هيئة تنظيم الاتصالات
Telecommunications Regulatory Authority
Kingdom of Bahrain - مملكة البحرين

Dominance designation for termination services on VIVA's mobile network

Final Determination

16 May 2013

Ref: MCD 05 13 044

Public Version

Legend
Confidential information has been replaced by [✂]
Text reproduced from the Draft Determination is shaded in grey

Purpose: To identify the relevant market in which VIVA supplies mobile termination services in Bahrain, and to assess whether VIVA holds a dominant position in that market.

DETERMINATION

HAVING REGARD TO THE LEGISLATIVE DECREE NO. 48 OF 2002 PROMULGATING THE TELECOMMUNICATIONS LAW, THE COMPETITION GUIDELINES ISSUED BY THE TELECOMMUNICATIONS REGULATORY AUTHORITY OF THE KINGDOM OF BAHRAIN ON 18 FEBRUARY 2010, ALL ADMISSIBLE EVIDENCE AND THE SUBMISSIONS MADE BY INTERESTED PARTIES, THE TELECOMMUNICATIONS REGULATORY AUTHORITY OF THE KINGDOM OF BAHRAIN HEREBY MAKES THE FOLLOWING DETERMINATION:

1. For the reasons set out in the Annex to this Determination the Telecommunications Regulatory Authority of the Kingdom of Bahrain (the "Authority") has identified and defined the following relevant market:
    a. the wholesale market for termination services on Saudi Telecommunications Company Bahrain B.S.C ("VIVA") mobile network in the Kingdom of Bahrain.
2. Termination services are interconnection services. They include voice calls, Short Messaging Services ("SMS") and Multimedia Messaging Services ("MMS") termination.
3. For the reasons set out in the Annex to this Determination, the Authority has identified and determines that:
    a. VIVA is dominant in the wholesale market for termination services on its own mobile network.
4. This Determination will be reviewed when conditions, as determined by the Authority, warrant it.
5. This Determination is without prejudice to the Authority's powers under the Telecommunications Law, promulgated by the Legislative Decree No.48 of 2002, the Competition Guidelines issued by the Authority on 18 February 2010, the Access Regulation, approved by the Authority's Regulation No. 1 of 2005 dated 30 April 2005, and the outcome of any on-going or future investigation, consultation or other regulatory process or measure carried out pursuant to such powers, all or any of which may result in the application of different terms and/or findings than those of this Determination, including the determination and definition of new markets and the designation of dominance.
6. This Determination shall come into effect from the date of its issuance.
7. As an operator declared dominant, VIVA shall comply with the obligations set out in Article 57(b) of the Telecommunications Law. In particular, VIVA is required to prepare a Reference Interconnection Offer within 3 months of publication of this Determination with tariffs and terms which are fair and reasonable and non-discriminatory.

8. This Determination supplements the "Dominance designation for termination services on individual mobile networks Determination" issued by the Authority on 1 February 2010.

Signed on 16/5/2013.

Mohamed Bubashait

General Director

Telecommunications Regulatory Authority

Manama, Kingdom of Bahrain

Annex: Reasoning for the Final Determination of dominance in termination services on VIVA's mobile network

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List of acronyms and definitions

Batelco	Bahrain Telecommunications Company B.S.C
CPP	Calling Party Pays
EC	European Commission
ERG	European Regulators Group
FTM	Fixed to Mobile
GSM	Global System for Mobile
MCP	Mobile Communications Provider
MMS	Multimedia Messaging Service
MNO	Mobile Network Operator
MTM	Mobile to Mobile
MTR	Mobile Termination Rate
Ofcom	Office of Communications (UK telecommunications regulator)
OLO	Other Licensed Operator
RO	Reference Offer
RPP	Receiving Party Pays
SMS	Short Message Service
SSNIP	Small but Significant Non-transitory Increase in Price
STC	Saudi Telecommunications Company

1 Introduction and purpose of this Final Determination

1. This Final Determination sets out the underlying reasoning for the adopted market definition and the conclusions regarding dominance in the supply of termination services on VIVA's mobile network in Bahrain.
2. The purpose of this Final Determination is to identify the relevant market in which VIVA supplies mobile termination services in Bahrain, and to assess whether VIVA holds a dominant position in that market.
3. A dominance designation provides the legal basis whereby regulatory obligations deemed necessary and/or mandated by the provisions of the Telecommunications Law promulgated by the Legislative Decree No.48 of 2002 (the "Telecommunications Law") can be defined and implemented.
4. In 2010, the Authority determined that both Batelco and Zain were dominant in the supply of mobile termination services on their respective networks[1]. As a result, both Batelco and Zain are regulated in respect of mobile termination rates. In this Final Determination, the Authority considers whether regulation should also be extended on a non-discriminatory basis to VIVA.

2 Background to this Determination

5. On 30 August 2012, the Authority issued a draft Dominance Determination for termination services on VIVA's mobile network (the "Draft Determination"),[2] in which the Authority proposed to find that VIVA is dominant in the wholesale market for termination services on its own mobile network.
6. On 4 October 2012, the Authority received submissions from Batelco[3], Zain[4], and VIVA[5].
7. The text from the market definition and dominance sections of the Draft Determination is identified in this Annex by shading[6]. A summary of the submissions received is then presented, followed by the Authority's final analysis and conclusions.
8. In this section, the Authority briefly describes the importance of mobile termination services and provides an overview of the existing regulation of these services in Bahrain. A summary of market developments since the Authority's previous review of mobile termination markets is then provided.

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[1] The Authority, "Dominance designation for termination services on individual mobile networks", 1 February 2010 (Ref: MCD/02/10/010).

[2] The Authority, "Dominance designation for termination services on VIVA's mobile network, Draft Determination", 30 August 2012 (Ref: MCD/08/12/115).

[3] Batelco "Response to the Telecommunications Regulatory Authority of Bahrain (TRA) Draft Dominance Determination for Termination Services on VIVA's Mobile Network", 4 October 2012 (Ref: GCL/346/12).

[4] Zain "Zain Bahrain Response to the TRA Consultation on "Dominance designation for termination services on VIVA's mobile network"", 4 October 2012.

[5] VIVA "Submission to the Telecommunications Regulatory Authority by VIVA BAHRAIN on the Public Consultation: "Dominance designation for termination services on VIVA's mobile network"", 4 October 2012.

[6] The text, with the exception of minor edits, is as per the Draft Determination.

2.1 Importance of mobile termination services

9. Mobile termination is a wholesale service that enables a subscriber on one mobile network to call a subscriber on another mobile network. It is a wholesale service because it is purchased by the mobile network operator ("MNO") of the calling party, rather than by the retail customer. In the absence of mobile termination, a subscriber would only be able to call other subscribers on the same network. In other words, mobile termination is a necessary wholesale input for calls between subscribers of different networks (i.e. an "off-net" call), whereas for calls between subscribers on the same network (i.e. "on-net" calls), the termination service is self-supplied.

10. Mobile termination is also used for supplying off-net Short Messaging Services ("SMS") and Multimedia Messaging Services ("MMS").

11. Mobile termination is also used for calls made by subscribers on a fixed network to subscribers on a mobile network (fixed-to-mobile or "FTM" calls). In such cases, the fixed network operator who originates the call purchases the wholesale termination service from the MNO of the recipient of the call.

12. The importance of mobile termination services can be seen by comparing the retail price of calls that use mobile termination (such as FTM calls) with the MTR. Batelco's standard retail price for national FTM calls is 21 fils per 90 seconds, or equivalent to 14 fils per minute, while VIVA's average MTR is approximately 6.5 fils per minute.[7] VIVA's MTR therefore represents about 46% of the retail price of an FTM call.[8] Reductions in MTRs are therefore expected to lead to lower retail prices for FTM (and off-net mobile-to-mobile or "MTM") calls.

13. As discussed below, mobile termination services supplied by Batelco and Zain are currently regulated in Bahrain, although VIVA's mobile termination service is not. However, the importance of termination services on VIVA's mobile network is evident from the Authority's market statistics, which shows that [✂]% of mobile call termination minutes supplied in Bahrain during 2011 were supplied by VIVA, with this share increasing to [✂]% by the end of 2012.

14. The importance of cost-based MTRs is widely recognised by telecommunications regulators around the world.[9] As well as being an important input into FTM calls, mobile termination can influence the competitive dynamics between MNOs. For example, high

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[7] Based on VIVA's response to the Authority's market statistics questionnaire for 2012. The average MTR is calculated by dividing the total wholesale voice call termination revenue earned by VIVA during 2012 by the total volume of voice call termination minutes supplied by VIVA during 2012.

[8] In the 2010 Dominance Determination (at paragraph 14), the Authority reported a similar proportion (47%) for 2008.

[9] For example, according to the European Regulators Group (ERG), national regulatory authorities (NRAs) in the European Union have generally designated MNOs to have market power in the supply of termination services, with cost-oriented price control obligations being introduced in most cases. The ERG noted that the actual implementation of price controls for mobile termination services varied widely throughout the EU, resulting in large variations in MTRs. See ERG, "ERG's Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates" (ERG (07) 83), available at http://www.erg.eu.int/doc/publications/erg_07_83_mtr_ftr_cp_12_03_08.pdf. The European Commission has also recognised the divergences in regulatory approaches taken across the EU, and has recommended greater harmonization of regulation of termination markets, with particular reference to termination rates based on forward-looking long-run incremental costs (LRIC). See EC, "Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU" (2009/396/EC), paragraph 13, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF.

MTRs can lead to high prices for off-net MTM calls, which in turn can distort competition in favour of larger MNOs.[10]

2.2 Existing regulation of mobile termination services

15. The existing regulation of mobile termination is formally based on the Authority's 2010 Dominance Determination in respect of mobile termination services (the "2010 Dominance Determination").[11]

16. The rationale for regulating mobile termination, and the implementation of such regulation is discussed in the Authority's 2010 Position Paper on the Regulation of Mobile Termination Services (the "2010 Position Paper").[12]

2.2.1 The 2010 Dominance Determination

17. Mobile termination services are currently regulated in respect of Batelco's mobile network and Zain's mobile network as a consequence of the Authority's 2010 Dominance Determination.

18. In the 2010 Dominance Determination, the Authority defined separate wholesale markets for termination services on Batelco's mobile network and for termination services on Zain's mobile network. Termination services included the termination of voice calls, SMS, and MMS. In considering the relevant product dimension, the Authority noted that while wholesale voice call termination to an individual mobile subscriber may be the appropriate starting point for market definition purposes, termination services on a particular network are offered on a homogenous basis and are subject to a common pricing constraint. As a result, the Authority took the view that the relevant market includes termination to all subscribers of an MNO.

19. The Authority noted that there are no effective demand-side substitutes for wholesale termination on a particular mobile network. Where a subscriber of one operator (Operator A) calls a subscriber of another operator (Operator B), Operator A has no choice but to purchase termination services from Operator B in order to complete the call. Termination services offered on another network are not close economic substitutes for Operator A.

20. The Authority considered whether potential demand substitution at the retail level could justify a broader market definition[13]. However, the Authority concluded that such substitution was unlikely to constrain individual MNOs when setting termination rates.

21. The Authority also dismissed substitution possibilities on the supply-side, as an MNO could not terminate calls to subscribers on another network.

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[10] Such competitive concerns have been behind the EC's recommendation to set MTRs on the basis of "pure" LRIC. See EC "Commission Staff Working Document accompanying the Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU" 7 May 2009.

[11] The Authority, "Dominance designation for termination services on individual mobile networks", 1 February 2010 (Ref: MCD/02/10/010).

[12] The Authority, "The Regulation of Mobile Termination Services Position Paper", 1 February 2010 (Ref: MCD/02/10/011).

[13] Such substitution possibilities included whether retail subscribers making a call to a mobile number would instead switch to making a call to a fixed number, to using an SMS or equivalent messaging service, or to making a call to a mobile number on another MNO.

22. In relation to arguments for a broad cluster market encompassing termination and retail services, the Authority noted that the Calling Party Pays (CPP) principle creates a disconnection between the calling party who pays for termination and the party whose subscription decision determines which MNO supplies the termination service. As consumers do not appear to base their subscription decision on the cost of incoming calls (as consumers do not pay for incoming calls under CPP), consumers are unlikely to switch MNOs in response to an increase in termination rates. In other words, an MNO faces a strong incentive to increase its termination rates for incoming calls, as its subscribers are unlikely to switch to another MNO in response to such an increase.

23. Having defined separate wholesale markets for termination services on Batelco's mobile network and Zain's mobile network, the Authority then considered the extent of competition in each of those wholesale markets. Given that each MNO had a monopoly over termination services on its network, the presence of absolute barriers to entry, and the lack of countervailing buyer power, the Authority concluded that each MNO was dominant in respect of wholesale termination services on its mobile network.

24. As a consequence of the 2010 Dominance Determination, mobile termination services supplied by Batelco and Zain are regulated services.[14] Batelco includes mobile termination services in its Reference Offer (RO), which the Authority reviews to ensure that rates are cost-based. Table 1 summarises the current regulated mobile termination rates (MTRs) that apply in respect of Batelco's mobile network[15].

Table 1: Regulated Mobile Termination Rates

	Current rates (approved 14 May 2012)
Mobile terminating access (fils per minute)	6.378
SMS terminating access (fils per SMS)	0.443
MMS delivery (fils per MMS)	124.495

25. Zain has included mobile termination services in its proposed RO which is currently being reviewed by the Authority.

2.2.2 The 2010 Position Paper on the Regulation of Mobile Termination Services

26. In its 2010 Position Paper, the Authority set out the basis for regulating MTRs. This included the rationale behind the regulation of MTRs, as well as a discussion of the pricing principle applicable to MTRs and the implementation of this pricing principle (including the Authority's position on symmetry).

27. In terms of the rationale, the Authority noted that in the absence of regulation, MNOs face an incentive to set high MTRs, and that excessive termination rates distort competition to the detriment of consumers. Such distortions can arise through the presence of network

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[14] Batelco's mobile termination services were already regulated services at the time of the 2010 Dominance Determination, by virtue of the Authority's Determination of Dominance in Interconnection Markets, 9 August 2003. The 2010 Dominance Determination extended regulation to Zain's mobile termination services.

[15] As determined in the Authority "An Order issued by the Telecommunications Regulatory Authority on the Reference Offer of the Bahrain Telecommunications Company B.S.C", 14 May 2012 (Ref: MCD/05/12/072).

effects and pricing differentials between on-net and off-net calls, particularly where MNOs have asymmetric market shares.[16]

28. The Authority also noted that high MTRs can distort consumer choices and competition between fixed and mobile networks, as the cost of supplying FTM calls will be inflated.

29. On the implementation of regulated MTRs, the Authority discussed the use of top-down and bottom-up cost models, noting that Batelco had developed a top-down accounting model which is used by the Authority in the RO process. The Authority referred to its intention to develop a bottom-up cost model in consultation with the industry, in order to set MTRs going forward.[17]

30. The Authority stated that MTRs should be symmetrical unless there are objective and material cost differences which are beyond the control of the MNOs.[18] The Authority noted that any asymmetry could only be considered for a transitory period in specific circumstances, such as where there are differences in spectrum allocation and where there are incumbency advantages. The Authority concluded that neither of those circumstances applied, as both Batelco and Zain had a broadly similar mix of spectrum, and incumbency advantages were not an issue in light of Zain's market share at the time.

31. In the 2010 Position Paper, the Authority noted that although Saudi Telecom Company (STC) was about launch its mobile network in Bahrain, it was not appropriate to declare STC to be dominant in respect of termination services, as STC had not at that stage commenced operations. The Authority considered that extending regulation to STC would be premature, and noted that Zain had also remained unregulated for an initial period following its entry in 2003.

2.3 Recent market developments

32. At the time of the 2010 Dominance Determination, only Batelco and Zain were offering mobile termination services in Bahrain. The 2010 Dominance Determination therefore only applies to Batelco and Zain.

33. In March 2010, STC launched its mobile network in Bahrain under its VIVA subsidiary. Since its entry, VIVA has rapidly increased its share of mobile subscribers in Bahrain, as illustrated in Figure 1.

Figure 1: Mobile Subscriber Market Shares

[✂]

Source: Authority's analysis based on operator information

34. In March 2011, a year after its entry, VIVA's share of mobile subscribers reached **[✂]**. By November 2011, VIVA became the largest MNO in terms of subscriber numbers, with just over **[✂]** of mobile subscribers, compared to Batelco's share of just under **[✂]**, and Zain's share of **[✂]**. By March 2013, VIVA's share of mobile subscribers was **[✂]**.

35. On 17 August 2011, the Authority informed all Licensed Operators of its intention to undertake a number of market reviews.[19] The Authority noted that VIVA had entered

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[16] 2010 Position Paper, paragraphs 18 to 23.

[17] ibid, paragraphs 31 to 39.

[18] ibid, paragraph 40.

[19] Letter from the Authority to Licensed Operators, 17 August 2011 (Ref: MCD/08/17/128).

since the previous review of the market for mobile termination services, and that a review of wholesale termination services was appropriate to ensure that regulation is applied consistently in this market.

3 Legal framework

36. Article 3 of the Telecommunications Law sets out the duties and powers of the Authority. According to Article 3(a) of the Telecommunications Law,

> *"The Authority shall carry out its duties and exercise its powers efficiently, effectively, regularly, reasonably and in a non-discriminatory and transparent manner."*

37. According to the Telecommunications Law, a licensed operator(s) declared dominant in interconnection markets is subject to specific regulatory obligations, including the publication of an approved RO and the obligation to offer tariffs based on forward-looking incremental cost (Article 57(b)) and the offer of interconnection services and to interconnect with other Licensed Operators (Article 57(c)).

38. More specifically, Article 57(b) of the Telecommunications Law, which deals with interconnection, states that:

> *"A Public Telecommunications Operator determined by the Authority to have a Dominant Position in a particular Telecommunications market shall, within three months of such determination and every six months thereafter, publicise a reference Interconnection offer after obtaining the Authority's approval to such offer.*
>
> *Such offer shall include a full list of basic Interconnection services, conditions of Interconnection and the tariff for every service.*
>
> *The Authority may issue an order specifying the terms and conditions and the tariffs if it does not approve the contents of such offer in this respect, which order shall be effective from the date of issue, unless the Authority specifies another date.*
>
> *Such terms and conditions and tariffs shall be fair, reasonable and non-discriminatory and the tariffs shall be based on forward-looking incremental costs or by benchmarking such tariffs against tariffs in comparable Telecommunications markets."*

39. A finding of dominance at the wholesale level triggers a regulatory obligation to submit an RO to the Authority for approval under Article 57(b) of the Telecommunications Law.

40. As noted above, in the 2010 Dominance Determination, the Authority determined that both Batelco and Zain were dominant in the supply of wholesale termination services on their respective mobile networks. Prior to the current Determination, no dominance determination applied in respect of VIVA's mobile network.

4 Analytical framework

41. To determine whether a licensed operator or operators are dominant in a relevant market, the Authority adopts a three-step process:

    a. definition of the relevant market(s);

    b. analysis of competition in the relevant market(s); and

    c. identification of dominant operator(s), if any.

42. At each step, the Authority relies on well-established economic principles and tests to define markets, such as the hypothetical monopoly test,[20] to assess demand- and supply-side substitution. The Authority's market definition focuses on the market(s) in which mobile termination services are supplied.

43. Having identified the relevant market(s), the Authority then looks at relevant factors to determine the level of competition in those defined markets, such as barriers to entry and expansion, and market shares. The purpose of this competition assessment is to identify any constraints, such as those from existing competition, potential competition, and any countervailing buyer power, that may limit the ability of an incumbent supplier to act independently and exercise market power.

44. The identification of relevant markets is not an end in itself, but is a critical step in assessing the extent to which any firm or firms in those markets have market power. Defining markets and assessing competition within those markets involves a degree of judgment, with the overarching purpose being to ensure that all relevant competitive constraints operating in a market (from both existing and potential competitors) are identified.

45. Throughout the three-step process, the Authority applies an analytical framework that is consistent with the Telecommunications Law and the Authority's Competition Guidelines[21]. The tools and principles employed by the Authority are similar to those employed by other regulators and competition authorities, including the European Commission ("EC") and national telecommunications regulatory authorities of the European Union.

46. In reaching its conclusions, the Authority has considered relevant facts and information, including information that the Authority has gathered through its periodic market data questionnaires and consumer surveys.

47. In the following sections, the Authority defines the relevant market(s) in which VIVA's mobile termination services are supplied (Section 5). The Authority then evaluates whether any operator has dominance in that wholesale market(s) (Section 6).

[20] As set out in the Authority's Competition Guidelines, the "hypothetical monopoly test" identifies a group of products which are sufficiently close substitutes to be regarded as being in the same market. The approach is to assume that the products are supplied by a hypothetical monopolist. If the monopolist is able to profitably maintain a "small but significant non-transitory increase in price" ("SSNIP") for those products, then the appropriate market boundary has been defined (i.e. to include only those products), as no other products are regarded as being close demand-side or supply-side substitutes.

[21] The Authority's "Competition Guidelines", 18 February 2010 (Ref MCD/02/10/019).

5 Identification of the relevant markets

48. The identification of the relevant market(s) is an important initial step in identifying whether or not a market participant holds a dominant position in the supply of a particular product or service.

49. A relevant market will include all the products and services which are purchased within a defined geographic area in which competition occurs. An economic market for a particular product or service will include all other products and services that are considered to be close substitutes from a demand- or a supply-side perspective. Demand- and supply-side substitution is commonly evaluated by assuming that the price of the product or service under consideration increases by 5-10% and examining whether buyers would switch to alternative products (demand substitution), or whether suppliers of other products might switch production to the product in question (supply substitution). If such substitution occurs on such a scale that makes the price increase unprofitable, then the alternative products should be included within the same market.

50. While such economic tests can usefully be employed to examine demand- and supply-side substitution possibilities, it is also important to ensure that the approach to market definition is pragmatic and exhibits commercial common-sense.

51. Markets have a number of dimensions. For telecommunications services, the product and geographic dimensions of the market are typically considered. It may also be relevant to consider the functional level of a market, as competitive conditions often differ across the value chain in the telecommunications sector.

52. As noted earlier, access to mobile termination services is an essential input that is used to deliver voice calls between a fixed or mobile subscriber on one network and a mobile subscriber on another network at the retail level (and SMS and MMS between a mobile subscriber on one network and a mobile subscriber on another network). Before considering the relevant markets in which mobile termination services are supplied, it is useful to refer to the retail markets associated with wholesale termination on mobile networks. There are three downstream markets, as previously defined in the Determination of Significant Market Power in certain retail markets of 3 June 2008,[22] relevant to wholesale termination on mobile networks:

    a. the retail market for mobile services (excluding mobile originated international calls);
    b. the retail market for fixed originated domestic calls for residential customers; and
    c. the retail market for fixed originated domestic calls for non-residential customers

53. The relevant product, functional, and geographic dimensions of the market in which mobile termination services are supplied in respect of VIVA's mobile network are considered below.

[22] The Authority, Determination of Significant Market Power in Certain Relevant Retail Markets, 3 June 2008. Note that there could be additional retail markets. Here, the Authority makes sole reference to markets which it has defined in the past.

Draft Determination text

5.1 Product dimension

54. The appropriate product dimension of the market in which mobile termination services are supplied will include all services that are regarded as being close economic substitutes for mobile termination. The process of identifying the boundary of the product market begins with the service under consideration, and then progressively expands the market boundary to capture other substitutable services.

55. As discussed in the 2010 Dominance Determination, the appropriate starting point is wholesale call termination on a particular mobile network. In the current case, the Authority is specifically considering mobile termination services on VIVA's network. Under the CPP arrangement that applies in Bahrain, in order for a subscriber on one network to be able to call a subscriber on VIVA's network, the network operator of the subscriber making the call must purchase a wholesale call termination service from VIVA. While this may indicate that the product market may be initially defined for termination services to an individual subscriber on VIVA's mobile network, mobile termination services are typically supplied by an MNO in a homogenous manner across its network, including at a uniform price.

56. The Authority therefore maintains the view consistent with the 2010 Dominance Determination that the relevant product market includes termination services to all subscribers on VIVA's mobile network.

57. Whether the product boundaries for call termination services on VIVA's mobile network should be expanded further depends on whether the parties acquiring termination services could switch to other existing services ("demand-side substitution"), or whether other suppliers could offer a good alternative ("supply-side substitution").

58. On the demand-side, there are potentially two ways in which demand could respond to an increase in the termination rate charged by VIVA. The first demand response relates to the *subscription decision* of the called party, as this determines which MNO provides the termination service. VIVA would be constrained in setting its termination rate if its own subscribers were to switch to another network in response to an increase in its termination rate. However, under the CPP principle, a disconnection is created between the calling party who pays for termination and the called party whose subscription decision determines which MNO supplies the termination service. As the called party does not pay for incoming calls, an increase in VIVA's termination rate is therefore unlikely to influence the subscription decision of the called party, with the result that a SSNIP applied to the termination rate could be sustained.

59. The second type of potential demand response relates to the *demand for calls*. In this regard, an originating operator wishing to complete a call to a VIVA subscriber has no alternative to purchasing a call termination service from VIVA. As a result, VIVA is likely to be able to sustain a SSNIP in its termination rate, without experiencing a reduction in wholesale demand for calls terminating on its network.

60. It is possible that the demand for termination services would decline in response to an increase in the termination rate, if retail customers making calls were able to switch to other means of communication. As the demand for wholesale termination services is derived from demand for retail calls terminating on a mobile network, VIVA may be

constrained in setting its termination rate if there are economic substitutes available to the retail subscriber making the call.

61. In the 2010 Dominance Determination, the Authority considered the following possible call substitution scenarios at the retail level:

    a. the retail call to the mobile subscriber is replaced by a retail call to a fixed number;

    b. the retail call to the mobile subscriber is replaced by an SMS or similar messaging service; and

    c. the retail call to the mobile subscriber is replaced by a retail call to a mobile number of another MNO.

62. For the reasons set out in the 2010 Dominance Determination, the Authority considers that calls to a fixed line and messaging services do not represent close economic substitutes for calls to a mobile number. The ability to be contacted immediately, regardless of location, is an important feature of a mobile service, while SMS do not allow real-time communication between parties. In addition, SMS termination is supplied by the same MNO that offers call termination, and therefore the ability to send an SMS to the mobile number (in place of a voice call to the same number) does not represent an effective constraint on the MNO when setting call termination rates.

63. It is possible that where subscribers have multiple SIM cards, a call to a mobile number on one network could be substituted with a call to a mobile number on another network, in response to an increase in the termination rate. However, for a call to a mobile number of another MNO to represent a sufficiently close economic substitute, the calling party must be aware of the specific network they are calling and of the price of calls to that network.

64. While callers may be aware of the different numbering blocks that are allocated to fixed numbers (13XX-17XX) and mobile numbers (3XXX), it is unlikely that callers will be able to distinguish between calls to different mobile networks. This is consistent with consumer survey evidence from the United Kingdom, where Ofcom found that although 87% of respondents knew when they were calling a mobile number, only 24% indicated that they knew to which network the number was subscribed.[23] Caller awareness of the network being called is being further diluted through the use of mobile number portability. In the 12 months to July 2012 since the launch of mobile number portability in Bahrain, there have been about 46,000 mobile numbers successfully ported between operators. The number of mobile numbers ported represents approximately 2.5% of the total number of mobile subscribers as of May 2012.

65. In addition, the reasons why subscribers have more than one SIM card or handset typically do not relate to the cost of incoming calls. According to the Authority's 2011 Consumer Survey, while approximately 30% of respondents have more than one mobile connection[24], the primary reasons for multiple SIM cards are to take advantage of retail promotions and to have a business and a personal connection. That most consumers are not concerned about the cost of incoming calls is again consistent with survey evidence on consumption decisions overseas.[25]

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[23] Ofcom, "Wholesale mobile voice call termination statement", 15 March 2011, paragraph 3.60.

[24] According to the 2011 survey, 29% of residential respondents have more than one handset, and 31% of residential respondents have more than one active SIM card.

[25] See for example Ofcom, "Wholesale mobile voice call termination statement", 15 March 2011, paragraph 3.76.

66. The Authority notes that the definition of a product market for termination services on an individual mobile network does not distinguish where the call originates, as the lack of economic substitutes for termination on a particular mobile network applies irrespective of where the call comes from. For example, the termination of a FTM call involves essentially the same network elements as the termination of an off-net MTM call. Similarly, the termination of an off-net MTM call from a subscriber of another mobile network in Bahrain is no different from the termination of an international inbound call (where the call is made by a subscriber in another country). From a market definition perspective, the termination on a particular mobile network of domestic and international inbound FTM and MTM calls is the same.

67. The absence of close economic substitutes for termination services, either directly at the wholesale level or indirectly at the retail level, supports the definition of a product market for termination services on each mobile network.

68. Overall, for the reasons indicated above, the Authority considers there are no demand-side and supply-side substitution possibilities for termination services on VIVA's mobile network. Termination constitutes an enduring bottleneck as all calls, SMS and MMS to VIVA's subscribers must necessarily go through its network.

5.2 Functional dimension

69. Mobile termination services are purchased by network operators in order to supply off-net retail communication services to customers. In other words, mobile termination services are used as a wholesale input into the supply of retail services.

70. The relevant functional dimension for the supply of mobile termination services is therefore the wholesale level.

5.3 Geographic dimension

71. Mobile termination services are supplied in Bahrain by Batelco, Zain, and VIVA. Each of these MNOs holds an Individual Mobile Telecommunications Services License, the geographic scope of which is national.

72. As noted in the 2010 Dominance Determination, competitive conditions in the supply of mobile services are homogenous throughout Bahrain, with all three MNOs having deployed mobile networks with nationwide coverage.[26]

73. The relevant geographic dimension for the supply of mobile termination services on VIVA's mobile network is the national level.

5.4 Conclusion on the relevant market for mobile termination services

74. The Authority's preliminary view is that the relevant market for this Draft Determination is the wholesale market for termination services on VIVA's mobile network.

75. Termination services include the termination of voice calls, SMS, and MMS.[27]

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[26] See the Authority "Mobile Networks Coverage Audit, Kingdom of Bahrain – 2010", available at http://www.tra.bh/en/pdf/Rapport_TRA_Coverage_Final.pdf

[27] As noted in the 2010 Dominance Determination (paragraph 4), the termination of voice calls, SMS, and MMS are similar in terms of the market failure that arises in respect of each.

Summary of submissions

76. Zain agreed with the Authority's view that the relevant market is for the wholesale supply of termination services on VIVA's mobile network. According to Zain, the majority ([✂]%) of mobile numbers successfully ported between mobile operators have been ported to VIVA. When combined with VIVA's on-net offers, this will increase VIVA's share of total mobile call termination minutes supplied in Bahrain, which would magnify the impact should VIVA decide to raise its mobile termination rate.[28]

77. Zain concluded that termination constitutes an enduring bottleneck, as all calls, SMS, and MMS to VIVA subscribers must be conveyed on VIVA's network.

78. In its submission, Batelco noted that the Authority's proposed market definition is consistent with the market definitions used by the Authority in the 2010 Determination. Batelco also noted that the inclusion of SMS and MMS in the proposed definition of termination services is consistent with the approach taken in respect of Zain's and Batelco's mobile termination services.[29]

79. VIVA agreed with the Authority's market definition set out in the Draft Determination, with the exception of the inclusion of termination of international inbound and termination of domestic calls in the same market.[30]

80. According to VIVA, domestic and international inbound calls are not substitutable for one another, and there are also differences in the cost of supplying such calls. VIVA submitted that international-originated calls involve more resources than domestic-originated calls, including the costs of international gateways, international transmission capacity, landing stations, and backhaul capacity.[31]

81. VIVA argued that the regulation of international inbound termination will not provide any benefits to Bahraini consumers but will only benefit foreign carriers. VIVA claimed that aligning international termination rates with domestic termination rates will result in an estimated loss to Bahrain of in excess of BD10 million per annum.[32]

The Authority's analysis and conclusions

82. The Authority notes that all submissions received supported the proposed definition of a wholesale market for termination services on VIVA's mobile network, with the exception being VIVA's argument that the termination of international inbound calls should be excluded.

83. In relation to VIVA's argument, the Authority disagrees that the termination of calls that originate in other countries should be distinguished from the termination of domestic calls

[28] Zain submission, page 3.

[29] Batelco submission, paragraphs 1-2.

[30] VIVA submission, page 2.

[31] ibid, page 2.

[32] ibid, pages 2-3. VIVA referred to its February 2012 submission to the Authority on international inbound services, in which VIVA proposed termination rates of 37.65 fils per minute for international calls to mobile and 30.12 fils per minute for international inbound calls to fixed. VIVA also proposed that the international inbound rates be applied to all originating countries.

that originate from within Bahrain. The Authority does not agree with VIVA's justifications for separate markets.

84. First, although termination of an international inbound call and termination of a domestic call are unlikely to be viewed as direct substitutes for one another, the Authority noted in the Draft Determination that there is a lack of economic substitutes for call termination irrespective of where the call originates. For the same reasons that termination of a domestic call is an enduring bottleneck (with which VIVA agreed), termination of an international inbound call is also an enduring bottleneck. The fact that the call originated outside of Bahrain does nothing to alleviate the market power concerns in respect of termination.[33]

85. VIVA also argued that the cost of supplying international calls is higher than the cost of supplying domestic calls. In the Authority's view, the total cost of supplying each call type is not relevant to the current Determination. What is relevant is the cost of terminating each call type. As the Authority explained in its final decision on the regulation of wholesale inbound services, the network elements and costs involved in terminating a call will be the same irrespective of whether the call originates outside of Bahrain or within Bahrain:[34]

> *"... it is clear ... that the network elements used to terminate domestic calls on Batelco's mobile network (product 950d) are identical to the network elements used to terminate international inbound calls (product 950n). Whether a call originates inside or outside of Bahrain has no bearing on the costs of terminating that call on Batelco's mobile network. Once the call has been handed over to Batelco, the termination of an international inbound call will be no different from the termination of a domestic call."*

86. The additional costing elements that VIVA referred to as being part of an international-originated call – namely the costs associated with international gateways, international transmission, landing stations, and backhaul capacity – are not part of the call termination service.[35]

87. In terms of whether Bahraini consumers benefit from regulation of termination rates applying to international inbound calls, the Authority has addressed this through the introduction of regulated price floors for the wholesale rates charged to foreign operators in respect of incoming calls.[36] Such price floors have been introduced to ensure that a certain level of profits are retained within Bahrain.

88. The Authority remains of the view that the appropriate market definition is for the wholesale supply of termination services in VIVA's mobile network, irrespective of where the call, SMS, or MMS originates.

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[33] For further details on this point, see the Authority, Wholesale Inbound Services Regulation Explanatory Note (Ref: MCD/0912/126), 27 September 2012, pages 13-14.

[34] ibid, paragraph 170.

[35] see ibid, Table 4, where these network elements are part of product 300c (Batelco's 'wholesale inbound service'), but not part of product 950d (Batelco's termination service in respect of international inbound calls).

[36] ibid, and Resolution No. (3) of 2010.

6 Assessment of whether there is dominance in the supply of mobile termination services

89. The Telecommunications Law defines a dominant position to be a position of economic power that enables an operator to prevent the existence and continuation of effective competition in the relevant market through the ability of the operator to act independently to a material extent of competitors, subscribers and users.

90. In its Competition Guidelines[37], the Authority sets out the relevant considerations for assessing market power in a relevant market. The Authority noted that in undertaking an *ex ante* assessment of market power, the aim is to understand how competitive the market is currently and whether this is likely to persist within a reasonable timeframe. Specifically in relation to dominance, the Competition Guidelines explain that although the Telecommunications Law does not refer to a market share threshold for dominance, European case law has established a presumption of dominance where an operator has a market share in excess of 50%.[38]

91. As noted in the Competition Guidelines, market power generally derives from a combination of several factors which, taken in isolation, may not necessarily be determinative. The main factors that the Authority considers when assessing market power are as follows:[39]

    a. the market shares of individual entities;

    b. other competitive constraints, including those from existing and potential competitors, barriers to entry and expansion, and the degree of countervailing buyer power; and

    c. evidence on behaviour and performance.

92. For the purposes of this Determination, the Authority has defined a wholesale market for the supply of termination services on VIVA's mobile network in Bahrain. The Authority is interested in whether VIVA has a dominant position in this market, and in undertaking such an assessment, the above competition factors are considered in the context of this market.

Draft Determination text

6.1 Existing competition and market share

93. In the wholesale market defined above, VIVA has a monopoly over the supply of termination services on its network. The network operator of the calling party has no option other than to purchase the termination service from VIVA. VIVA therefore has a market share of 100% in respect of wholesale termination services on its network. A market share of 100% creates a strong presumption of dominance.

94. It should be noted that an MNO's dominance in respect of wholesale termination services on its network is largely unaffected by competition at the retail level. An MNO with a relatively small retail market share of subscribers will still be in a dominant position in the

[37] The Authority "Competition Guidelines", 18 February 2010, Section 3.

[38] ibid, paragraph 96.

[39] ibid, Section 3.2.

supply of termination services on its network, as other operators wishing to provide calls to that MNO's subscribers will face no economic alternatives to that MNO's termination service. For this reason, mobile termination regulation is typically applied to all MNOs irrespective of their retail market share.

6.2 Barriers to entry and expansion

95. As noted in the 2010 Dominance Determination, a termination service offered on a particular mobile network cannot be bypassed and duplicated by another network. There is no prospect of new entry into any of the wholesale termination markets, as each market displays an absolute entry barrier due to this non-replicability.

96. High barriers to entry support a finding of dominance in each of the wholesale markets for termination services.

6.3 Countervailing buyer power

97. As noted in the 2010 Dominance Determination, for countervailing buyer power to be effective, buyers must be able to exert a sufficiently strong influence on the seller, preventing the latter from behaving independently of its competitors and customers to an appreciable extent. In doing so, countervailing buyer power can constrain prices to a level consistent with effective competition, and can in principle benefit the purchasers of termination services and ultimately retail customers.

98. The conditions conducive to countervailing buyer power include the following:

    a. the buyer has alternative choices;

    b. the buyer is well-informed, especially about alternative sources of supply;

    c. the buyer could switch to alternative sources of supply without incurring significant costs;

    d. the buyer could produce the service itself or could sponsor new entry by another supplier;

    e. the buyer is an important outlet for the seller.

99. The above conditions generally do not apply to termination services. As discussed earlier, VIVA has an effective monopoly on the supply of termination services on its network, and so another network operator wishing to establish a communication with a subscriber on VIVA's mobile network has no alternative to purchasing a termination service from VIVA. The absence of existing or potential alternative sources of supply effectively removes the first four conditions listed in the preceding paragraph.

100. If the purchaser of termination services is an important customer for VIVA, it is conceivable that the purchaser could exercise countervailing buyer power with which to constrain the terminating MNO, even in the absence of alternative sources of supply. The originating operator could for example threaten not to purchase termination services from VIVA in the event that VIVA attempted to increase its MTR. However, the option of not interconnecting is precluded by Article 57 of the Telecommunications Law, which gives public telecommunications operators the right to interconnect with any other public telecommunications operator. This implies that VIVA seeking to increase its MTR could do so without the risk of being 'disconnected' by other network operators.

101. It is possible that the purchaser of termination services from VIVA could possess some countervailing power if it also supplied termination services (or other wholesale services) to VIVA, and could therefore threaten to retaliate by increasing its own MTR. However, the MTRs of both Zain and Batelco are subject to regulation (as is Batelco's fixed termination rate). Such regulation effectively removes the ability of either of Zain or Batelco to respond to any increase in VIVA's MTR by a retaliatory increase in their own MTRs.[40] The Authority therefore considers that VIVA faces little or no constraint from countervailing buyer power when setting its MTR.

102. The EC has also noted that national regulators have typically found constraints such as countervailing buyer power to be weak and insufficient to offset the market power of terminating network operators.[41]

6.4 Behaviour and performance

103. In the absence of regulation, the above assessment indicates that there are few or no constraints on VIVA in respect of the wholesale rates that it charges for termination services on its mobile network.[42]

104. In addition to considering the level of constraint arising from existing competition, potential new entry, and/or countervailing buyer power, evidence regarding the behaviour and performance of operators in the relevant market may be useful when evaluating whether an operator has a dominant position.

105. Mobile termination services in Bahrain have been subject to regulation since Batelco was found to be dominant in the Authority's 2003 Determination on Dominance in Interconnection Markets.[43] In 2010, mobile termination regulation was extended to Zain. VIVA is the only mobile network operator in Bahrain that is currently unregulated in respect of MTRs.

106. The levels of VIVA's MTRs are generally symmetrical with the MTRs charged by Batelco and Zain. For example, according to the market indicators information supplied to the Authority, VIVA's MTR for terminating voice calls on its network in 2011 was **[✂]-[✂]** fils per minute; while the MTR that Zain charged VIVA for calls terminating on Zain's mobile network in 2011 was **[✂]** fils per minute. By comparison, the regulated MTR which applied to Batelco's network during 2011 was 6.203-6.553 fils per minute.[44]

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[40] While Zain could in principle respond to an increase in VIVA's MTR by increasing the wholesale rate at which it terminates VIVA traffic on Zain's fixed WiMax network, the volume of such traffic is relatively small, and hence this would not represent a significant source of countervailing power.

[41] EC "Commission Staff Working Document accompanying the Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU", 7 May 2009

[42] The EC has summarised this lack of constraint and the resulting ability to price mobile termination above cost as follows: "As the receiving party makes no payment for the termination service by convention (CPP), it generally has little or no incentive to constrain the pricing behaviour of its terminating operator. To the extent that the increased wholesale termination charge results in increased retail prices and reduces the number of calls that an end-user receives, they are made worse off. However, this may not be directly perceptible to the end-user such that it cannot necessarily attribute this fall-off in calls to a higher termination rate. Thus, terminating operators have the ability to raise the price of reaching their subscribers substantially above cost." ibid, page 4.

[43] The Authority "Dominance in Interconnection Markets", 9 August 2003.

[44] As determined in the Authority "An Order issued by the Telecommunications Regulatory Authority ("TRA") on the Reference Interconnection Offer and Reference Access Offer of the Bahrain Telecommunications Company B.S.C ("Batelco")", 25 January 2011 (Ref: MCD/01/11/006).

107. The symmetry between the MTRs of VIVA and the other mobile network operators must be seen within the context of regulatory statements at the time of VIVA's entry into Bahrain. The Authority outlined its views on symmetrical MTRs in its draft statement on the regulation of mobile termination services, which was released for consultation in November 2008, in anticipation of the award process for the third mobile in order to provide some certainty[45]. The Authority stated that there were no compelling reasons for asymmetric MTRs between Batelco and Zain, and that such differences could only be justified where there are differences in spectrum holdings or where there is an incumbency advantage[46]. The Authority confirmed its view on symmetry in its final statement on mobile termination regulation[47], where the Authority also commented that its stated position on MTRs and asymmetry should provide guidance to negotiations involving the third mobile network operator.[48]

108. The Authority notes that the experience in overseas jurisdictions has been that unregulated MTRs have typically exceeded regulated MTRs. For example, in its 2011 review of mobile termination regulation in the United Kingdom, Ofcom compared the MTRs charged by small mobile communications providers (MCPs), which were at the time unregulated, with the regulated MTR applying to the four national MCPs. Ofcom found that in the majority of cases (21 MCPs out of 28 MCPs), the unregulated MTRs exceeded the regulated MTR, by between 29% and 125% of the regulated charge.[49] ComReg has also recently reported that non-regulated mobile service providers in Ireland have typically charged substantially higher MTRs than regulated mobile service providers.[50]

109. This has also been the case previously in Bahrain. As noted by the Authority in the 2010 Dominance Determination, Zain had engaged in price discrimination between the MTRs it charged OLOs directly interconnected with Zain and the MTR it charged Batelco. This shows the type of behaviour that an unregulated mobile network operator can engage in with respect to MTRs.

110. The Authority also notes that while VIVA's MTR for voice calls has approximated the regulated MTR applying to Batelco, this does not appear to be the case for SMS termination. Based on VIVA's response to the Authority's market questionnaire for 2011, VIVA's average SMS termination rate (calculated as the wholesale revenue earned by VIVA from terminating SMS on its network, divided by the volume of SMS terminated) in 2011 was substantially higher than the regulated SMS termination rate applying to Batelco in 2011.

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[45] The Authority "The Regulation of Mobile Termination Services, Draft Statement", 25 November 2008.

[46] ibid, paragraphs 35 to 38.

[47] The Authority "The Regulation of Mobile Termination Services Position Paper", 1 February 2010 (Ref. MCD/02/10/011), paragraphs 40 to 47.

[48] ibid, paragraph 49.

[49] Ofcom, "Wholesale mobile voice call termination statement", 15 March 2011, paragraph 4.65, available at http://stakeholders.ofcom.org.uk/binaries/consultations/mtr/statement/MCT_statement.pdf

[50] ComReg, "Market Review: Voice Call Termination on Individual Mobile Networks", 23 May 2012, paragraphs 6.19 to 6.33, available at http://www.comreg.ie/_fileupload/publications/ComReg1246.pdf

Summary of submissions

111. Zain agreed with the Authority's preliminary view that VIVA is dominant in the supply of termination services on VIVA's mobile network.[51] Zain referred to the Authority's conclusion in the Draft Determination, that VIVA faces no countervailing buyer power, as VIVA could raise its mobile termination rate without the risk of being disconnected by other network operators.

112. Zain also estimated that VIVA has the highest share of mobile subscribers in Bahrain, and that VIVA enjoys a net inflow of interconnection traffic.[52]

113. Zain commented that in addition to having a direct link to off-net calls, mobile termination rates can also have an impact on the retail price of on-net calls.[53] According to Zain, the retail price of an on-net call should be at least twice the mobile termination rate, in order to avoid 'club effects'. VIVA's offer of free on-net calls is a major reason why VIVA has achieved the largest share of subscribers since its launch.

114. Batelco's submission noted that the Authority's preliminary finding that VIVA is dominant is consistent with the 2010 Determination[54]. Batelco also noted that given the market definitions in the 2010 Determination, the Authority could have found VIVA to be dominant following VIVA's launch in March 2010[55]. Batelco submitted that the rapidly change in market conditions following VIVA's launch placed VIVA in a position of market power. Despite this, VIVA has not been subject to the same dominance designation as Batelco and Zain. Batelco did acknowledge, however, that the same regulatory outcome of symmetrical rates was achieved commercially between Batelco and VIVA.

115. Batelco submitted that it is imperative that market reviews are conducted in a timely manner, in order that current and prospective market conditions can be taken into account[56].

116. VIVA's submission did not support the proposal to designate VIVA as dominant in relation to the wholesale supply of termination services on its mobile network, for a number of reasons.[57]

117. VIVA submitted that as a third entrant, it has no bargaining power over interconnection rates, and has been constrained by its competitors to offer reciprocity. VIVA noted that at the time of the 2010 Dominance Determination, the mobile termination rates charged by Zain to OLOs were between 21% and 36% higher than the rate charged by Zain to Batelco. According to VIVA, its unregulated mobile termination rates are uniform across operators.

118. In addition, VIVA submitted that Zain was unregulated for a period of seven years, and that as VIVA has committed to apply symmetric rates, it should be treated in a non-discriminatory manner. VIVA argued that it should remain unregulated for a period similar

[51] Zain submission, page 4.

[52] ibid, pages 4-5.

[53] ibid, page 5.

[54] Batelco submission, paragraph 3.

[55] ibid, paragraph 7.

[56] ibid, paragraph 8.

[57] VIVA submission, pages 3-5.

to Zain in light of the 'asymmetric market environment' created by the installed customer base, reputation, and quality of the two existing network operators.

119. VIVA also argued that while it has gained market share in terms of subscribers, this has been at the expense of its revenue share, and that VIVA's market share can change quickly as it has targeted price-sensitive customers.

120. VIVA referred to the heavy capital expenditure required to deploy its network, and that the imposition of a regulatory costing system will create an unduly significant burden on VIVA.

121. VIVA also claimed that the regulatory objective of cost-based termination rates is already being achieved. VIVA concluded that there is no risk of abuse of dominance by VIVA for termination services on its network, and that all operators should be treated in a non-discriminatory manner with proportionate regulatory remedies.

The Authority's analysis and conclusions

122. The Authority notes that Zain supports the finding that VIVA is dominant in the wholesale supply of termination services on VIVA's mobile network, while Batelco noted that this finding was consistent with the 2010 Dominance Determination. VIVA disagreed with this conclusion.

123. VIVA argued that as a new entrant, it should be exempted from any dominance designation for a period similar to that which applied to Zain when it entered. According to VIVA, such an exemption is appropriate in light of what it refers to as an 'asymmetric market environment'.

124. The Authority disagrees with VIVA's characterisation of the mobile market as being asymmetric in favour of Zain and Batelco. VIVA has been able to achieve a substantial customer base and has created a strong brand since its entry. For example, in the Authority's 2011 survey of residential consumers, of those consumers who were likely to switch mobile service providers, 71% responded that they were most likely to switch to VIVA.[58] Zain's submission also noted that in terms of actual ported numbers, 70% have been ported to VIVA.[59]

125. In terms of VIVA's argument that its gain in subscribers has been at the expense of its revenue share, the Authority notes that VIVA has a relatively high proportion of prepaid subscribers, who tend to have lower levels of average revenue per user (ARPU) than postpaid subscribers. This commercial strategy has resulted in VIVA's market share in terms of mobile subscribers being higher than its market share based on mobile revenues. However, even based on revenues, VIVA's market share has increased significantly since its entry, as shown in Figure 2. At the end of 2012, VIVA's revenue share was **[✂]**% (compared to VIVA's **[✂]**% market share based on subscribers), while Batelco's share of mobile revenues was **[✂]**% and Zain's share was **[✂]**%.

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[58] The Authority "2011 Residential Consumer Survey Report", 15 February 2012, available at http://www.tra.org.bh/en/pdf/TRAReportResidentialModuleF.PDF. Of the total number of survey respondents, 21% said they intended to switch mobile service provider, and of these, 71% were likely to switch to VIVA (slide 36).

[59] Zain submission, page 3.

Figure 2: Mobile Revenue Market Shares

[✂]

Source: Authority's analysis based on operator information

126. As discussed in the Draft Determination, an MNO's dominance in respect of wholesale termination services on its own network is largely unaffected by competition at the retail level.[60] An MNO with a relatively small market share at the retail level will still be dominant in the supply of termination services on its network, as other operators wishing to provide calls to that MNO's subscribers will have no choice other than acquire termination services from that MNO. In any case, VIVA's market share, both in terms of mobile subscribers and mobile revenues, indicates that VIVA has been able to establish itself and achieve considerable scale in the Bahrain mobile market in a relatively short period.

127. VIVA also argued that it is constrained by countervailing power in the hands of the other network operators, which has resulted in VIVA agreeing to symmetric mobile termination rates. While VIVA has agreed to symmetric mobile termination rates, the Authority noted in the Draft Determination that this must be viewed within the context of statements made by the Authority at the time of VIVA's entry. The Authority remains of the view that in the absence of regulation (or the threat of regulation), there are no other significant constraints on VIVA when setting its mobile termination rates. In particular,

    a. Zain and Batelco have no alternative but to purchase termination services from VIVA in order to allow their subscribers to call VIVA subscribers;

    b. Zain and Batelco are themselves regulated in respect of their mobile termination rates, and therefore they could not increase (or threaten to increase) their mobile termination rates in retaliation to an increase in VIVA's mobile termination rate;

    c. according to market data provided to the Authority, VIVA is a net recipient of interconnection traffic, and would therefore tend to benefit from an increase in its termination rate (even if Batelco and Zain were able to impose a retaliatory increase in their termination rates which, as per the above bullet, they are unable to do).

128. For the reasons given in the Draft Determination, VIVA could increase its mobile termination rate without risking the loss of its own subscribers, as under the calling party pays billing arrangement, VIVA's termination rate is paid by subscribers on other networks (rather than by its own subscribers).

129. The absence of constraints on VIVA in relation to termination services on its own network supports the view that VIVA is dominant in the wholesale supply of these termination services.

7 Conclusion on dominance in the supply of mobile termination services

130. In this Determination, the Authority has defined the wholesale market for the supply of mobile termination services on VIVA's mobile network.

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[60] Draft Determination, paragraph 79.

131. In the above wholesale market, VIVA has a monopoly on the supply of termination services on its network. The network operator of the calling party has no option other than to purchase the termination service from VIVA in order to supply off-net calls to VIVA subscribers.

132. The wholesale termination market is also characterised by absolute barriers to entry and a lack of countervailing buyer power. In the absence of such constraints, MNOs are able to set excessive MTRs, as has been the experience in markets where MTRs have not been subject to regulation.

133. The Authority also notes that according to Article 3(a) of the Telecommunications Law, the Authority is required to exercise its powers in a non-discriminatory manner. Given that both Zain and Batelco are regulated in respect of mobile termination services, and given the absence of competitive constraints on VIVA's mobile termination service (either in the form of competition from other mobile termination services, or in the form of countervailing buyer power), the Authority's view is that it is appropriate to extend regulation of mobile termination rates in a non-discriminatory manner to VIVA.

134. Having considered the submissions received on the Draft Determination, and for the reasons given above, the Authority's view is that VIVA is dominant in the wholesale market for the supply of mobile termination services on VIVA's mobile network.