**Response to TRC Mobile Markets Review**

**30 Dec 2019**

Zain has carefully studied the TRC's market review of mobile markets in Jordan, dated July 2019. We congratulate the TRC on a thorough and detailed review of the market in an objective and evidence-based manner. This review is a substantial improvement on the previous review conducted in 2010.

We are pleased to see a sensible reduction in the proposed regulation of the voice call termination market and a proportionate proposal to regulate the SMS termination market, given the risk that the current Bill & Keep arrangements could come to an end, leaving the market unregulated. In particular, we are very pleased to see that the TRC now follows international best practice in finding the Mobile Access and Call Origination (MACO) market not susceptible to *ex-ante* regulation and thus will remove large amounts of unnecessary and costly obligations that had no material effect on consumer outcomes. This is a significant step forward for the Jordanian market. The elimination of undue asymmetry in the imposition of ex-ante remedies in what is already a highly competitive market is a welcome move by the TRC.

There are, however, some areas where the TRC could take further actions to improve market outcomes for consumers and these are set out below and in response to the questions. We wish to make two general points about the market: first about the impact of Over the Top (OTT) services and their effect on the market and secondly concerning spectrum allocation restrictions.

*The Impact of OTT Services*

The consultation document notes the growth in data traffic (Exhibit II.16) and data revenues (Exhibit II.19). The former shows growth by a factor of 6.5 and the latter by 2.8 between 2015 and 2018. Growth in data traffic is driven primarily by the use of OTT services, including video, voice and messaging apps. While we recognise that OTT services are valuable to our consumers, the difference between the growth in traffic and the growth in revenue demonstrates how hard it is for mobile network operators to monetise the provision of data access. This has a direct effect on our ability to continue to invest in our mobile and fixed networks to provide the quality of service our consumers require.

It is our view that it is incumbent on the TRC to take the effect of OTT services on network operators into account. Whilst it has done so to some extent in this market review, we believe that could have been even more forward-looking and considered the full impact of these services on network operators.

In January 2018, the TRC gave the industry a presentation on the impacts of OTT. This was a very useful input that clearly set out the regulatory imbalances between OTT services and network operators. These imbalances have also been pointed out by Ebru Tekin Bilbil[1] in the report on methodologies for regulating OTT services. On Slide 33 of its presentation, the TRC rightly states that *OTT behaviour will have an impact on revenue from operators.* It also claims that network operators will "benefit" from an increase in demand for data. However, as Exhibits II.16 and II.19 in the consultation show, network operators are not "benefitting" from that demand, as revenue growth is not keeping up with demand growth.

[1] Bilbil, E. T. (2018). *Methodology for the Regulation of Over-the-top (OTT) Services: The Need of A Multi-dimensional Perspective.* International Journal of Economics and Financial Issues, 8(1), 101-110.

Bilbil[2] points to different approaches to classifying and, therefore, regulating OTT services in India and the EU and then suggests her own multi-criteria approach. Our concern is that the market review methodology does not adequately capture the full effects of OTT on the market and that the TRC should continue to examine the impact of OTTs to ensure that the interests of network operators, who need constantly to invest in network upgrades, are not being harmed, whilst ensuring that consumers benefit.

The TRC may therefore need to consider regulation of OTTs to ensure that mobile network operators (MNOs) are not at a competitive disadvantage and are able to compete on a level playing field. It may also need to consider actions that prevent OTT services free-riding on mobile networks.

*Spectrum Allocation*

Mobile spectrum is currently allocated according to the following table.

| Band | Orange | Umniah | Zain |
|---|---|---|---|
| 900 MHz | 2 x 12.5 | | 2 x 12.5 |
| 1800 MHz | 2 x 10 | 2 x 20 | 2 x 20 |
| 2100 MHz | 2 x 15 | 2 x 10 | 2 x 20 |
| 2600 MHz | 2 x 10 | | |

This allocation apparently means that Zain has more spectrum allocated to it in total than either Orange or Umniah. However, the spectrum allocated to Orange in the 900MHz and 2600MHz bands is not specified for use by a particular generation of mobile technology and so may be used for 2G, 3G or 4G as Orange sees fit. By contrast Zain's spectrum in the 900 MHz band is restricted to 2G voice services until the licence is renewed in February 2021 and 2x10MHz of its 2100MHz spectrum is restricted to 3G until 2026 and the other 2x10MHz until 2029.

The allocation thus gives Orange an in-built advantage for 4G services where it can deploy up to 2 x 32.5 MHz of spectrum in multiple bands and Zain can only deploy 2 x 20 MHz of 1800MHz spectrum. Further, as Orange can deploy its 900 MHz spectrum for 4G, this gives it superior in-building penetration and coverage. The allocation of 2 x 10 MHz of spectrum in the 2600 band is also advantageous to Orange as this band has better capacity characteristics than low frequency bands.

It is our view that the TRC should transition to full technology neutrality as soon as practical, in line with international practice. Such a transition would lead to significant economic benefits for Jordanian consumers and the economy. A recent report by the GSMA points out:

> *"The higher spectral efficiency of 4G compared to legacy 2G and 3G technology is a key ingredient in delivering the connected society. There is empirical evidence for the economic benefit brought about by introducing 4G mobile broadband technologies"* [3].

Restricting 900MHz for 2G services and 2100MHz spectrum for 3G services is therefore preventing the further development of mobile data markets in Jordan. The TRC should, therefore, amend technology specific licences to remove usage restrictions urgently to allow Jordan to benefit from increased data speeds and usage.

[2] Ibid

[3] See GSMA (2019) *'The Benefits of Technology Neutral Spectrum Licences'*

*Answers to specific questions*

*1. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for retail mobile services?*
*2. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for wholesale mobile voice call termination services?*
*3. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for wholesale mobile SMS termination services?*
*4. Do you agree with the TRC's preliminary conclusions regarding the relevant product and geographic market definitions for wholesale mobile access and call origination services?*

Zain agrees with the product and geographic market definitions, but would like to note the following information in relation to Question 3, concerning the market definition of SMS termination.

Exhibit II.15 of the TRC's consultation document shows overall growth in SMS messages of 26% over the period 2015 – 2018. However, the TRC should note that this growth in SMS traffic is driven by the increase in Application to Person (A2P) messaging rather than Person to Person (P2P) messaging, which has seen a substantial reduction in usage as consumers have switched to OTT apps. A2P messages include applications such as promotional messages and the sending of security codes for on-line banking applications. Whilst this does not affect the market definition, *per se*, it does affect the way the market operates.

*5. Do you agree with the TRC's preliminary conclusions regarding the mobile markets found to be susceptible to ex ante regulation?*

Zain agrees with and welcomes the TRC's conclusion that the wholesale Mobile Access and Call Origination (MACO) market is not susceptible to *ex ante* competition, bringing Jordan in line with other countries where this market has also been found to be effectively competitive.

Zain recognises that there are barriers to entry in this market brought about by the physical limitations on spectrum and the number of licences issued and so meets the first criterion of the Three Criteria Test. These are physical and regulatory barriers to entry rather than resulting from actions of operators.

However, since the launch of Umniah in 2005 the market has become increasingly competitive and so does not meet the second criterion: the market is effectively competitive.

The presence of three firms in a market is a recognised benchmark for finding a market competitive. Seminal academic research by Bresnahan and Reiss[4] found that the presence of three firms in a variety of local service industry markets across the USA resulted in those markets enjoying competitive outcomes. The marginal gain in competitive outcomes of a fourth firm was positive but small. Xiao and Orazem[5] used Bresnehan and Reiss's model and applied it to local broadband markets in the USA and found the same results: a fourth firm in a market resulted in only limited competitive gains. In a more theoretical paper, Huck et al[6] also found that a duopoly market tended

[4] Bresnahan, T. F., & Reiss, P. C. (1991). Entry and competition in concentrated markets. Journal of political economy, 99(5), 977-1009.
[5] Xiao, M., & Orazem, P. F. (2011). Does the fourth entrant make any difference?: Entry and competition in the early US broadband market. International Journal of Industrial Organization, 29(5), 547-561.
[6] Huck, S., Normann, H. T., & Oechssler, J. (2004). Two are few and four are many: number effects in experimental oligopolies. *Journal of Economic Behavior & Organization*, *53*(4), 435-446.

to result in collusive behaviour between the two suppliers but that such behaviour is difficult to achieve when at least three firms are present.

The two empirical papers used an “entry threshold” model to establish the extent to which industry profits tended towards zero as additional firms entered the market. These models show that the rate of increase of competition decreases with the number of firms in the market at the time of entry, hence the marginal competitive gain from each additional entrant is smaller compared with the previous entrant. The two papers therefore come to the same conclusion about the number of firms needed to create a competitive market.

Further evidence of the relationship between market structure and competition can be found in various market review consultations and decisions issued by the UK regulator, Ofcom. Most recently, Ofcom’s consultation *‘Promoting investment and competition in fibre networks’*[7] divided the UK into three geographic markets based on the number of actual or potential network operators in the area. For a geographic area to be defined as competitive it needs the presence of BT plus two or more other operators, meaning that the presence of three operators is enough for the area to be competitive. This approach is consistent with Ofcom’s findings in previous market reviews of the Wholesale Broadband Access market.

The competitiveness of the MACO market in Jordan was explained in a White Paper prepared for Zain by SPC Network and submitted to the TRC in 2017. This showed that in the period since the 2010 market review, Zain’s market share of subscribers had declined with a commensurate rise in shares for Orange and Umniah. The shares of the three MNOs are now very similar.

International comparison shows that Jordan has a less concentrated market[8] than any three-operator market in the European Union, where the MACO market is not considered susceptible to *ex ante* regulation. Figure 1 below, taken from the White Paper prepared by SPC Network for Zain in 2017, shows that Zain has a lower market share than the leading operator in any three mobile network markets in the EU.

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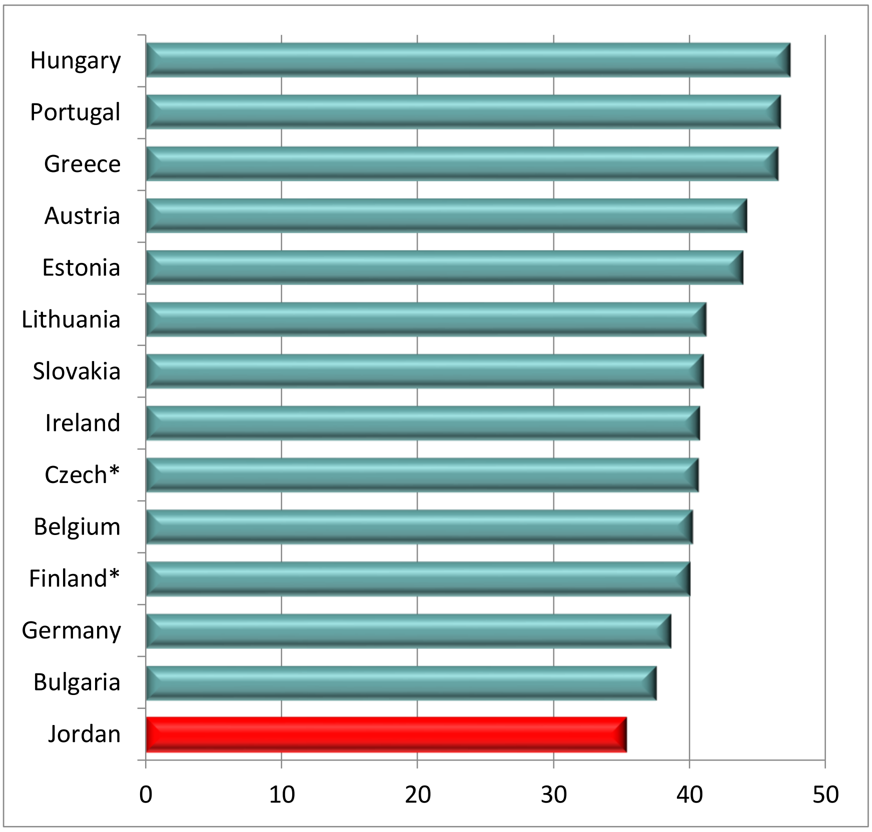
[7] Issued 11th December 2018

[8] Measured using the Herfindahl-Hirschmann Index (HHI).

**Figure 1: Market Share of Leading Operators in 3-MNO Markets**




* Countries marked with an asterix have a fourth operator, but with a market share below 1%. (Source: Ovum, TRC, SPC Network)

As the TRC points out in its analysis, whilst Zain experienced some market share growth in 2015 and 2016, it lost market share in 2017. This change in market share reflects a dynamic market in which consumers switch between providers, dependent on who is offering the best deal.

The competitiveness of the market is reflected in prices and ARPU. Zain, and we expect other operators, has had to lower prices and/or offer improved quality of services for the same price, to maintain a competitive position in the market. This has resulted in lower ARPU across our customer segments. Lower prices and lower ARPU imply that consumers have gained and there has been a transfer of welfare from suppliers to consumers.

The second criterion of the Three Criteria Test is concerned with the market not trending towards effective competition. Given that the market is now fully competitive by all measures, we agree with the TRC that the MACO market does not fulfil this condition and so is not susceptible to *ex ante* regulation.

*6. Do you agree with the TRC's preliminary competition assessment and SMP designations on the market for wholesale mobile voice call termination?*

We accept that voice call termination is a monopoly for each terminating network and, therefore, that regulations are required to prevent firms abusing that position.

However, as noted in our introduction, OTT calling apps such as WhatsApp, potentially bypass termination and may, therefore, constrain even a monopolist of voice call termination from raising prices above the competitive level. Mobile callers have a wide choice of apps available to them that allow them to call another party at no charge. Should a mobile operator seek to exploit its monopoly position over call termination by increasing wholesale termination rates to the monopoly level and that additional charge were passed on to the calling party, then it is quite possible that the caller would prefer to use an app, resulting in no revenue for the terminating network.

We do not see sufficient evidence of such substitution occurring today to affect either market definition of mobile call termination or an assessment of dominance in the market. Nevertheless, on a forward-looking basis, it is our view that the TRC should be aware that such substitution is likely to be stronger in future and so even this market may not fulfil the three criteria test in future.

*7. Do you agree with the TRC's preliminary competition assessment and SMP designations on the market for wholesale mobile SMS termination?*

We agree with TRC's finding. Firstly, we note from Exhibit II.15 in the consultation document that SMS message volumes have grown by 25% since 2015, although as noted earlier this growth is entirely A2P traffic. So, although messaging apps are substitutes for SMS for P2P messaging, traditional text messaging is an increasingly important element of the service mix for A2P messages.

Secondly, the TRC has rightly pointed out that the current Bill and Keep (B&K) arrangement is voluntary and may well come to an end during the period of this review. If it did so there is a real risk that mobile network operators could raise the price of SMS termination to the monopoly level. We do not believe that OTT apps are an effective substitute for SMS messaging for A2P messages since there are a plethora of messaging apps and some mobile users may not have subscribed to an app. A2P message originators, therefore, rely on SMS to ensure they can reach all mobile customers on a single platform. In these circumstances, originating networks would have no choice but to pass a price rise of SMS termination on to their customers. Inevitably this would cause significant harm to consumers and a reduction in consumer welfare.

Our view, therefore, is that the TRC is right to prevent such behaviour by regulating this market and taking control of the termination rate for SMS messages.

However, the points made concerning Question 6 above are also applicable to SMS termination for P2P messaging.

*8. Do you agree with the TRC's preliminary assessment of competition problems and appropriate remedies in the market for wholesale mobile voice call termination?*

We are pleased to see that the TRC proposes to impose the same remedies on Umniah as it has on Orange and Zain. The last market review did not impose remedies on Umniah, which we believe was a significant weakness with that review. Umniah was and is a significant player in the market, with a market share approximately the same as Orange and Zain and so there is no reason for it not to be subject to the same regulations,

We support that TRC's proposal that the **Access** obligation should assume that all requests for access are reasonable and that the onus will be on the SMP operator to justify refusal of access.

We do not object to the obligation on operators to negotiate in good faith but doubt the effectiveness of such an obligation. It is extremely difficult to prove that negotiations are not conducted in good faith.

The proposal to conclude negotiations in a manner that is "fair, reasonable and timely" is, in our view, too vague. The TRC should be more specific with regard to what "timely" means and should consider setting a limit on the time allowed to negotiate.

We support the continued implementation of **non-discrimination** obligation on all operators.

We are pleased to see that the TRC will withdraw the TRC Board Decision no. 9-1/2004 and fully agree with this proposal. We have argued for a long time that this ruling is outdated and has been overtaken by events. Our arguments against this ruling are set out below:

i) At the time the ruling was imposed, Zain had a subscriber market share of more than 75%, and there was only one other operator. Today, Zain's subscriber market share is around 35%.

ii) The TRC imposes mobile termination rates (MTRs) based on Long Run Incremental Costs (LRIC) and these rates are the same for all operators. The result is that on-net and off-net call prices are now very similar and are included within the bundle.

iii) At the time of Decision 9-1/2004 there was no OTT-based alternative to voice calls using termination services. Today there is a wide variety of data-based services that can substitute for voice calls (e.g. Skype, FaceTime, Facebook Chat and WhatsApp) and so do not incur a mobile termination charge.

Decision 9-1/2004 has been used opportunistically by other operators to make unfounded complaints against Zain's behaviour, **none of which has been upheld by the TRC**. Removing this Decision will, therefore, prevent such unfounded complaints being made again in the future.

It is our view that had the review of mobile market been conducted earlier, in line with the two to three period set out in the TRC's White Paper on market reviews[9] or with the EU policy of conducting reviews every three years, then Decision 9-1/2004 would have been revoked earlier as competition in the market developed. We therefore propose that the revocation of Decision 9-1/2004 should be backdated to the date when the LRIC model for mobile termination was introduced. As noted above, no complaints based on this Decision have been successful and backdating the withdrawal would have the effect of preventing further spurious complaints from being launched on the basis of a Decision that the TRC now proposes to revoke. Such an action by the TRC would have significant benefits for all parties and could prevent further wasting of the TRC's and the courts' time.

It is not clear from the consultation document if the model text of the proposed **Statement of Compliance** will be subject to further consultation. Given the importance of this proposed measure, we expect that it will be and will provide further comments at that time.

We agree that full **accounting separation** is not required and so support the move towards the supply of "relevant accounting information" in this market. However, we want to ensure that this requirement does not become disproportionately burdensome. We note that the TRC proposes to issue further documentation on what information will be required. Zain's support of this proposal in

[9] TRC (2009) *'White Paper on Market Reviews'* p. 9

principle should not be taken as support for the specific information. In the event that we find the TRC's requirements overly burdensome, we will make this point when the additional documentation is published.

Zain provisionally accepts the TRC's proposal for a **Unified Reference Offer** (URO). We assume that the TRC will consult on the details of the URO and look forward to providing feedback.

The TRC's proposal regarding **Key Performance Indicators** (KPIs) is broadly welcomed. In particular, we welcome the proposal to ensure that each SMP operator provides data that compare the service provided to itself and to other operators. This is important to establish that the SMP operator is not discriminating between internal and external customers.

In our view, KPIs should not be provided only to the TRC but should be published on operators' websites so that they are fully transparent and available to other stakeholders as well as customers. Such publication should only happen once the TRC has tested, verified and approved the KPIs to ensure operators do not attempt to use unverified KPIs to mislead customers and distort competition.

It is not clear from the consultation document whether the TRC plans to consult on its proposed KPIs. Nevertheless, we look forward to the TRC publishing further details on what the KPIs will be and will comment on these when this document is published.

Zain agrees with the continued glide path for termination rates.

9. Do you agree with the TRC's preliminary assessment of competition problems and appropriate remedies in the market for wholesale mobile SMS termination?

We agree with the TRC's proposed remedies in this market. Our comments set out above in relation to mobile voice call termination remedies are also applicable to SMS.

In addition to these points, it is essential that regulated SMS termination rates are symmetrical, i.e. the same termination rate is applied to all operators, as suggested by the market review finding and as determined by the FW-LRIC model adopted by the TRC. As the three mobile networks are of roughly the same size, there would be no justification for asymmetric termination rates.