and considers any regulatory obligations unnecessary and disproportionate. TRC has not clarified what the competition problems are that require intervention, and it has not conducted an impact assessment of the proposed remedies, which is best practice among other regulators (e.g. Ofcom, or the Dutch regulator ACM). TRC explicitly states that it does not expect that the wholesale measures will be effective during the period under review. The remedies will lead to a net social cost as an administrative cost will be borne by operators (mainly by Orange Fixed) and TRC, and there will be no benefits for consumers.
150. Under infrastructure competition, access obligations are unnecessary. Operators generally have incentives to provide access to third parties voluntarily, to prevent losing customers to other infrastructures. And, if they do not provide access, competition between vertically integrated operators is sufficient to ensure competitive market outcomes for consumers. Imposing access remedies, if effective (which, as TRC admits, is doubtful) is likely to reduce other operators' incentives to develop their own infrastructures, to the detriment of future competition.
151. It is unclear, given the market has become more competitive since the previous regulatory round, why TRC has found it necessary to impose additional obligations:
- Providing access to sub-loops was not mandated in the previous regulatory round, and, if implemented, leads to far larger costs than providing access at a higher level.
 - Notifying new wholesale products 6 months in advance (and changes 3 months in advance) to other operators, and an additional month to TRC, reduces Orange Fixed's flexibility in the market and makes it difficult to compete in a highly competitive market.

- Orange Fixed also objects to the obligation not to withdraw access to any product or associated facility without a prior approval of the TRC. Where such obligation will prevent Orange Fixed to dismantle its copper and related ADSL core elements in the areas that are fully covered by FTTH, Orange fixed will incur high cost to keep two technologies in the same areas.
152. As competition increases, regulatory burden should become lighter, and imposing additional obligations is disproportional. We also note that a lighter regulation of copper would encourage investment in fibre. In its report for FttH Council Europe, DotEcon notes that low prices of copper make fibre relatively less attractive and may discourage investment.⁵⁴
 153. Orange Fixed welcomes the decision not to impose price cap in fibre, but it considers that no regulation at all should be imposed on fibre. This is discussed further in the answer to Question 13 (Section 14.1).
 154. Orange Fixed disagrees with the obligation to provide an annual statement of compliance with the non-discrimination obligation. Such an obligation puts a high administrative burden on Orange Fixed and is disproportional. There is no legal basis for such an obligation given that TRC already has power to monitor the licensees' compliance to all market regulations.
 155. Furthermore, Orange Fixed objects to the obligation to provide access to civil engineering infrastructure (CEI) such as ducts, poles, and dark fibre. There is no legal basis for such an obligation imposed solely on Orange Fixed. Access to infrastructure of all operators is currently under consultation (Infrastructure Sharing and National Roaming).
 156. Finally, Orange Fixed strongly objects to the following specific obligations:
 - The obligation to provide an annual Statement of Compliance with the non-discrimination obligation, with all the details as specified in Annex 4. This obligation places an unnecessary administrative burden on Orange Fixed, which will incur considerable costs to provide the required information. There is also no need to impose this as TRC already has all the necessary powers to monitor the compliance of all operators with market regulation, not only the SMP operator.
 - The obligation not to withdraw access to any wholesale product or associated facility without the prior approval of TRC, including the withdrawal of a product or service in a particular geographic area.⁵⁵ Such an obligation will

⁵⁴ DotEcon (2012), "Regulatory policy and the roll-out of fibre-to-the-home networks, A report for the FTTH Council Europe", paragraph 208.

⁵⁵ Public Consultation: Review of Dedicated Capacity Markets in Jordan, page 64.

seriously harm Orange Fixed's ability to modernise its network by replacing obsolete technology with a modern one. To protect the interests of wholesale customers, it would be sufficient to require a notice period for the withdrawal, which would allow customers time to switch to a new service. At the very least, TRC should be required to approve proposed changes within a reasonable period of time, and to withhold permission without a good reason and proper motivation.

- The obligation to notify the launch of a new wholesale product 6 months in advance, changes to products 3 months in advance, and an additional 1 months' notice to TRC. Such a long period puts a high burden on Orange Fixed, it deprives it of flexibility and makes it impossible to effectively compete in the highly competitive DC market. It is also at odds with the best international practice:
 - Ofcom requires a notice of 90 for introducing new products and changes to existing products, but only 28 days' notice for prices, terms and conditions of such products. It also does not require an additional period for itself.⁵⁶
 - The Dutch regulator, ACM, requires a two-months' notice for introducing new products and changes to existing wholesale products.⁵⁷

14 Question 13 Remedies - WBA

157. *Q13 Do you agree with the TRC's preliminary proposals for remedies in the Wholesale Broadband Access market?*

158. TRC proposed the following remedies in the WBA market:

- Access upon reasonable request; this includes:
 - Access to the copper network at all feasible access points, including DSLAM and BRAS (national plus optional regional); this should include the choice to take DSL -only.
 - Access to the fibre network.
- Non-discrimination.

⁵⁶ Ofcom (2016), "Business Connectivity Market Review – Volume I Review of competition in the provision of leased lines". Available at: https://www.ofcom.org.uk/__data/assets/pdf_file/0015/72303/bcmr-final-statement-volume-one.pdf,

⁵⁷ ACM, Marktanalyse hoge kwaliteit wholesalebreedbandtoegang en wholesalehuurlijnen, 2012.

- Transparency:
 - Obligation to publish reference offers for all products currently provided.
 - Similar as for WLA.
- Accounting separation, similar as for WLA.
- Cost accounting and price control:
 - Prices continue to be regulated based on cost, defined as FL-LRIC.
 - Unlike for WLA, there is no exemption for fibre.
 - There is also an obligation not to apply margin squeeze, which will be subject to further specification by TRC.

159. Orange Fixed disagrees with the proposed remedies, for the same reasons as it disagrees with the remedies on WLA (see the answer to Question 12, Section 13). Furthermore, Orange Fixed strongly opposes any regulation of fibre, and in particular price cap regulation of WBA on fibre; there is no reason to treat WBA differently than WLA in this respect. If any regulation on fibre is imposed, it should apply equally to all operators with the only fibre network in any particular area. This is further discussed in Section 14.1.

14.1 Negative consequences of fibre regulation

160. Consumers only benefit from competition if there are sufficient investments. Jordan lags behind other MENA countries regarding roll out and take-up of fibre. Regulation of access to the fibre network will reduce incentives to invest, as explained below.
161. There is evidence that access regulation has a negative effect on investment in fibre and on communications investments in general.⁵⁸ In 2012, DotEcon conducted a research for FttH Council Europe, addressing the problem of fibre underdevelopment in Europe as compared to parts of Asia and North America.⁵⁹ One of the conclusions was that a partial deregulation of wholesale broadband access in areas where competition is sufficiently strong, appears to have a positive effect.

⁵⁸ M. Grajek, L.-H. Röller (2012), “Regulation and Investment in Network Industries: Evidence from European Telecoms”, *The Journal of Law and Economics*, vol. 55, no.1, page 44. NERA Economic Consulting (2018), “Telecommunications Infrastructure International Comparison”.

⁵⁹ DotEcon (2012), “Regulatory policy and the roll-out of fibre-to-the-home networks: A report for FttH Council in Europe”.

162. One such example is in Portugal, where the regulator (ANACOM) decided to de-regulate wholesale broadband access in competitive urban areas (i.e. Lisbon or Porto with three or more operators and a high number of households with cable access). In the view of the FTTH Council, this was one of the main reasons for Portugal Telecom's significant investment in the roll-out of its FTTH network across the country. Access to the fibre network of the fixed incumbent was never regulated in Portugal, based, among others, on the strong presence of fixed wireless operators which led to the incumbent's falling market shares.⁶⁰
163. For this reason, in many countries, fibre is exempted from regulation when it is still in the development phase, for instance:
- In Belgium, the regulator applies a five-year regulatory holiday for new deployment in areas where no or one network is deployed.⁶¹
 - In Turkey, access to FTTH/FTTB has been excluded from market analyses process for the five years period or till the percentage of fibre internet subscribers reaches the 25% of the whole fixed broadband subscribers. This means that FTTH/FTTB-based access products are not regulated within the scope of wholesale local access and wholesale broadband access markets. This exemption is still applicable.⁶²
 - In Brazil, the regulator applied for new fibre deployments a regulatory holiday of 9 years (later shortened to 7 years), and in Argentina, for 15 years.
164. TRC should adopt a similar approach and apply a regulatory holiday for a number of years the regulation of access to newly deployed fibre. Given that fibre take-up only took off since 2017, it would be appropriate to exempt fibre from any regulation for at least one or two regulatory periods.
165. As discussed previously, TRC has not conducted sufficient research into the possibility of defining local geographic markets, despite the fact that it acknowledges that in some areas of Jordan (e.g. Amman) there is more fibre investment and competition than in others. Had TRC conducted such research, it would have likely concluded that in areas such as Amman, there is already sufficient competition and regulation does not contribute to more competition, but rather decreases incentives to invest both by the regulated operator, and by other operators that now can use the regulated operator's fibre rather than develop their own infrastructure.

⁶⁰ See <https://www.cullen-international.com/product/documents/FLTEPT20170002>.

⁶¹ See <https://www.cullen-international.com/product/documents/FLTEBE20180001>

⁶² See <https://www.btk.gov.tr/uploads/pages/elektronik-haberlesme-sektorunde-pazar-analizleri/fsae-pa-nd-2013.pdf>

166. For this reason, many regulators have decided not impose regulation, or deregulate, in areas with sufficient network competition. Such an approach has been adopted recently by Ofcom, also with the aim to stimulate investment in fibre. The Ofcom approach was to define separate three types of geographical areas:
- Competitive, largely deregulated.
 - Potentially competitive, high bandwidths were deregulated while regulation for low-bandwidths was retained.
 - Non-competitive, where competition is unlikely to develop, regulation is maintained.
167. More international examples of deregulating areas with competing fibre networks are:
- In Belgium, the regulator considers that the market is competitive in any areas where three or more NGA operators are active. In such areas most obligations will be removed.⁶³
 - In France, the regulator decided in 2017 not to impose bit-stream regulation on fibre (physical access to fibre was unregulated already earlier).⁶⁴
168. If there is price regulation on fibre, then the European Commission in its NGA recommendation recommends that a higher return is allowed to account for a higher risk on new investments.⁶⁵ However, according to the FTTH Council report, such an approach is less effective in encouraging investment than deregulation.⁶⁶

15 Question 14 Remedies – wholesale call termination

169. *Q14 Do you agree with the TRC's preliminary proposals for remedies in the Wholesale Fixed Voice Call Termination market?*
170. TRC proposes the following remedies:

⁶³ See <https://www.cullen-international.com/product/documents/FLTEBE20180001>

⁶⁴ See <https://www.cullen-international.com/product/documents/FLTEFR20170010>

⁶⁵ Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA), 2010/572/EU, recital 23.

⁶⁶ DotEcon (2012), "Regulatory policy and the roll-out of fibre-to-the-home networks: A report for FttH Council in Europe", page vi.

- Access upon reasonable request, imposed on all operators who provide fixed telephony.
- Non-discrimination and transparency.
- Separate accounts:
 - Obligation to provide relevant accounting information, similar to WLA.
- The decision refers to information on “all products and associated facilities in the market for trunk segments of TI leased lines and in the market for terminating segments of TI leased lines, for Orange Fixed”⁶⁷. This is probably an error and the decision should refer to fixed termination. It is therefore not clear if the obligation should apply to Orange Fixed only, or to all SMP operators.
- On page 159 there is a reference to the obligation to provide financial statements for *mobile* termination – this should probably be “fixed” termination.
- Price control. The fixed termination prices will continue to be regulated at cost based on the LRIC model. The costs already have been estimated and a glide path approved by TRC in 2017, which TRC proposed to maintain.

171. Orange Fixed Jordan agrees with the remedies but objects to its discriminatory treatment by TRC. In particular, the following measures apply only to Orange Fixed and are therefore discriminatory:

- The TRC proposes that the current remedies imposed on all SMP operators to publish terms and conditions should be maintained. In addition, Orange Fixed should be obliged to maintain and keep up-to-date its RO, as approved by the TRC.
- A transparency obligation would require Orange Fixed to provide information to the TRC on a set of Key Performance Indicators (KPIs). The purpose of the KPIs will be to demonstrate that Orange Fixed is compliant with its access and non-discrimination obligations. KPIs will be required to measure two key aspects. The first aspect is the treatment of orders initiated by other operators and the SMP operators’ own downstream arm. The second aspect is the service supplied by the SMP operator, and in particular any difference in the treatment of faults and repairs.

⁶⁷ TRC Public Consultation on Fixed Markets 2019, page 163.

172. As other operators have increased in size since the previous regulatory round, all operators should be subject to the same obligation to provide relevant accounting information.

16 Question 15 Remedies – wholesale transit

173. *Q15 Do you agree with the TRC's preliminary proposals for remedies in the Wholesale Transit market?*
174. TRC proposes the following regulation in the wholesale transit market:
- Access upon reasonable request.
 - Non-discrimination.
 - Transparency.
 - Accounting separation.
 - Cost-based prices, based on an appropriate top-down LRIC.
175. Orange Fixed disagrees with the SMP and the need to impose regulation on wholesale transit. See answer to Question 10 (Section 11.5). Furthermore, Orange Fixed notes that regulating traditional voice telephony services will discourage operators from offering broadband-based voice services and slow down the development of VoIP.

17 Question 16 Remedies – retail FACO

176. *Q16 Do you agree with the TRC's preliminary proposals for remedies in the retail Fixed Access and Call Origination market?*
177. TRC proposes the following remedies in the FACO market
- Non-discrimination.
 - Transparency. The obligation to apply per-second billing is withdrawn.
 - A safeguard cap to make sure on prices of out-of-bundle and international calls.
 - Obligation not to unreasonably bundle services, including the obligation to submit bundled offers to TRC for approval four weeks in advance. Elements of the bundle should not be offered at prices below costs. TRC reserves to examine any bundle after launch.

- Providing relevant accounting information as specified by TRC.
 - No price cap is imposed. However, a safeguard cap on out-of-bundle calls, to make sure the prices do not increase in real terms (i.e. by more than CPI).
178. Orange Fixed disagrees with the necessity to impose any regulation, as it considers it has no SMP in this market. See answer to Question 11 (Section 12). Furthermore, Orange Fixed notes that regulating traditional voice telephony will discourage operators from offering broadband-based voice services and slow down the development of VoIP.
179. Orange Fixed particularly strongly opposes the following obligations:
180. *Regulation of out-of-bundle international calls.* In the previous regulatory round, the market for international calls was considered competitive and not regulated. Currently, international calls are regulated, although the market for fixed calls has become more competitive, and even though TRC states that the volumes of international calls are decreasing because of the increasing use of OTT alternatives.⁶⁸ Therefore, introducing new regulation on international calls is disproportionate.
181. *Obligation to submit bundled offers for approval four weeks in advance.*
- First, as stated during the previous regulatory review, this obligation deprives Orange Fixed of flexibility in changing its offer and decreases its competitiveness by making it impossible to react quickly to competitors' actions.
 - Second, TRC did not clarify the type of bundle offers they referred to. For instance, it is not clear whether TRC considers VoIP over fibre internet as a bundled offer. As VoIP can only be provided on the internet, the obligation would mean that all VoIP services by Orange Fixed need to be approved by TRC, which is a very heavy and disproportional obligation which will slow down the migration to VoIP.
 - Third, TRC has not conducted any impact analysis or clarified the precise nature of the supposed competition problem that is addressed by the obligation to submit bundles for approval. According to TRC, the potential problems related to bundling are:
 - Consumers being forced to purchase something they do not want. Presumably, TRC is referring to consumers having to purchase internet services together with fixed access and telephony, on which Orange Fixed allegedly has SMP. However, consumers currently demand a broadband

⁶⁸ TRC Public Consultation on Fixed Markets 2019, page 131.

connection and get fixed telephony as an add-on for free. TRC has not made clear what service they would be forced to purchase that they do not want.

- Cross-subsidy between regulated/non-regulated markets. It is possible that this relates to the notion that an operator can use its revenues from a regulated market (here, FACO) to offer products in a non-regulated market (here, broadband) below cost. This could harm competitors if they are only able to compete in the non-regulated segment and are unable to offer bundles themselves. However, all operators can offer bundles, and most competitors in the broadband market bundle internet with fixed access and telephony. In fact, the retail market is already a market for bundles including fixed access, internet and fixed telephony. In addition, the largest competitors are also mobile operators, and are able to offer bundles including mobile telephony. TRC has not made clear the type of harm that may arise from such bundling.

182. *Price caps on out of bundle calls.* It is not clear why TRC considers that Orange Fixed would have more incentives to raise these prices than other operators. It is correct that once a consumer has taken a subscription which includes internet and some fixed calls, it is not likely to change a fixed operator simply to avoid high out-of-bundle charges. In this sense, competition on these charges between fixed telephony operators may be limited. However, this is the same for all operators regardless of their market share. Operators compete on bundles including all fixed services, meaning that when they charge a higher price of some element of the bundle, they use this revenue to lower the price elsewhere to attract more customers. Moreover, the out-of-bundle calls are subject to competitive pressure from OTT services over broadband, and mobile telephony. Therefore, any potential harm from increased prices of out-of-bundle calls is minimal, and preventing it does not weigh against the administrative burden imposed on Orange Fixed, and on TRC, by the imposition of the price cap.

18 Conclusion on ex ante remedies

183. All in all, Orange Fixed is surprised to see a package of heavy remedies imposed on fixed services. After nine years since the previous review, with such a long review period being contrary to any international best practice, TRC comes up with regulation that ignores the deep changes that the sector has undergone since 2010. In the view of developments such as the rise of alternative infrastructures such as wireless and fibre at the expense of the legacy copper infrastructure, the resulting rapid increase in competition and decline in the Orange Fixed's market shares, and the increasing pressure from mobile, one would expect regulation of fixed getting lighter or even disappearing altogether. By contrast, TRC's proposed regulatory

package is in many respects heavier than the previous one, and as such does not in any way reflect the changed market situation.

19 Detailed queries

184. Below we provide detailed queries on errors and omissions in specific paragraphs of the TRC consultation.

Page	Section	Comment
5	1	Mada has not been referenced even though its FBWA subscriber base has grown.
7	1	We would note that SMS is not relevant in the fixed market.
7	1	Regarding the obligation of not bundling unreasonably, the regulation is based on an incorrect presumption that competitors cannot compete on bundles. Competitors do in fact compete on bundles. Zain is the incumbent and largest mobile operator, owning its own backbone. It has the following subsidiaries: 1-Mada, which offers fixed broadband wireless access (FBWA), previously using WiMAX technology, since 2017 Fixed LTE. 2-Zain data, providing fixed services. (broadband and DC) based on its own microwave infrastructure and wholesale broadband access purchased from Mada. 3-Bella, an international gateway access services provider. Umniah is the third mobile operator. It is owned by Batelco, which also provides fixed voice telephony services VoIP based on its own fibre infrastructure and wholesale purchases from Orange Fixed. It owns an FBWA network (first WiMAX, now fixed LTE) and has an FttH network.
10	2.2	In para 2.2, part of the sentence is missing: "The legal and regulatory context for undertaking market reviews and publishing and implementing Decisions is set out in full in"
11	2.5	As per TRC regulations, 14 days is in fact the period to provide inputs.
13	3.2	TRC should define fixed access as one relevant market; there should be no distinction between narrowband and broadband access. Any fixed access, whether copper, fibre, FBWA or microwave enables service providers to provide narrow-band telephony services (PSTN, VoIP). For example, wholesale broadband access for ADSL over copper can enable service providers to provide VoIP over ADSL. FBWA access enables service providers to provide fixed narrow-band telephony. It is also possible to provide fixed narrowband over leased lines.
14	3.2	We query whether Zain does provide ISDN-PRA.
14	3.2	We query whether Batelco does provide ISDN-PRA.
17	3.2	Mada should be included in the retail fixed telephony access market share data.
17	3.2	Umniah FLTE should be included in the retail fixed telephony access market share data.
17	3.2	TRC should have the power to collect the market information. It should not accept Batelco's lack of submission of information in this market review. Moreover, TRC should not form conclusions when there is missing information that could affect the results of any analysis conducted.
18	3.3	We query whether Zain and Batelco provide ISDN-PRA.
19	3.3	It appears that TRC has confused Zain and Mada (Zain subsidiary) in its analysis.
22	3.3	We query whether Zain provides fixed telephony services.
22	3.3	TRC should not accept the lack of availability of such information in such an important market review exercise.
23	3.4	Dedicated data subscriptions for stand-alone services (mobile broadband SIM only lines) is not considered in the mobile market review consultation.
23	3.4	Orange fixed does not provide retail ADSL fixed internet services.

23	3.4	TRC appears to have overlooked that Zain provides retail internet connectivity over FBWA leased from Mada and that Zain Data, a separate legal entity, is the provider of ADSL leased from Orange Fixed.
23	3.4	Mada and Umniah are the only FBWA service providers in Jordan; Al-Nayi is not licensed to provide FBWA services.
24	3.4	It is not appropriate to include Orange Fixed's coverage of its copper network in a comparison with fibre networks. Moreover, TRC has not considered FBWA coverage in its assessment of the provision of retail fixed broadband.
25		Total numbers of access lines in Exhibit III.12 (392,000 in 2018) and Exhibit III.13 (536,000 in 2018) are not consistent.
26	3.4	TRC has overlooked the following facts: Zain Data provides both ADSL and leased lines; and Zain Mobile provides FTTH and FBWA (leased from Mada).
26	3.4	TRC should assess the data available in its online published quarterly report. These indicate that Mada and Umniah WiMAX was 76,231 (Q3/2016); 24,103 (Q4/2016); and was 102,675 in Q1/2017. Accordingly, if TRC deducts the number of WiMAX lines provided by Umniah from the total, this will yield the number of WiMAX lines for Mada.
26	3.4	The last sentence says that Exhibits III.13 and III.14 show the lines for residential, business, and total subscriptions, suggesting that a split by business and residential will be shown. However, no such split is shown.
28	3.4	The title of Exhibit III.14 is "Share of lines by access technology by technology". The title should probably have been "Share of lines by access technology".
27	3.4	TRC states in its consultation that WiMAX was shut-down at the beginning of 2017 yet the figure at Exhibit III.13 shows active WiMAX lines in 2018.
28	3.4	Exhibit III.13 shows that the number of WiMAX lines were 171,000 (2017) and 146,000 (2018). Exhibit III.14, however, shows that WiMax shares of lines in 2017 and 2018 is zero. The exhibits are contradictory.
30	3.4	TRC states on page 23 that Al-Nayi provides FBWA. In contradiction, TRC states on page 30 that Al-Nayi provides FTTH/FTTB.
30	3.4	Orange Fixed does not provide retail ADSL
30	3.4	TRC should present the data for Zain Mobile and Zain Data separately, as Zain Data provides both retail ADSL and FLTE (leased from Mada).
30	3.4	Umniah does not provide retail ADSL
32	3.4	TRC provides no reason for the exclusion of Batelco market share data in the Exhibit III.18 table.
32	3.5	Broadband over FBWA now accounts for around 41.8% (as stated in Exhibit III.14 for 2018) not 37%.
33	3.5	TRC should include the various Zain agreements with different municipalities (Zarqa, Irbed, Russifah) in its analysis. These show rapid expansion and widespread deployment in a short time period, beyond the area of Amman. TRC should also consider the recent MoDDE press statement that it is in process of preparing the tender documents to engage a provider to manage and operate the fibre NBN. The ministry study concluded that it is commercially feasible to enable private sector access to the NBN. We would note that the NBN fibre length is around 6,500 km and an additional 500 km will be completed during 2020.
		Zain and Umniah have entered into agreements with municipalities and electricity companies, rapidly expanding their operations. Umniah, for example, with electricity provider JEPSCO has established a company, and has obtained a licence from TRC to roll out FTTH using JEPSCO electricity infrastructure including electricity poles. This will enable Umniah to reach 1.4 million homes and businesses. Such facts contrast markedly with TRC's statements.
34	3.5	Competitors do offer bundled services. TRC should investigate Zain and Umniah's bundled offers provided to their customers.
37	4.1	Sentence "it is supply-side substitution that should be relied upon as the primary criterion" should read "it is <i>demand-side</i> substitution that should be relied upon as the primary criterion".
40	5.1	We query why TRC has not considered NTTOs, CS and CPS in its analysis.
46	5.2	TRC should consider in its analysis the use of Tellular (fixed location handset equipped with SIM card) that are provided by mobile operators. TRC should have ready access to data on Tellular services.

51	5.2	<p>TRC has not included FLTE in the list of retail FACO's technologies. TRC should re-visit and check the data underpinning the example it cites and reconsider its assessment accordingly. We provide below the correct information.</p> <p>Orange Fixed's residential offer comprises: Installation: free Local and national minutes: 22,000 Flexible minutes comprising fixed to mobile and 9 international destinations: 1,000 minutes (from bundle=0.03 JoD)</p> <p>The small business fixed line package comprises: Installation: 20 JoD Local and national minutes: 11,000 Flexible minutes comprising fixed to mobile and 9 international destinations: 60 minutes (from bundle=0.015 JoD)</p>
59	6.2	TRC stated in the previous paragraph that FBWA offers are available with advertised download speeds of 4 Mbps, 6 Mbps and 8 Mbps. Yet in the table (Exhibit VI.2), TRC refers to the availability of download speed 150Mbps. This needs to be checked for accuracy.
59	6.2	In Exhibit VI.1, TRC stated that the maximum monthly price (JD) for xDSL is 21.83 for 16Mbps. However, in this table (Exhibit VI.2) TRC states that the maximum monthly price (JD) is 21.83 for 24Mbps. Which is correct 16Mbps or 24Mbps?
61	6.2	We question why TRC has excluded this offer from its assessment. This offer competes with fixed broadband retail offers.
65	6.2	We query why Zain and Umniah have been excluded from this table.
67	6.2	Existing suppliers of leased lines have appropriate infrastructure and can provide retail broadband services; Umniah and Mada are providing LL over FBWA, and most of the existing operators are providing leased lines over fibre and microwave links. TRC should also consider Umniah leased line services provided to more than 3,000 schools.
75,76	7.3	TRC should consider the cost incurred by operators for each contract with property developers/owners. It should also note that the value of the contract paid by the contracted operator is based on commercial business cases of retail offers' plans. Making the access available to OLOs based on regulated prices of WLA will prevent the SMP operator to compete on the tenders released by property developers/owners. This is unfair and will damage the SMP operator substantially.
92	10.2	<p>TRC should re-visit and check the data underpinning the example it cites and reconsider its assessment accordingly. We provide below the correct information.</p> <p>Orange Fixed's residential offer comprises: Installation: free Local and national minutes: 22,000 Flexible minutes comprising fixed to mobile and 9 international destinations: 1,000 minutes (from bundle=0.03 JoD)</p> <p>The small business fixed line package comprises: Installation: 20 JoD Local and national minutes: 11,000 Flexible minutes comprising fixed to mobile and 9 international destinations: 60 minutes (from bundle=0.015 JoD)</p>
102	12.2	We query why Mada has not been considered in the assessment of FBWA services. TRC should refer to the QoS bi-annual reports which include the number of orders for both Umniah and Mada FBWA services.
111	12.7	In its analysis of the 3CTs, TRC should not assume that the starting point is FACO over copper. The relevant product market for FACO comprises copper, FLTE, fibre and others. This implies that entry barriers are low due to the large number of operators providing services over various infrastructures.
111	12.7	TRC does not support its conclusion with a list of examples of such practices at the retail level for which competition law is not sufficient to deal with.
113	12.7	This subject matter of this paragraph is retail FACO, not wholesale FACO.
113	12.7	TRC has not set out the competition problems on the market for retail FACO.

123	13.3	TRC has not considered in its assessment the exemptions on annual spectrum fees granted to FBWA licensees or the very low spectrum acquisition fees for FBWA services. Both give FBWA licensees an advantage over other fixed operators that use different technologies.
123	13.3	The trunk segment of TI is not within the scope of this consultation.
124	13.3	This conclusion is not valid given the market structure. TRC should consider the OLOs (more than 5 operators) that provide FTTH.
124	13.3	TRC's conclusion is based on the exception of wholesale access via FBWA. We consider that the exclusion of access via FBWA is not justified.
126	13.4	TRC should consider the declining market shares. Current trends are such that Orange Fixed's market share is likely to fall below 50% during the next 2-3 years.
129	13.6	Orange Data is a retail not wholesale provider.
139	14.1	It is unclear why TRC references leased lines in this consultation (i.e. the fixed market review).
139	14.2	We would note that existing remedies do not include sub-loop.
140	14.2	The delay to respond to access requests is not introduced by Orange Fixed. Orange Fixed had submitted the TD-TSLRIC since February 2017 with no response from the TRC to date in spite of the several official meetings and letters submitted by Orange Fixed to TRC.
141	14.2	Access to ducts have always been subject to availability and this is currently exist as parts of the TSLRIC costing models of TRC as well as being part of the wholesale services by Orange Fixed.
142	14.2	Account Separation <ul style="list-style-type: none"> ▪ The outputs of the TD TSLRIC model are considered inputs to the Accounting Separation. ▪ The TRC till this moment did not provide Orange Fixed with any feedback about the TD TSLRIC model submitted by Orange Fixed to TRC in February, 2017.
142	14.2	The top-down model has not been approved. Moreover, the rates recently approved by TRC are subject to challenge as they were not calculated based on a top-down costing model.
145	14.2	The proposed notification period appears excessive. A shorter time period would be sufficient for operators to prepare for a changed offer.
147	14.2	Orange Fixed believes that TRC should not proceed with the proposed remedies without solving the lack of clarity related to the reference of costing figures. One of the main remedies of the last market review conducted by the TRC was to build a Top-Down TSLRIC model by Orange Fixed. Consequently, Orange Fixed provided TRC with our TD TSLRIC costing model in February 2017.
<p>By the end of 2017, TRC had issued the new version of TSLRIC model to be applied since the first of January, 2018. This model includes the costing figures of the interconnection services like the Bitstream, DC, Collocation, Naked BS, and LLU...etc.</p> <p>Currently, we have three different costing models; the TD TSLRIC model, the TSLRIC model of 2011 and the new TSLRIC model of 2018.</p> <p>Moreover, Orange Fixed had submitted an objection to implement the new costing figures of different services including bitstream.</p> <p>Orange Fixed believes that if TRC proceed with adding extra remedies without having clear reference for implementing the needed costing figures, will make the subject more complex.</p>		
160	14.4	TRC says that "there is no need for Orange Fixed to provide double tandem termination". We do not understand how double tandem termination is related to wholesale call termination.
163	14.4	Table title is Exhibit XIV.1 Regulated rates for fixed national call termination as per the 2017 Regulatory Decision on Charges for <i>Mobile Interconnection</i> ; it should state " <i>Fixed Interconnection</i> ".

163	14.4	The trunk segment of TI is not within the scope of this consultation.
172	14.6	TRC has not considered that Zain and Umniah have affiliates and are able to make bundled offers. TRC should investigate Zain and Umniah's bundled offers available in the market.