DETERMINATION

Determination of significant market power in certain relevant retail markets

Significant market power designation in certain relevant retail markets

Determination

3 June 2008

Purpose: To define certain relevant retail markets and determine whether a licensed operator or operators hold significant market power.

TRA
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Telecommunications
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Determination of significant market power in certain relevant retail markets

DETERMINATION

HAVING REGARD TO THE LEGISLATIVE DECREE NO. 48 OF 2002 PROMULGATING THE TELECOMMUNICATIONS LAW, THE METHODOLOGY FOR THE DEFINITION OF THE TELECOMMUNICATIONS MARKETS, APPROVED BY THE DETERMINATION OF THE TELECOMMUNICATION REGULATORY AUTHORITY OF THE KINGDOM OF BAHRAIN ISSUED ON 19 APRIL 2003, THE METHODOLOGY FOR DETERMINING MARKET POWER, APPROVED BY THE DETERMINATION OF THE TELECOMMUNICATIONS REGULATORY AUTHORITY OF THE KINGDOM OF BAHRAIN ISSUED ON 19 APRIL 2003, ALL RELEVANT 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 outlined in the Annex to this Determination the Telecommunications Regulatory Authority of the Kingdom of Bahrain ("TRA") has identified and defined the following relevant retail markets.

2. Fixed narrowband access markets:

   - The retail market for fixed narrowband access services for residential customers. (Market 1a)
   - The retail market for fixed narrowband access services for non-residential customers. (Market 1b)

3. Domestic calls markets:

   - The retail market for fixed originated domestic calls for residential customers to either fixed or mobile subscribers within the Kingdom of Bahrain. (Market 2a)
   - The retail market for fixed originated domestic calls for non-residential customers to either fixed or mobile subscribers within the Kingdom of Bahrain. (Market 2b)

4. International calls markets:

   - The retail market for fixed originated international calls to Zone 1 countries (The Gulf Cooperation Council ("GCC") countries: Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates ("UAE")). (Market 3a)
   - The retail market for fixed originated international calls to Zone 2 countries (South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka). (Market 3b)
   - The retail market for fixed originated international calls to Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, the United Kingdom ("UK"), the United States of America ("USA"), and Yemen). (Market 3c)

- The retail market for fixed originated international calls to Zone 4 countries (rest of the world). (Market 3d)
- The retail market for mobile originated international calls to Zone 1 countries (GCC countries: Kuwait, Oman, Qatar, Saudi Arabia, UAE). (Market 3e)
- The retail market for mobile originated international calls to Zone 2 countries (South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka). (Market 3f)
- The retail market for mobile originated international calls to Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA, and Yemen). (Market 3g)
- The retail market for mobile originated international calls to Zone 4 countries (rest of the world). (Market 3h)

5. Mobile services market:

   - The retail market for mobile services (the market definition excludes mobile originated international calls). (Market 4)

6. Internet access markets:

   - The retail market for dial-up internet access services from a fixed location. (Market 5a)
   - The retail market for broadband internet access services from a fixed location. (Market 5b)

7. Leased lines markets:

   - The retail market for domestic leased lines. (Market 6a)
   - The retail market for international leased lines. (Market 6b)

8. The geographic scope of the retail markets defined is the Kingdom of Bahrain.

9. For the reasons set out in the Annex to this Determination, TRA has identified and determines that Bahrain Communications Company B.S.C ("Batelco") is an Operator with Significant Market Power ("SMP") in the Kingdom of Bahrain, with the exception of the Amwaj area, in the following retail markets:

   - Market 1a, Market 1b; Market 2a; Market 2b; Market 3a; Market 3c; Market 5a; Market 5b; Market 6a; and Market 6b.

10. In the markets where Batelco holds SMP, there exists insufficient competition.

11. TRA has not analysed Market 4 and has therefore not assessed competition in this market. TRA considers that regulatory restrictions currently represent the most significant impediment to further competition at the retail level. As stated in TRA's Statement (Reference: MCD/0508/046) and

Report (Reference: MCD/0208/015), TRA has decided to allow the entry of a third mobile network operator and at the same time to remove the requirement imposed on Batelco to submit its mobile tariffs for approval.[1] These two measures will lead to greater competition. As such TRA deems it unnecessary to undertake a formal SMP analysis of the retail mobile services market at this point in time.

12. This Determination will be reviewed when conditions, as determined by TRA, warrant it.

13. This Determination is without prejudice to TRA's powers under the Telecommunications Law, promulgated by the Legislative Decree No.48 of 2002, the Methodology for the Definition of Telecommunications Markets, approved by the Determination of TRA issued on 19 April 2003, the Methodology for Determining Market Power, approved by the Determination of TRA issued on 19 April 2003, the Access Regulation, approved by TRA Regulation No. 1 of 2005, and the outcome of any ongoing 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 designations of significant market power or dominance.

14. This Determination shall come into effect from the date of its issuance.

15. Any existing obligations on Batelco in force at the date of this Determination will remain in effect until such time as TRA formally adopts further appropriate measures that amend or remove existing obligations. It is envisaged that any changes to these existing obligations resulting from this Determination of Significant Market Power will be effected as set out in TRA's Final Statement on the Strategic and Retail Market Review (Reference: MCD/0508/046).

For the Telecommunications Regulatory Authority
Alan Horne
General Director
3 June 2008

[1] TRA, 2008, Strategic and Retail Market Review: A report issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain, 28 February and TRA, 2008, Statement on the Strategic and Retail Market Review, 2 June 2008.

Annex: Reasoning and Reasons for the Determination of significant market power in certain relevant retails market

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Determination of significant market power in certain relevant retail markets

1 Purpose of this Determination

1. To define certain relevant retail markets and determine whether a licensed operator or operators hold Significant Market Power ("SMP") in them.

2. The analysis of SMP involves a three-step process: the definition of relevant markets, the analysis of competition in each of the relevant markets and the identification of SMP operators, if present. At each step, the Telecommunications Regulatory Authority of the Kingdom of Bahrain ("TRA") applied an analytical framework consistent with the Telecommunications Law, as promulgated by the Legislative Decree No. 48 of 2002, ("Telecommunications Law"), the relevant Determinations by TRA and international best practices.[2] To arrive at its conclusions, TRA conducted in-depth empirical analysis.

3. This annex sets out the underlying reasoning and reasons for the adopted market definitions and SMP findings.

4. TRA considers that the analysis conducted in this Determination complies not only with definition 34 ("Operator with Significant Market Power") of Article 1 of the Telecommunications Law, but also with definition 14 ("Dominant Position") of Article 1 of the Telecommunications Law, as detailed in the Methodology for Determining Market Power, approved by the Determination of TRA issued on 19 April 2003. Due to the factors considered in its analysis, TRA is of the view that in the markets where Batelco has SMP, Batelco is able to a material extent to act independently of competitors, subscribers and users. Therefore TRA considers that, when appropriate, the operator determined as holding SMP according to this Determination can also be considered to be in a dominant position.

2 Background to this Determination

5. TRA issued a consultation on 27 August 2007 on the proposed retail market definitions in a consultation document titled Strategic and Retail Market Review (the "August 2007 Consultation") (Reference MCD/0807/068).[3]

6. TRA received responses from Bahrain Telecommunications Company B.S.C ("Batelco"), MTC-Vodafone Bahrain B.S.C. ("Zain"), Mena Telecom W.L.L

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[2] The relevant Determinations are: TRA, Methodology for Determining Market Power, A Determination issued on 19 April 2003; and TRA, Methodology for the Definition of Telecommunications Markets, A Determination issued on 19 April 2003.

[3] TRA, 2007, Strategic and Retail Market Review Consultation, 27 August.

("Mena Telecom"), Moobility Telecom International ("Friendi Mobile") and Cisco System Inc ("Cisco"). TRA analysed and considered these responses.[4]

7. On 28 February 2008 TRA issued its Strategic and Market Review Report (the "Report") (Reference: MCD/0208/015) and a Draft Statement on the Strategic and Retail Market Review (Reference MCD/2008/014).[5] The Report presented TRA's findings with respect to the Strategic and Retail Market Review. It established a package of regulatory measures designed to further promote competition and the interest of users. In the Report, TRA provided a summary of the August 2007 Consultation and summarised and addressed the comments received.

8. Based upon its findings resulting from its work with respect to its August 2007 Consultation, TRA decided to proceed with a formal SMP designation as part of its competition assessment. The SMP designation provides the legal basis for the application of certain regulatory obligations.

9. Accordingly, on 28 February 2008 TRA released a Draft Determination of Significant Market Power designation in certain relevant retail markets ("Draft Determination") (Reference: MCD/0208/016). The Draft Determination built extensively on the relevant sections of the August 2007 Consultation.

10. TRA received contributions from Batelco, Friendi Mobile, Mena Telecom, Lightspeed Communications W.L.L ("Lightspeed") and Zain well as submissions from the Businesses User Advisory Group ("BAG") and Consumer Advisory Group ("CAG").[6]

11. For clarity purposes, this Annex largely reproduces the text included in the Draft Determination with minor amendments before summarizing and addressing the comments received on the Draft Determination.

3 Analytical framework

3.1 The August 2007 Consultation

12. In the August 2007 Consultation TRA adopted a two-step process for its market and competition review in line with international best practice. It undertook a forward-looking analysis and defined relevant markets before

[4] See TRA, 2008, Strategic and Retail Market Review: A report issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain, 28 February and TRA, 2008, Draft SMP Determination, 28 February 2008.

[5] TRA, 2008, Strategic and Retail Market Review: A report issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain, 28 February and TRA, 2008, Draft Statement on the Strategic and Retail Market Review, 28 February 2008.

[6] The non-confidential versions of those submissions can be found on TRA's web site.

assessing competition in each of these markets. At each step TRA relied on well-established economic principles and tests to define markets, such as the hypothetical monopoly test,[7] to assess supply and demand-side substitution. It looked at a large range of factors to determine the level of competition, such as barriers to entry and expansion, and market shares.

13. The approach followed is consistent with the two previous determinations by TRA on market definition and market power respectively.[8]

3.2 Responses to the August 2007 Consultation

14. Although Batelco welcomed the use of standard economic tests and methodology by TRA, it considered that TRA had improperly used those tools, and had consequently reached inaccurate conclusions with respect to several market definitions and competition assessments.

15. Batelco contended that insufficient weight had been given to demand and supply-side substitution in defining markets. Batelco claimed, in particular, that TRA had not properly factored into its competition analysis the competitive constraints provided by actual and potential competitors, as well as the impact of wholesale regulation in retail markets and demand complementarities. Further, Batelco considered that TRA had failed to apply the concept of prospectively competitive markets correctly in several instances, and called for a more forward-looking and prospective approach to the review of markets.

16. From a methodological standpoint Batelco was of the view that the standard concepts of market power analysis and substitutability, used by TRA and other regulators alike, needed to be modified to take into account sunk costs. Finally, Batelco stated that a market should only be deemed to be not effectively competitive if barriers to entry are high and non-transitory.

17. Other respondents did not raise specific high-level comments concerning the analytical framework.

3.3 The Draft SMP Determination

18. As part of its competition assessment TRA decided to proceed with a formal significant market power designation so that regulatory obligations can be applied to operators with SMP in the relevant markets. This allows the current retail regulation in place to be removed in markets where reliance on competitive forces, and competition provisions within the law, are sufficient to protect consumers' interests and the competitive environment.

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[7] The hypothetical monopoly test is also commonly referred to as the SSNIP test, i.e. the Small but Significant and Non-transitory Increase in Price.

[8] As mentioned above in footnote 2 at page 4.

19. Despite the representation made in Batelco's submission, at the general level, TRA remained of the view that its approach was sound and in line with its previous determinations on market definition and market power assessment. The tools and principles employed by TRA are similar to those employed by other regulators and competition authorities, including the European Commission and national telecommunications regulatory authorities of the European Union.[9]

20. TRA disagreed with Batelco that a competition assessment can be reduced to an analysis of entry barriers. Not only would this approach be at odds with accepted international practice, but it would also negate other important factors that affect competition in a particular market, such as vertical integration or the level of concentration.

21. Similarly, TRA did not believe that adjustments to the concept of market power and substitutability were required. As said above, TRA's approach is in line with accepted international practice. Furthermore, TRA is of the view that its approach already takes into account sunk costs appropriately. For instance, in looking at profitability as a potential indicator of market power, TRA takes incremental cost (inclusive of a contribution for common cost) as its cost standard instead of marginal cost, which is the commonly used cost standard. By definition, marginal cost ignores fixed and common costs.

22. Individual market definitions and competition assessments addressed other specific points raised by Batelco.

23. TRA also noted that market definitions are not to be applied in a mechanistic way. They constitute an instrument to assess competition and, in the present case, assist in the definition of appropriate regulatory measures. Further, it is important to note that a finding of effective competition and absence of dominance/SMP, in this context, does not preclude anti-competitive conduct in the future.

3.4 Responses to the Draft SMP Determination

24. Batelco referred back to its submission to the August 2007 Consultation. Additional points raised by Batelco relate to some market definitions and findings of SMP in certain markets.

25. Zain supports TRA's approach to market definition.

26. The CAG and BAG provided broad support to the SMP determination, including the overall framework used by TRA and the conclusions reached.

[9] Cf. for example, European Commission, Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 2002/C 165/03.

The CAG recommended TRA to include a process to review the determination in the future to assess whether the situation has changed.

3.5 TRA analysis and conclusion

27. As Batelco's points were previously considered by TRA above, TRA has no further comments on the analytical framework. Issues related to specific market definitions and competition assessments are addressed below.

4 Identification and determination of the relevant retail markets

28. TRA's Determination for the Definition of Telecommunications Markets ("Markets Definition Determination") describes the method by which TRA defines relevant markets.[10]

29. Section 1.1 of the Markets Definition Determination states that, in general, TRA will follow to this procedure:

- TRA will define relevant telecommunications markets that may be considered for the application of some form of regulation;
- TRA will investigate whether the market is sufficiently competitive or expected to become so in the near to medium term such that any regulatory intervention would be unwarranted, by undertaking a market dominance/significant market power analysis; and
- If the market is not likely to become effectively competitive then TRA will identify which operator or operators are dominant or have significant market power in a relevant market or markets.

30. Section 2 of the Markets Definition Determination outlines how TRA will define the relevant markets.

31. The definition of markets forms an integral part of the analysis of competition. In the August 2007 Consultation, TRA outlined in detail its approach to market definition. This approach is consistent with that of other competition and regulatory authorities, and also with its Market Definition Determination.

32. An economic market for a good or a service includes all goods or services that are substitutable for them, and for which either demand or supply-side substitution constrains the pricing of the goods or services in question. The definition of markets necessitates identifying substitutable products and constraints on the price setting behaviour of firms. Typically this is done by applying the hypothetical monopoly test, i.e. the Small but Significant Non-transitory Increase in Price ("SSNIP") test.

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[10] TRA, Determination on the Methodology for the Definition of Telecommunications Markets, Determination No. 1 of 2003, 19 April 2003, pages 2-3

33. TRA also recognized in the August 2007 Consultation that a strict approach to market definition could lead to the definition of a large number of granular economic markets. However, TRA considered that the outcome of its competition analysis would not be altered by the definition of such more narrowly defined markets and that granular markets were not warranted given the level of development in the sector. Hence TRA adopted a pragmatic approach to market definition.

34. After taking into consideration TRA's original views as published in the August 2007 Consultation and Draft SMP determination and analysing and carefully considering the responses to the August 2007 Consultation and the Draft SMP Determination, TRA has defined the following relevant retail markets.

5 The markets for fixed narrowband access and domestic calls for residential and non-residential customers

5.1 The August 2007 Consultation

35. TRA originally considered defining one market for fixed narrowband access and domestic calls for residential and non-residential customers.

36. Based on a SSNIP analysis, TRA considered that it was appropriate to differentiate between residential and non-residential customers because of:

- The observed price discrimination between the two groups of users;
- The different expectations in term of services between residential and non-residential customers; and
- The limited supply-side substitution between non-residential and residential users.

37. TRA was of the view that there was one market for fixed access and domestic calls because of:

- The complementarity of demand between access and domestic calls; and
- The similar level of competition for both products at this point in time.

5.2 Responses to the August 2007 Consultation

38. A first element concerning these market definitions related to the definition of separate markets for residential and non-residential customers. Batelco did not comment specifically on this aspect of market definition. Zain supported this distinction.

39. A second element was whether to include access and domestic calls in the same market. Batelco disputed the inclusion of domestic calls originated on fixed lines with fixed narrowband access in the same market. It argued that these two products are functionally different; are complements and not substitutes; are not always sold as a bundle; and that the degree of competition for these two products is different with several OLOs providing domestic calls in competition with Batelco. In terms of supply-side substitution, Batelco noted that there are no substitution possibilities from calls to access given the economies of scale and sunk costs involved in the roll out of local access networks.

5.3 The Draft SMP Determination

40. With regards to the first issue, in light of the comments received, TRA decided to retain the distinction between residential and non-residential customers.

41. TRA saw some merits in Batelco's arguments that fixed access and fixed originated calls should be in separate markets.[11] It is indeed common for regulators to separate access from calls. TRA therefore decided to revise its market definition and to have separate markets for fixed access and domestic calls. TRA noted however that for the purpose of this analysis, the outcome of the competition assessment did not vary with the choice of market definition.

42. In the Draft SMP Determination TRA determined the following markets:

- fixed narrowband access for residential customers;
- fixed narrowband access for non-residential customers;
- domestic calls for residential customers;
- domestic calls for non-residential customers.

5.4 Responses to the Draft SMP Determination

43. Batelco welcomed the revised market definitions defined by TRA.

44. Whilst Mena Telecom does not disagree to a large extent with TRA's revised market definitions it is of the view that access services and domestic calls should be grouped into the same market for simplicity and clarity purposes.

[11] This is consistent with the European Commission's ("EC") view for example. See e.g. European Commission, Recommendation on the relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services, 2003/311/EC.

5.5 TRA analysis and conclusion

45. TRA does not consider that for simplicity purposes it is appropriate to group the access and domestic calling markets together for the reasons set out in para 41 above.

46. For the reasons set out above, TRA is of the view that the relevant markets are:

- The retail market for fixed narrowband access services for residential customers. (Market 1a)
- The retail market for fixed narrowband access services for non-residential customers. (Market 1b)

- The retail market for fixed originated domestic calls for residential customers to either fixed or mobile subscribers within the Kingdom of Bahrain. (Market 2a)
- The retail market for fixed originated domestic calls for non-residential customers to either fixed or mobile subscribers within the Kingdom of Bahrain. (Market 2b)

6 The international calls markets

6.1 The August 2007 Consultation

47. Considering supply-side and demand-side substitution, TRA was of the view that a definition of separate markets for each of the 237 international routes was unpractical and instead proposed that routes be grouped into four zones reflecting potentially different levels of competition and geography.

48. TRA aggregated the various routes into four zones:

- Zone 1: the Gulf Cooperation Council (“GCC”) countries;
- Zone 2: South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka;
- Zone 3: Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, the United Kingdom (“UK”), the United States of America (“USA”), and Yemen; and
- Zone 4: rest of the world.

49. Because of demand-side substitution (i.e. customer switching behaviour), TRA considered that fixed and mobile international calls markets encompassed all access methods i.e. International Direct Dial (“IDD”), Pre-Paid Calling Card (“PPCC”) and Carrier Pre-Selection (“CPS”) (the latter for fixed originated calls only).

50. International calls to Zone 1, 3 and 4 originated from fixed and mobile phones were considered to be not substitutable and therefore constituted separate markets.

51. By contrast international calls to Zone 2 from either a fixed or mobile phone were considered in the same relevant market based on the different consumption behaviour of customers (i.e. demand-side substitution) which make calls to these destinations.

52. TRA therefore delineated in the August 2007 Consultation the following markets:

- Fixed originated international calls to Zone 1 (GCC) countries;
- International calls to Zone 2 countries (South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka);
- Fixed originated international calls to Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA and Yemen); and
- Fixed originated international calls to Zone 4 countries (other destinations).
- Mobile originated international calls to other zones (i.e. Zones 1, 3 and 4) were part of a wider mobile services market.

6.2 Responses to the August 2007 Consultation

53. Batelco supported the definition of international markets route-by-route adopted by TRA. However, it disagreed with the aggregation process whereby individual routes were grouped into four zones. Batelco also disagreed with TRA grouping of routes into a group of routes which appear to be competitive, and a group of routes that are either prospectively competitive or not competitive. Batelco submitted that prospectively competitive routes should be part of the group of competitive routes, and that the grouping of routes can only be justified if competitive conditions are the same across several routes.

54. Batelco contended that TRA's grouping was not based on all the factors that affect competition on particular routes, such as actual and potential players, entry barriers and consumer's propensity to switch.

55. Batelco also pointed out that TRA's approach is not in line with some international precedents, such as the UK and Hong Kong.

56. With regards to the definition of international calls to Zone 2 countries, which include calls originated from both fixed and mobile phones, Batelco questioned whether TRA had not thereby defined a distinct PPCC market, and hence whether other fixed routes ought to be included in this market.

6.3 The Draft SMP Determination

57. TRA remained of the view that its approach to the grouping of routes was both pragmatic and reasonable in light notably of data limitations. TRA acknowledged that a route-by-route market definition and competition assessment may provide additional insights. However, it would require a large amount of data and information, which is not readily, or currently available. It would also be a disproportionately and resource intensive endeavour with no clear benefits, especially given TRA's conclusions regarding competition in the defined markets, and proposals for the ex ante regulation of those markets.

58. Further, TRA noted that although Batelco called for a route-by-route market definition, it had not submitted data and analysis at this level. Instead, it looked at international calls en masse and provided only a few months of traffic data for five routes. On balance, TRA considered that the aggregation of routes reflecting potentially different levels of competition intensity and geography was a reasonable compromise between a route-by-route and an overall analysis of international calls.

59. TRA undertook further analysis of the international calls market. TRA notably considered the case for differentiating between the residential and non-residential international calls markets. Competitive conditions differ somewhat between these two classes of customer. As identified in the Consumer Survey conducted by TRA in 2007 ("Consumer Survey"),[12] business users tend to make more extensive use of IDD calls than residential customers, for which PPCC is a widespread alternative to IDD. The provision of CPS services is also predominantly targeted at business users, who, because of their larger spend on international calls make the economics of CPS more workable. However, on balance, TRA was of the view that the definition of separate markets for residential and non-residential users was not warranted. In particular, TRA considered that potential competition and regulatory concerns for each category of users could be addressed without separate market definitions. Furthermore, it does not appear that such segmentation would have any material effect on the competition analysis in such markets. Accordingly, TRA decided to retain a single market for international calls for both residential and non-residential customers.

60. Another element of the market definition related to the treatment of mobile originated international calls, including the market definition for international calls to Zone 2. In the August 2007 Consultation, TRA defined a separate market for international calls to Zone 2 countries originated from either a fixed or a mobile phone. International calls originated from a mobile phone to other destinations (i.e. to Zone 1, 3, and 4 countries) were included in the wider mobile services market.

[12] The survey is available at http://www.tra.org.bh/en/marketSurveys.asp.

61. After further analysis, and based notably on comments from Zain (see below), TRA was of the view that it was more appropriate to define separate markets for fixed and mobile originated international calls to the four zones given the prevailing market conditions in Bahrain. TRA also considered it was preferable to treat mobile originated international calls as separate markets from the mobile services market. Whilst mobile phone users typically buy access and calling services together, the Consumer Survey, and the activities of OLOs in mobile originated international calls shows that mobile users often purchase international calls from a competitor of Zain and Batelco. For instance, according to the Consumer Survey 38% of mobile residential customers use PPCC for international calls from their mobile.

62. The analysis of supply-side substitution between mobile originated international calls on the one hand, and mobile access and domestic calls services on the other hand, also justified separating mobile originated international calls from mobile services. In fact, supply substitution between those services is one-way: in response to a SSNIP in the mobile access and domestic calls market, a provider of international calls is unable to enter the mobile services market within a reasonable timeframe owing to entry restrictions (i.e. current Batelco-Zain duopoly) and other entry barriers. Competitive conditions in the supply of mobile originated international calls differ substantially from those applicable in the mobile services market. In the latter, Batelco and Zain hold a duopoly. TRA therefore decided to separate mobile originated international calls from the mobile services market.

63. Regarding the international calls market to Zone 2 countries, TRA considered it was more appropriate to align this market definition to the ones applicable for international calls to other zones. Mobile and fixed originated calls tend to have different prices and are not substitutable at this point in time. It is unlikely that consumers would switch to fixed originated calls to Zone 2 countries in response to a price increase in mobile originated calls to Zone 2 countries.

64. For the reasons set out above, TRA decided in the Draft SMP Determination to adopt the following revised market definitions for international calls:

Fixed originated international calls

- To Zone 1 (GCC) countries;
- To Zone 2 countries (South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka);
- To Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA and Yemen);
- To Zone 4 countries (other destinations);

Mobile originated international calls

- To Zone 1 (GCC) countries;

- To Zone 2 countries;
- To Zone 3 countries; and
- To Zone 4 countries.

6.4 Responses to the Draft SMP Determination

65. Batelco reiterated its previous concerns regarding the grouping of routes into four zones, in particular the basis for assigning specific destinations to one of the four zones.

66. Overall, Zain agrees with TRA's aggregation of international destinations into four groups. Whilst Zain suggests that an alternative mapping for three destinations could be warranted, it considers that it will not affect the analysis of markets.

67. Mena Telecom also agrees with TRA's grouping of zones. However, it considers that these markets should be further split between residential and non-residential users on the basis of prices, price sensitivities and elasticities as well as usage and behaviour.

6.5 TRA analysis and conclusion

68. TRA remains of the view that the approach to market definition for international calls is practical and appropriate. As indicated previously, having considered the route-by-route approach, TRA concluded that it would be impractical and would not have a material impact on conclusions.

69. The grouping into zones is a reasonable compromise between a route-by-route and a global analysis. To group routes, TRA used its understanding of the characteristics of the Bahraini telecommunications market. As explained in the August 2007 Consultation (at pages 133-134) the grouping was based on a mixture of considerations, including usage patterns, demand drivers (e.g. countries of origin of most expatriate workers) and characteristics (e.g. high price sensitivity of South Asian workers) and competitive pressures. Combined together these considerations resulted in the form of geographic grouping adopted.

70. For the reasons set out above at paras 59-59, TRA does not consider that a segmentation by consumer type is justified. Competition and regulatory concerns can be addressed without separate market definitions for residential and non-residential users. Furthermore it does not appear that such segmentation would have any material effect on the competition analysis in such markets.

71. Therefore, for the reasons set out above, TRA's view is that the relevant international call markets are:

- The retail market for fixed originated international calls to Zone 1 countries (GCC countries: Kuwait, Oman, Qatar, Saudi Arabia, and UAE). (Market 3a)
- The retail market for fixed originated international calls to Zone 2 countries (South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka). (Market 3b)
- The retail market for fixed originated international calls to Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA, and Yemen). (Market 3c)
- The retail market for fixed originated international calls to Zone 4 countries (rest of the world). (Market 3d)

- The retail market for mobile originated international calls to Zone 1 countries (GCC countries: Kuwait, Oman, Qatar, Saudi Arabia, and UAE). (Market 3e)
- The retail market for mobile originated international calls to Zone 2 countries (South Asian countries: Bangladesh, India, Pakistan, the Philippines and Sri Lanka). (Market 3f)
- The retail market for mobile originated international calls to Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA, and Yemen). (Market 3g)
- The retail market for mobile originated international calls to Zone 4 countries (rest of the world). (Market 3h)

7 The mobile services market

7.1 The August 2007 Consultation

72. Based on a SSNIP analysis, TRA concluded there was a separate market for mobile services. TRA was of the view that there was limited supply-side substitution between fixed access and mobile access but that there was supply substitution between access and call services.

7.2 Responses to the August 2007 Consultation

73. Whilst Batelco did not specifically comment on the definition of the mobile services market, Zain supported TRA's definition of two separate markets for fixed and mobile access. It wished further clarification regarding the basis for including domestic and international calls originated from a mobile in the same market access.

74. Similarly, Zain questioned why separate markets for prepaid and postpaid mobile services were not defined, as well as why two separate markets for non-residential and residential customers were not identified as was the case in the fixed access market.

7.3 The Draft SMP Determination

75. Based on supply-side substitution considerations, TRA was of the view that it was appropriate to put prepaid and postpaid customers in the same market. A mobile operator offering solely prepaid services could easily offer postpaid services in response to a SSNIP in the postpaid market. The same supply-side substitution argument applied to the distinction between non-residential and residential customers.

76. Therefore, with the exception of the adjustment regarding the exclusion of mobile originated international calls from the mobile services market explained above, TRA considered that the comments received did not warrant a modification of the definition of the mobile services market.

7.4 Responses to the Draft SMP Determination

77. Mena Telecom broadly supports TRA's market definition although it considers that separate mobile markets for prepaid and postpaid should be defined as pricing, packaging and usage behaviour differ between these two sets of users.

7.5 TRA analysis and conclusion

78. Based on the supply-side considerations outlined above at para 75 above, TRA remains of the view that prepaid and postpaid are in the same market.

79. For the reasons sets out above, TRA is of the view that the relevant market is:

- The retail market for mobile services (the market definition excludes mobile originated international calls) (Market 4)

80. As TRA has decided not to conduct a competition assessment of the mobile services market (see para 134 below for an explanation), TRA notes that the precise definition of mobile services is not a determining factor.

8 The Internet access from a fixed location markets

8.1 The August 2007 Consultation

81. Based on a SSNIP analysis, TRA was of the view that dial-up and broadband services were in the same market based on considerable switching between broadband and dial-up services.

8.2 Responses to the August 2007 Consultation

82. In its submission Batelco stated that dial-up and broadband Internet access should be distinct markets. From a product dimension stand point Batelco explained that broadband access differed from dial-up as it is an always-on product, allowing faster download speed, and the use of voice and data services simultaneously.

83. Consistent with the European Commission and the Office of Communications (UK) ("Ofcom"), Batelco further argued that there is only one-way substitutability between broadband and dial-up. One-way substitutability would make a SSNIP for broadband profitable as customers are switching from dialup to broadband, but not the other way round. Hence, the two products did not appear substitutes. Their prices also differ substantially. Finally, in terms of supply-side substitution, Batelco stated that a rise in dial-up prices was unlikely to result in a broadband provider offering dial-up service as dial-up is a declining market, i.e. the number of subscribers is diminishing. For these reasons Batelco argued that there were two separate markets.

8.3 The Draft SMP Determination

84. In the August 2007 Consultation TRA included broadband and dial-up internet access in the same market on the basis of extensive consumer switching between the two products. However, as submitted by Batelco, demand substitutability between the dial-up and broadband is mostly one-sided, i.e. from dial-up to broadband. This point, along with the different characteristics of the two services (e.g. always-on, speed) and the price differentials between fixed dial-up and fixed broadband Internet services, give weight to the argument for having separate markets. Similarly, TRA concurred with Batelco regarding supply-side substitution. Overall TRA identified dial-up Internet and broadband Internet access as separate markets.

85. TRA also considered the case for having a separate broadband Internet access market for residential and non-residential customers especially given the price discrimination between these two customer segments, and the different quality of services offered (e.g. lower contention ratio for business offers). However, the precise definition of the retail broadband market would not affect the outcome of the competition assessment. Batelco has a market share for each customer type well in excess of 90%. TRA therefore decided to retain a single market for fixed broadband Internet access for both residential and non-residential customers.

8.4 Responses to the Draft SMP Determination

86. Batelco welcomes the revised market definitions which separate the dial-up services market from the broadband services market. Further, Batelco

indicated that a strict application of market definition principles could lead to distinguishing between residential and non-residential customers markets. According to Batelco this distinction is unlikely to affect the outcome of the competition assessment at this point in time. Nonetheless Batelco suggested that the precise delineation of this market could be left open to be corrected to a narrower boundary if niche players targeting non-residential users gain market share.

87. Mena Telecom considers it is more appropriate to have a single market definition containing dial-up and broadband services based on the assumption that, from a consumer perspective, product substitution is taking place as a result of price and quality of the two sets of products.

8.5 TRA analysis and conclusion

88. TRA is of the view that the comments made on the Draft SMP determination do not warrant a change of market definition.

89. For the reasons set out above, TRA is of the view that the relevant retail markets are:

- The retail market for dial-up internet access services from a fixed location. (Market 5a)
- The retail market for broadband internet access services from a fixed location. (Market 5b)

9 The leased lines markets

9.1 The August 2007 Consultation

90. TRA was of the view that although on the basis of demand-side substitution, domestic and international leased lines could form separate markets, competitive conditions for both services did not differ such that the conclusion of the analysis of competition was independent on the choice of market definition.

9.2 Responses to the August 2007 Consultation

91. Batelco contended that the market defined by TRA was overly narrow and should include substitute technologies, such as Free Space Optics (“FSO”), Single channel per carrier (“SCPC”) solutions used by some other licensed operators (“OLOs”) for local leased lines, global Multi-protocol Label Switching (“MPLS”) and satellite services for international leased lines.

9.3 The Draft SMP Determination

92. TRA disagreed with Batelco and remained of the view that there was a separate market for retail leased lines. TRA considered that the product's characteristics in terms of price, performance, and quality of the substitute technologies outlined by Batelco were not sufficiently similar to be part of the same relevant market, with the exception of leased lines over MPLS.

93. Optical links can be used to provide point-to-point, line of sight, circuits over short distances. FSO suffers occasional periods when services are unavailable due to sandstorms, fog or any other form of optical obstruction. This makes FSO unsuitable for critical applications of some customers, such as banks. Similarly, satellite solutions suffer from greater latency and echo than traditional leased lines, and are therefore not suitable for customers who have demanding service level and reliability requirements. By contrast traditional leased lines provide greater security and guaranteed quality of service. Furthermore, satellite links are typically not cost efficient compared to traditional leased lines circuits.

94. Having considered Batelco's comment, and based on supply and demand side considerations, TRA concluded that there was a separate leased lines market comprising domestic and international leased lines, including leased lines provided over MPLS.

9.4 Responses to the Draft SMP Determination

95. Batelco reiterated arguments made in its response to the August 2007 Consultation as summarized above. Batelco considers that in addition to leased lines provided over MPLS, optical and satellites links should be included in the same market. While Batelco agrees with TRA that on the basis of supply-side substitution these technologies are not part of the same market, Batelco contends that an analysis of demand-side substitution as evidenced by offers of competitors and uptake in the market leads to their inclusion in the same market. Further, Batelco argues that the application of the principle of technological neutrality to this market implies the inclusion of those alternative technologies in the same market. Finally, Batelco requested the inclusion of dedicated capacity products that could be delivered by Zain over its WiMAX network.

96. Another line of argument raised by Batelco relates to the treatment of international private leased lines circuits ("IPLCs"). Here Batelco argued that IPLCs should be in a separate market. Whilst Batelco appreciates that the precise market definition does not currently have a material impact on the assessment of competition, it recommends adopting a market definition consistent with the analysis of supply-side and demand-side substitution. From a demand-side perspective Batelco notes than an IPLC is clearly not substitutable to a local leased circuit ("LLC"), while from a supply-side perspective an IPLC, unlike an LLC, requires access to both domestic infrastructure and "international inputs and relationships".

97. Mena Telecom supports TRA's market definition.

9.5 TRA analysis and conclusion

98. Leased lines are fixed permanent connections providing capacity between two points. They are used mostly by businesses. The main distinguishing features of leased lines include:[13]

- symmetrical and dedicated capacity to the user's exclusive use (always on);
- guaranteed bandwidth available 24/7;
- capacity can be used to send and receive voice and data messages from one site to another;
- secure communications channels and high customer services/care.

99. Whilst the data collected from licensed operators shows that the uptake of the alternatives referred to by Batelco is currently minimal, TRA accepts that there may be some demand-side substitution between alternative technologies and traditional leased lines. TRA notes, for instance, that Batelco's retail IPLC are provided, depending on the destination or media available, via a cable or satellite link. This, combined with the principle of technological neutrality, tend to support the view that alternative technologies could be considered part of the same market.

100. The inclusion or exclusion of alternative technologies in the product market makes no difference to the competition analysis at this point in time.

101. For the reasons set out above TRA has decided to include alternative technologies in the same product market. TRA may in the future revise this point of the market definition in light of market developments.

102. With regards to international leased lines, TRA accepts that the strict application of market definition principles of supply-side and demand-side substitution lead to the definition of two separate markets, one for domestic leased lines and one for international leased lines. International leased lines are made up of two segments, a local segment which requires access to domestic infrastructure and an international segment which requires access to international capacity.

103. Whilst the definition of two separate markets does not alter the conclusion of the competition assessment as acknowledged by Batelco, TRA agrees with Batelco's recommendation to adopt two more narrowly defined markets instead of a single retail leased lines market.

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[13] See also Ofcom's recent and extensive analysis of the leased lines market (Ofcom, 2008, Review of the retail leased lines, symmetric broadband origination and wholesale trunk segment market).

104. For the reasons set out above, and having considered the comments received, TRA is of the view that the following relevant retail markets exist:

- The retail market for domestic leased lines. (Market 6a)
- The retail market for international leased lines. (Market 6b)

10 The Geographic Dimension of Markets

10.1 The August 2007 Consultation

105. TRA was of the view that early on in the development of competition, it is common practice by regulators not to have geographically differentiated markets and instead to rely on the geographic scope of the license and reach of the network of the incumbent.

106. Although competitive conditions may differ in certain areas (e.g. Amwaj Islands, reclaimed land), TRA did not consider it proportionate to define separate markets for these types of areas at this point in time given notably the current effective scale of those operations.

10.2 Responses to the August 2007 Consultation

107. In its submission Batelco called for a more granular approach to the geographic dimension of markets. It requested the definition of separate geographic markets in respect of each significant new property development, with rational and transparent criteria for the definition of new developments; a determination that Batelco is not dominant in respect of new developments where Batelco does not have its own infrastructure; and a consideration of whether an access regime should apply in respect of new developments to give access to Batelco such that it can meet its universal services obligations.

108. Batelco considered that the main factors justifying the definition of separate geographic markets for new developments relate to: the "more disruptive (relocation) rather than incremental (enhancement) role in the demographics of businesses";[14] the fact that new developments tend to be physically separate areas requiring significant network roll-out; and that the risk profile of new developments, where leading-edge network and services are rolled out, is likely to be materially different.

109. In its submission Batelco referred to TRA's dominance designation in wholesale markets. In this determination, TRA considered that the geographic scope of markets was the Kingdom of Bahrain but determined that Batelco was not dominant in one part of this geographic market, the

[14] Cf. Batelco's submission at page 40.

Amwaj area, on the basis that Batelco "does not at present possess infrastructure in the Amwaj area, due to the arrangements of the developers of that area with another licensed operator that has installed its infrastructure there."[15]

10.3 The Draft SMP Determination

110. TRA considered it was premature to have geographic markets of the kind advocated by Batelco. With the exception of Amwaj Island the majority of these new property developments are still in construction and telecommunications services providers have yet to be designated. Models for information and communication technology infrastructure are not settled yet. It is therefore not justified for TRA to define separate geographic markets at this point in time.

111. Furthermore, TRA indicated that the status of new property developments was currently being considered by TRA as part of a separate process the aim of which is to develop TRA's regulatory approach towards new developments.

112. TRA remained of the view that it was not at present necessary to form an opinion regarding the status of new property developments. TRA considered that the geographic scope of all markets defined is the Kingdom of Bahrain. TRA however considered that in fixed markets where Batelco is designated as an operator with SMP, the designation would exclude the Amwaj area. This was in line with the approach adopted by TRA in the 2006 Dominance designation in wholesale markets. Batelco supported this approach in its submission to the August 2007 Consultation.

10.4 Responses to the Draft SMP Determination

113. Batelco referred back to its comments to the August 2007 Consultation. Batelco argues that the definition of separate geographic markets for new property developments is required in order to exempt Batelco from any obligations required under an SMP or dominance designation. Batelco contends that this is required in order to incentivise Batelco to invest in new property developments.

10.5 TRA analysis and conclusion

114. Having previously commented on Batelco's points, TRA remains of the view that the definition of sub-national markets is not appropriate for the time being. The scope of the markets defined above is national.

[15] TRA, Dominance in Wholesale Markets by Batelco, A Determination, 22 January 2006, page 4.

115. This is consistent with the 2006 Dominance Designation in Wholesale Markets in which Batelco was found to be dominant in the relevant markets (which was defined on a national basis) with the exception of the Amwaj area. The rational for this carve-out at the market analysis stage was that Batelco did not have infrastructure in the area and given the prevailing arrangements between Nuetel and the developer Batelco also had no access rights. However, as TRA continues to develop its regulatory approach toward new developments, it may adopt a different approach in future analyses of markets.

11 Identification and Determination of Significant Market Power in the Relevant Retail Markets

11.1 The August 2007 Consultation

116. Having defined the relevant markets, the next step consisted of analysing the extent of competition in each market. The purpose of this was to determine whether competition was currently effective in constraining the behaviour of firms. In the August 2007 Consultation, TRA proposed that the outcomes of its competition assessment could be one of the following three:

- Effectively competitive;
- Not competitive: markets where competition was not currently effectively competitive and where it was not expected to become so over the next few years; and
- Prospectively competitive: markets where competition could reasonably be expected to become effective over the short-to-medium term.

117. To assess competition TRA considered a number of factors in line with its Determination on the Methodology for Determining Market Power ("Market Power Determination").[16] For example, it looked at market shares and market share trends; price trends; profitability; countervailing buyer power; and barriers to entry and expansion.

11.2 Responses to the August 2007 Consultation

118. With regards to the assessment of competition, Batelco made several general comments. Batelco contested the findings of TRA that some markets were not competitive. More specifically Batelco disagreed with what it called the 'implied dominance' approach of TRA, whereby TRA had not explicitly found dominance in the identified markets, but had

[16] See reference in footnote 8 above.

nonetheless determined a regulatory requirement on the basis that markets were prospectively competitive or not competitive.

119. Batelco was of the view that TRA had not properly factored into its analysis demand and supply-side analysis and had, in particular, failed to recognize existing, potential and prospective competition. Furthermore, Batelco disputed TRA's definition of effective competition and indicated that TRA should define the optimal number of suppliers that could be sustained in Bahrain before assessing whether competition was effective. Batelco also asked TRA to take into account the contestability of markets and the barriers to switching, since a high degree of contestability and a low level of barriers to switching would prevent the exercise of market power. Batelco requested TRA to focus on assessing market outcomes (e.g. product range, price) to gauge contestability rather than industry structure. Batelco also emphasised that competition is a means to increase consumer welfare, and is not an end in itself.

120. In its submission, Batelco stated that TRA had not defined what it means by cost. It contended that the standard analysis of market power and substitutability based on price elasticity need to be altered because of the fixed and sunk costs of telecommunications networks. More specifically Batelco indicated that a mark-up over marginal cost was perfectly compatible with a competitive market given the large fixed investment costs involved in the sector.

121. Batelco disputed the findings of TRA for each market. Batelco claimed that all markets defined were either, at least prospectively competitive, or effectively competitive, on the basis of: new infrastructure entry; its assessment of current competition at the retail level; forthcoming retail competition; and proposed and/or already implemented wholesale regulation (including wholesale DSL, bitstream, CPS and CS).

122. The table below summarises the findings of TRA and Batelco regarding the state of competition in each of the relevant markets defined in the August 2007 consultation.

Table 1: TRA and Batelco conclusions regarding the level of competition in the relevant markets defined in the August 2007 Consultation

#	Market	Competition assessment	
		TRA	Batelco
1	Fixed access narrowband connections and domestic calls originating on fixed lines - non-residential customers	Not competitive	Prospectively competitive
2	Fixed access narrowband connections and domestic calls originating on fixed lines - residential customers	Not competitive	Prospectively competitive
3	All international calls made from a fixed location to Zones 1 countries (GCC countries), Zone 3 countries (USA, Australia, UK, FR, etc) and Zone 4 countries (Others)	Zone 1: Not competitive Zone 3 & 4: prospectively competitive	Effectively competitive
3b	International calls made from either a fixed or mobile phone to Zone 2 countries (South Asian countries)	Effectively competitive	Effectively competitive
4	Mobile services, including mobile originated international calls to Zones 1, 3 and 4 countries	Prospectively competitive	Effectively competitive
5	Internet access from a fixed location	Not competitive	Prospectively competitive
6	Leased line services (domestic and international leased lines)	Not competitive	Effectively competitive

11.3 The Draft SMP Determination

123. The Telecommunications Law provides the following definition of an “operator with Significant Market Power”:

> “a Licensed Operator which holds twenty-five percent or more of the market share of the relevant market as determined from time to time by the Authority;
> When determining such matters, there shall be taken into consideration the ability of a Licensed Operator to influence market conditions, its turnover relative to the size of the market, its control of the means of Access to Users, its financial resources and its experience of providing products and services in the market. The Authority may determine that a Licensed Operator has significant market power even if such operator holds a share of less than twenty-five percent of the market or that it does not have significant power even if it holds more than such percentage.”

124. Thus, according to the Telecommunications Law TRA shall take into consideration the following when assessing SMP:

- Market share of the licensed operator in a relevant market;
- The ability of the Licensed Operator to influence market conditions;
- Its turnover relative to the size of the market;
- Its control of the means of Access to Users;

- Its financial resources; and
- Its experience in providing products and services in the market.

125. Each of these factors was considered in turn.

Market share of the licensed operator and ability to influence market conditions

126. For each of the relevant markets, TRA looked at market shares. Amongst the relevant markets in which TRA found that Batelco had SMP, the lowest market share held by Batelco was about [70%-80%] of the market for fixed originated international calls to Zone 3 countries. In all relevant markets where Batelco was found to have SMP, Batelco had market shares well in excess of the 25% set out in the Telecommunications Law.

127. Batelco's continued high market share in each of these relevant retail markets, including its continued control of not easily duplicable infrastructure used to provide services, enable Batelco to influence market conditions and to act - to a material extent – independently of competitors subscribers and users. This point was further discussed where appropriate for each relevant market.

Turnover relative to the size of the market

128. Batelco's total turnover for its operations in Bahrain was BD 194,872,000 for the year ended in 2006 and BD 204,527,000 for the year ended in 2007.[17] This represents about 80% of the total revenues from telecommunications services in Bahrain.[18]

129. Market shares and turnover relative to the size of the market are correlated. Hence, turnover relative to the size of the market was further considered for each relevant market below as part the analysis of market shares.

Control of the means of access to users

130. By virtue of the ownership and control of its fixed access network inherited from the period in which Batelco held a monopoly, Batelco controls the means of access to most users for the relevant markets for which TRA is conducting an SMP analysis.[19]

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[17] See Batelco, Annual Report 2006 and 2007.

[18] Total revenues from telecommunications services were estimated at BD 253 millions. See TRA, 2008, Telecommunications Services Indicators in the Kingdom of Bahrain, February.

[19] See also TRA, 2006, Determination on Dominance in Wholesale Market by Batelco, 22 January 2006.

Financial resources

131. Batelco has large annual revenues and profits. In the year ended 31 December 2006 Batelco had a total group turnover of BD 234,990,000 (BD 194,872,000 for Bahrain), a net profit of BD 90,835,000 (BD 87,478,000 for Bahrain).[20] At 31 December 2007, Batelco had BD 213,657,000 in cash and cash equivalent.[21] Therefore, Batelco has substantial financial resources.

Experience in providing products and services in the market.

132. Batelco, as the incumbent operator, has extensive experience in offering telecommunications services within the Kingdom of Bahrain and in other countries. Since its inception in 1981, Batelco has developed a substantial amount of experience in the development, maintenance and management of technical services, as well as its marketing and sales know-how.

Other Factors

133. In addition to the factors above, TRA also considered other criteria relevant to the analysis of market power. In its Market Power Determination, TRA concluded that in assessing SMP it will also consider other criteria relevant to the analysis of market power where relevant. Those included for instance, barriers to entry, the control of infrastructure not easily duplicable and vertical integration. In the August 2007 Consultation and in the analysis below, TRA looked at criteria directly relevant to the markets defined in a manner consistent with the Market Power Determination.[22]

134. TRA decided to exclude the mobile services market from its SMP analysis. TRA considered that entry restrictions have represented the major significant impediment to further competition at the retail level. As stated in TRA's Statement (Reference: MCD/0508/046), TRA has decided to allow the entry of a third mobile network operator, and therefore it deems it unnecessary to undertake a formal SMP analysis of the retail mobile services market at this point in time.

135. TRA disagreed with Batelco's other points. TRA considered it was not appropriate for a regulator to second-guess the market or to pre-define the optimal number of market players that the market could sustain prior to

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[20] See Batelco, Annual Report 2006, pages 54-5.

[21] Batelco, Consolidated Financial Statements 31 December 2007, page 7.

[22] The list of criteria contained in Annex 1 of the 2003 Determination is indicative and is non-exhaustive (Cf. TRA, 2003, Determination on the Methodology for Determining Market Power, page 7). It is clear from this Determination that Annex 1 lists criteria that might be considered by TRA when assessing whether a company is dominant or has SMP.

conducting a competition assessment.[23] Batelco's proposed approach of defining an optimal market structure a priori is at odds with international practice and mainstream economics of free entry. Open entry is a defining characteristic of competitive markets. Section 3 of the Telecommunications Law requires TRA to promote effective and fair competition among new and existing licensed operators. Effective and fair competition supports the promotion of end-user benefits through the discipline it provides to market participants to strive to offer innovative products at the lowest cost possible. Competition is not an end in itself, but a means to serve consumers' interests. Typically, entry restrictions distort the competitive process in favour of incumbents and to the detriment of consumers.

136. TRA took the contestability of markets into account as part of its analysis of barriers to entry and expansion. A market is contestable when there is free entry and exit is costless.[24] The key element that affects the contestability of a market is the level of sunk costs. Sunk costs are those costs that an operator must sink to enter a market and that cannot be recovered upon exiting a market (e.g. civil infrastructure costs). Sunk costs are widespread in the telecommunications sector. They create entry barriers. As a consequence, the level of contestability of markets was analysed by TRA as part of its analysis of barriers to entry and expansion of individual markets.

137. More generally, with regards to Batelco's points on contestability, TRA noted that the results of the theory of contestable markets developed by Baumol, Panzar and Willig in the early 1980's hold only when strict assumptions are met and, in particular, the absence of sunk costs. In a perfectly contestable market incumbent firms are vulnerable to hit-and-run entry. This possibility ensures that a monopoly can only recover its cost, and hence that market power is constrained. This is the key insight of the theory of contestable markets. However, research has shown that even a small proportion of sunk costs drastically limit the applicability of this general result.[25] This point appeared to be largely neglected in Batelco's view on contestability.

138. TRA concurred with Batelco's view that, in a sector characterised by large fixed costs, a mark-up over marginal cost was not in itself indicative of market power, and that it could be compatible with effective competition. A deviation from marginal cost pricing is necessary for recovering fixed and common costs. The typical cost standard applicable in the sector is incremental cost with, or without, a contribution to recover common costs.

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[23] In line with standard economic thinking, where there is no or very limited scope for competition, behavioural regulation is typically warranted in order to maximise economic welfare. Allocative efficiency can be improved by eliminating the deadweight loss associated with monopoly pricing whilst productive efficiency can be enhanced.

[24] See, for example, Church, J., and Ware R., Industrial Organization: A Strategic Approach, MacGraw-Hill, 2000, page 507.

[25] See, for example, Church, J., and Ware R., 2000 referred to at footnote 24, at page 52.

Incremental costs include both fixed and variable costs. Incremental costing (plus a reasonable contribution to common costs) is used by TRA for setting interconnection and access prices where TRA seeks to ensure the recovery of efficiently incurred incremental costs, including a return on capital commensurate with risks and a contribution to common costs.

139. For the analysis of competition and SMP in each relevant market, TRA considered market shares. This is consistent with the definition of SMP contained in the Telecommunications Law. TRA considered it appropriate to indicate market shares through the use of ranges in this Determination. TRA reserved the right to publish specific figures in the future where it considers such publication to be appropriate.

11.4 Responses to the Draft SMP Determination

140. Batelco notes that the market data used by TRA to calculate market shares is now somewhat outdated. Batelco is of the view that TRA wrongly focuses on bright-line SMP criteria instead of applying an effect-based analysis and that TRA has improperly defined regulatory measures to address competition issues. Finally, Batelco contends that TRA is incorrectly focussing on protecting competitors instead of on consumer welfare.

141. Zain made two main comments. First, Zain is of the view that given the relative inexperience of many operators and consumers in Bahrain concerning the application of the Telecommunications Law and competition provisions, the market share threshold for the finding of SMP should be considerably lower than used by TRA. In particular, it contests TRA's finding of no SMP in some markets where Batelco has a relatively large market share.

142. Second, Zain considers that TRA's analysis shows that Batelco does not only have SMP but is also dominant in certain relevant markets. Zain is of the view that the SMP designation should be complemented by a Dominance Designation.

143. Similarly Lightspeed requires TRA to designate Batelco as dominant in the relevant markets in addition to the SMP designation. Lightspeed argues that Batelco as a dominant operator should be subject to stricter ex ante obligations.

11.5 TRA analysis and conclusion

144. TRA disagrees with Batelco's arguments. TRA's approach to the analysis of market power is consistent with the relevant provisions of the Telecommunications Law, TRA's relevant Determinations and regulatory best practices.

145. Furthermore, TRA notes that it has not applied the market share threshold included in the Telecommunications Law in a rigid way but has instead considered extensively other relevant factors in its assessment of competition (e.g. barriers to entry). In undertaking an SMP analysis, TRA's overriding goal is to support the development of competition for the long term benefit of users, and hence to increase consumer welfare.

146. With regards to the data, TRA notes that it is standard practice in market analysis to take into account data available at a particular point in time as practically it is not feasible to update data at every consultative stage.

147. TRA does not consider that a Dominance Designation is warranted. The purpose of this Determination is to define relevant retail markets and assess competition therein with a view to establish the legal basis for the definition of retail regulation in markets where competitive conditions justify it. As per the Telecommunications Law, a dominance designation generally triggers obligations at the wholesale level. However, as stated above, TRA considers that the analysis conducted in this Determination complies not only with definition 34 ("Operator with Significant Market Power") of Article 1 of the Telecommunications Law, but also with definition 14 ("Dominant Position") of Article 1 of the Telecommunications Law, as detailed in the Methodology for Determining Market Power, approved by the Determination of TRA issued on 19 April 2003. Due to the factors considered in its analysis, TRA is of the view that in the markets where Batelco has SMP, Batelco is able to a material extent to act independently of competitors, subscribers and users. Therefore TRA considers that, when appropriate, the operator determined as holding SMP according to this Determination can also be considered to be in a dominant position.

12 Residential and non-residential markets for fixed narrowband access and for domestic calls originating on fixed lines

12.1 The August 2007 Consultation

148. The August 2007 Consultation concluded that the fixed access and domestic calls markets for non-residential and residential customers were not competitive. TRA noted the very high level of concentration in those two markets, with Batelco's market share (based on volume) in excess of 90% for non-residential users and close to [90%-100%] for residential customers. TRA also considered that there were significant entry barriers in these two markets. The entry barriers include notably the large sunk costs involved in the provision of direct access services to customers and the switching cost faced by customers due to the lack of number portability.

149. TRA also noted the distorting effects of unbalanced rates and the absence of nominal tariff changes since 2000. As a result, the fixed retail line of

business is unprofitable on a stand alone basis. Finally, TRA indicated that wholesale products (e.g. CAT for business users and CPS regulation) did not effectively curb Batelco dominance in retail markets.

12.2 Responses to the August 2007 Consultation

150. According to Batelco these markets were prospectively competitive and therefore should not be subject to any form of retail regulation. It contended that current wholesale regulation provides appropriate access conditions to OLOs; the market was contestable as evidenced by the domestic calls and bundle offers of Lightspeed and Etisalcom for example; and that forthcoming competition from other platforms (e.g. fixed wireless services) would have a major impact. Further, it contended that there is, in any case, limited scope for competitive entry into the fixed line access markets.

151. With regards to wholesale access services, Batelco claimed that there are currently a substantial number of operators that buy wholesale access services from Batelco such that end-users have a choice of competing providers for fixed access services. Alternative operators can provide direct access to business customers via Customer Access Tails (“CATs”), WiFi (mesh) networks, mobile and satellite networks.

152. Further, Batelco claimed that access services in conjunction with interconnection (including freephone origination), termination services and carrier pre-selection offered at regulated rates ensure that OLOs can offer competitive retail services to business and residential users.

153. For the non-residential customer markets, Batelco noted that there are a number of OLOs offering domestic calls services (via CPS or Voice-over-Internet-Protocol (“VoIP”) services) and that although there is no wholesale access product for narrowband access services to business customers, such as wholesale line rental, it was unlikely that any OLOs would want to enter the narrowband fixed access market.

154. In its submission, Batelco argued that the inclination to switch service providers identified by the business module of the Consumer Survey suggested that non-residential markets were at least prospectively competitive.

155. In the case of residential customers, Batelco considered that alternative operators have direct access to customers thanks to wholesale DSL and bitstream, which allow them to provide voice over broadband. Batelco also pointed out several domestic call offers of OLOs. Finally, Batelco requested TRA to fully consider the likely impact of Zain’s entry and its offer to residential customers of broadband, voice and access services.

12.3 The Draft SMP Determination

156. TRA remained of the view that the residential and non-residential markets for fixed access and fixed originated domestic calls were not effectively competitive. TRA considered that Batelco had SMP in these four markets.

157. With regards to the fixed access markets, TRA referred back to Batelco's market share. The table below shows that Batelco has [90%-100%] market share (based on volumes) in both the residential and non-residential markets and that no significant changes occurred in Q1 and Q2 2007. As mentioned in the August 2007 Consultation, there are significant barriers to entry to provide fixed access to non-residential and residential customers. Most of the costs of Batelco access network are sunk in nature. Batelco controls a network that is not easily duplicated.

Table 2: Estimated market shares (volume): residential and fixed narrowband access markets

Residential users	2005	2006	Q1 2007	Q2 2007
Batelco's market share	100%	100%	[90% - 100%]	[90% - 100%]
OLO's market share	0%	0%	[0% - 10%]	[0% - 10%]
Total	100%	100%	100%	100%

Non-residential users	2005	2006	Q1 2007	Q2 2007
Batelco's market share	100.0%	100.0%	[90% - 100%]	[90% - 100%]
OLO's market share	0%	0%	[0% - 10%]	[0% - 10%]
Total	100%	100%	100%	100%

158. The impact of the competitive entry of Zain and Mena Telecom in these markets is difficult to predict with any accuracy. However, in the relevant time horizon, it seems unlikely that it will be sufficient to curb Batelco's dominance and to exert sufficient strong competitive pressures.

159. The unbalanced structure of rates is a further factor distorting entry in these markets. TRA was of the view that Batelco overestimates the effect of wholesale regulation at the downstream level. CAT, other leased lines and satellites networks are not substitutes to fixed line access for non-residential customers. They are not part of the relevant markets defined above.

160. For the reasons outlined above, TRA concluded that Batelco had SMP in the fixed access markets for residential and non-residential customers.

161. With regards to the fixed originated domestic calls markets, TRA disagreed with Batelco's claim that these markets were prospectively competitive. The table below summarizes Batelco's market share in these markets. Whilst no information is available on the split between residential and non-residential customers, there should not be any material differences as CPS is only very marginally used for domestic calls and market shares in the fixed originated domestic calls markets are closely correlated with the market shares in the fixed access markets.

Table 3: Estimated market shares (volume): fixed originated domestic calls market

All users	2005	2006	Q1 2007	Q2 2007
Batelco	100%	100%	[90% - 100%]	[90% - 100%]
OLOs	0%	0%	[0% - 10%]	[0% - 10%]
Total	100%	100%	100%	100%

162. Batelco controls virtually all the market for fixed originated domestic calls. Batelco's monopoly position has not been really challenged despite the introduction of wholesale products. OLOs can provide domestic calls in competition to Batelco based on their own access infrastructure, such as Zain's fixed wireless network or by purchasing wholesale services from Batelco. Interconnection products include cost-based origination and termination services for PPCCs and CPS. OLOs that offer CPS have targeted mainly non-residential users with large monthly spends on international calls. Domestic calls originated from a fixed location could also be offered at the margin based on regulated access products. For instance, bitstream can be used to offer voice over broadband services to residential and non-residential customers, while CAT and other leased lines could constitute the basis to supply calls to certain non-residential customers only.

163. By allowing OLOs to put together retail services, the availability of wholesale products reduces the level of barriers to entry. However, updated market information for Q1 and Q2 2007 indicated that these wholesale products have not had any material impact. TRA has in fact received a number of complaints alleging for example delays in provisioning CAT and bitstream.[26] Thus, unless wholesale regulation is effective, the control by Batelco of the underlying infrastructure gives Batelco an opportunity to seek to leverage its upstream market power into the downstream market. In doing so, it can hinder the development of competition at the retail level.

164. With regards to the entry of the two National Fixed Wireless Services ("NFWS") licenses, as noted above it is difficult to predict their potential effect in the market. TRA considered that their entry was unlikely to undermine Batelco dominance in the fixed originated domestic calls markets over the relevant time frame. Zain packages of broadband and calls services are predominantly geared towards broadband users with domestic calls as an add-on providing an extra stream of revenues. Given the unbalanced rate structure, it seemed unlikely that an operator could profitably enter the market focusing only on the supply of access and domestic calls. Thus the magnitude of the likely impact of Zain and Mena Telecom entry may be limited by the size of the addressable broadband market relative to the fixed access markets.

[26] Subsequently to the publication of the Draft SMP, TRA issued in March 2008 an Order fining to Batelco BD100,000 for not providing wholesale leased lines services to 2Connect. TRA, 2008 Section 35, Order No 1/08 Batelco's obligation to provide Customer Access Tail Service.

165. For the reasons indicated above, TRA concluded that Batelco had SMP in the residential and non-residential fixed originated calls markets and that there was insufficient competition in these markets.

12.4 Responses to the Draft SMP Determination

166. Batelco referred back to its comments to the August 2007 consultation and notes that WiMax is a true substitute for fixed access.

167. Lightspeed and Zain concur with TRA's market assessment for the market for fixed access narrowband connections (residential and non-residential) and for the market for domestic calls originating on fixed lines (residential and non-residential). Mena Telecom agrees with TRA that Batelco has SMP in the fixed access markets.

12.5 TRA analysis and conclusion

168. In light of the comments received and considering that TRA has previously addressed Batelco's comments, TRA is of the view that Batelco has SMP in the following markets and that there is insufficient competition in these markets:

- The retail market for fixed narrowband access services for residential customers. (Market 1a)
- The retail market for fixed narrowband access services for non-residential customers. (Market 1b)

- The retail market for fixed originated domestic calls for residential customers to either fixed or mobile subscribers within the Kingdom of Bahrain. (Market 2a)
- The retail market for fixed originated domestic calls for non-residential customers to either fixed or mobile subscribers within the Kingdom of Bahrain. (Market 2b)

13 International calls markets

13.1 The August 2007 Consultation

169. In the August 2007 Consultation, TRA concluded that:

- The international calls market to GCC countries (Zone 1) was not competitive;
- The international calls market to Zone 2 countries was effectively competitive; and finally

- The international calls markets to Zone 3 and Zone 4 were prospectively competitive.

170. TRA based its findings on an analysis of the level of concentration based on the Herfindahl-Hirschman Index ("HHI"), of barriers to entry and expansion, of price levels and profitability as well as of countervailing buyer power.

13.2 Responses to the August 2007 Consultation

171. Batelco submitted that the international calls markets were effectively competitive and should therefore not be subject to any form of retail tariff regulation. To substantiate this view, Batelco provided estimates of its market share of minutes of traffic. It estimated its overall market share of outbound traffic at [20%-30%], its market share of international outbound retail traffic from mobile at [15%-25%], and its international outbound retail traffic from fixed lines at [40%-50%].

172. With regards to entry conditions, Batelco noted that current wholesale regulation (including CPS, PPCCs and the Voice-over-Broadband ("VoBB") providers) allowed OLOs to compete effectively with Batelco; that barriers to entry were low, and hence that international markets were contestable as evidenced by the competitive pressures of PPCCs and the drop in international rates.

173. Further, Batelco indicated it was unable to increase IDD rates as customers would switch. It said the use of the HHI index in this particular context was not appropriate, and that instead TRA's analysis ought to focus on analysing contestability. Although Batelco recommended a route-by-route analysis, it did not attempt to carry out such an analysis.

174. Batelco argued that calls from fixed locations to Zone 3 and Zone 4 were prospectively competitive and should therefore not be subject to price controls. It was concerned that doing otherwise would be disproportionate given the volume of IDD minutes to Zone 3 and 4 in relation to the total volume of traffic to those countries.

175. With respect to calls to Zone 1, Batelco indicated that its market share and volume of traffic had been declining and despite price drops Batelco had been unable to invert this trend. Hence, Batelco argues that imposing a retail price control would be disproportionate.

13.3 The Draft SMP Determination

176. TRA undertook further analysis since the release of the August 2007 Consultation based on international traffic data for Q1 and Q2 2007. TRA amended accordingly the conclusions of its competition assessment.

177. Two adjustments to the data provided by licensed operators were required to estimate the market shares of operators by zone and by access type, i.e. mobile or fixed originated calls. The first adjustment consisted of splitting Batelco's IDD traffic for Q1 and Q2 2007 by access type based on the relative proportion of international calls originated from mobile and fixed phone in 2006.

178. The second adjustment made related to the treatment of traffic from PPCCs. Here, TRA considered that 20% of PPCCs traffic was made from a fixed line and 80% was originated from a mobile phone. This adjustment was based on the proportion of fixed and mobile phone users in Bahrain. It implicitly assumed that there is an equal probability of originating a PPCC call from a fixed and mobile phone. A similar adjustment was made for Batelco's PPCCs traffic.

179. These adjustments were most likely to underestimate Batelco's market share in the fixed originated international calls market and correspondingly to overestimate its share for mobile originated international calls markets.

180. At the high level, the main insights from the quantitative analysis of international traffic were:

- Whereas the volume of international traffic has increased dramatically,[27] overall revenues for calls have dropped significantly as a result of price competition. The decline of revenue per minute has been particularly significant for calls to Zone 2 and, to a lesser extent, to Zone 3 and Zone 4 countries since market liberalisation. Calls to GCC countries have experienced only a marginal decrease in revenue per minute.
- The geographic distribution of traffic based on volume is as follows: about 20% to GCC countries, 60% to Zone 2, 10% to Zone 3 and 10% to Zone 4. The percentages based on revenues are respectively about 30%, 40%, 15% and 15%.
- There are a large number of active operators in the international calls markets. OLOs have gained significant market share in some markets (see below details of markets concerned). Market shares tend to fluctuate in most markets. This suggests fierce competition in some markets (see below details of markets concerned).
- Batelco's market shares based on revenues have been systematically higher than its market shares based on volume. In most markets the difference is significant. The same applies to Zain. To the extent that the traffic of Zain and Batelco is mostly IDD, this is not surprising as IDD rates are typically higher than PPCCs' rates. Providers of PPCCs also tend to use low-cost switching and transmission solutions. However, this may also suggest the existence of market power.

[27] Between Q2 2006 and Q2 2007, international traffic grew by 82%. See TRA, 2008. Telecommunications Services Indicators in the Kingdom of Bahrain, February, page 24, available at http://www.tra.org.bh/en/marketinfo.asp.

181. The tables below summarise market shares for each of the fixed international calls markets defined.

Table 4: Batelco estimated market share: fixed originated international calls markets

Volume	2005	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Q1	2007 Q2
Zone 1 GCC	100%	[90% - 100%]	[90% - 100%]	[90% - 100%]	[90% - 100%]	[80% - 90%]	[80% - 90%]
Zone 2	100%	[50% - 60%]	[30% - 40%]	[30% - 40%]	[0% - 10%]	[0% - 10%]	[10% - 20%]
Zone 3	100%	[90% - 100%]	[90% - 100%]	[80% - 90%]	[70% - 80%]	[70% - 80%]	[70% - 80%]
Zone 4	100%	[90% - 100%]	[90% - 100%]	[80% - 90%]	[70% - 80%]	[50% - 60%]	[30% - 40%]

Revenues	2005	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Q1	2007 Q2
Zone 1 GCC	100%	[90% - 100%]	[90% - 100%]	[90% - 100%]	[90% - 100%]	[90% - 100%]	[90% - 100%]
Zone 2	100%	[70% - 80%]	[60% - 70%]	[50% - 60%]	[20% - 30%]	[20% - 30%]	[30% - 40%]
Zone 3	100%	[90% - 100%]	[90% - 100%]	[90% - 100%]	[90% - 100%]	[80% - 90%]	[80% - 90%]
Zone 4	100%	[90% - 100%]	[90% - 100%]	[90% - 100%]	[80% - 90%]	[60% - 70%]	[50% - 60%]

182. The main findings from the analysis of market shares for each relevant fixed market were:

- The geographic distribution of fixed originated traffic based on volume is as follows: about 25% to GCC countries, 50% to Zone 2, 15% to Zone 3 and 10% to Zone 4. The percentages based on revenues are respectively about 40%, 30%, 20% and 10%.
- For fixed originated international calls to GCC countries, Batelco has retained an extremely high market share, both measured in volume [80%-90%] and revenues [90%-100%].
- For fixed originated international calls to Zone 2 countries, Batelco has lost about [80%-90%] of the market in terms of volume, although the impact on revenues has been less dramatic. Several PPCCs providers have greater traffic volumes than Batelco. Along side those competitors there is a fringe of smaller players.
- For fixed originated international calls to Zone 3 countries, OLOs have gained about [20%-30%] market share based on volume and [10%-20%] based on revenues.
- For international calls to Zone 4 countries, Batelco has lost about two thirds of the market with one operator emerging as its largest competitor by market share. Here too, the impact on revenues has been less pronounced with Batelco still holding a market share in excess of 50%.
- CPS traffic amounts to about 5% in each market, except for calls to Zone 4 countries where the market share is about 8%. One CPS provider stands out.

183. The analysis of market shares suggested that Batelco may have SMP in the fixed originated international calls markets to GCC countries and to Zone 3 countries and to a lesser extent to Zone 4 countries.

184. Estimates of market shares for mobile originated international calls are provided in the table below.

Table 5: Estimated market shares: mobile originated international calls markets

Volume

Zone 1 GCC	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[70% - 80%	[70% - 80%	[60% - 70%]	[60% - 70%]	[60% - 70%]	[60% - 70%]
Zain	0%	[20% - 30%]	[20% - 30%]	[20% - 30%]	[20% - 30%]	[20% - 30%]	[20% - 30%]
OLOs	0%	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]
Total	100%	100%	100%	100%	100%	100%	100%
Zone 2	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[40% - 50%]	[20% - 30%]	[20% - 30%]	[10% - 20%]	[0% - 10%]	[0% - 10%]
Zain	0%	[0% -10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]
OLOs	0%	[40% - 50%]	[60% - 70%]	[70% - 80%]	[80% - 90%]	[80% - 90%]	[80% - 90%]
Total	100%	100%	100%	100%	100%	100%	100%
Zone 3	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[60% - 70%]	[50% - 60%]	[40% - 50%]	[20% - 30%]	[30% - 40%]	[30% - 40%]
Zain	0%	[20% - 30%]	[20% - 30%]	[20% - 30%]	[20% - 30%]	[10% - 20%]	[10% - 20%]
OLOs	0%	[0% - 10%]	[20% - 30%]	[30% - 40%}	[50% - 60%]	[40% - 50%]	[40% - 50%]
Total	100%	100%	100%	100%	100%	100%	100%
Zone 4	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[70% - 80%]	[60% - 70%]	[50% - 60%]	[30% - 40%]	[40% - 50%]	[20% - 30%]
Zain	0%	[20% - 30%]	[20% - 30%]	[20% - 30%]	[20% - 30%]	[10% - 20%]	[20% - 30%]
OLOs	0%	[0% - 10%]	[10% - 20%]	[20% - 30%]	[30% - 40%]	[40% - 50%]	[50% - 60%]
Total	100%	100%	100%	100%	100%	100%	100%

Revenues

Zone 1 GCC	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[70% - 80%]	[70% - 80%]	[70% - 80%]	[60% - 70%]	[70% - 80%]	[60% - 70%]
Zain	0%	[20% - 30%]	[20% - 30%]	[20% - 30%]	[30% - 40%]	[20% - 30%]	[20% - 30%]
OLOs	0%	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]
Total	100%	100%	100%	100%	100%	100%	100%
Zone 2	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[60% - 70%]	[50% - 60%]	[40% - 50%]	[30% - 40%]	[20% - 30%]	[20% - 30%]
Zain	0%	[0% - 10%]	[0% - 10%]	[0% - 10%]	[0% - 10%]	[10% - 20%]	[0% - 10%]
OLOs	0%	[20% - 30%]	[40% - 50%]	[40% - 50%]	[50% - 60%]	[60% - 70%]	[60% - 70%]
Total	100%	100%	100%	100%	100%	100%	100%
Zone 3	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[70% - 80%]	[60% - 70%]	[60% - 70%]	[30% - 40%]	[40% - 50%]	[50% - 60%]
Zain	0%	[20% - 30%]	[20% - 30%]	[20% - 30%]	[40% - 50%]	[20% - 30%]	[20% - 30%]
OLOs	0%	[0% - 10%]	[0% - 10%]	[10% - 20%]	[20% - 30%]	{30% - 40%]	[20% - 30%]
Total	100%	100%	100%	100%	100%	100%	100%
Zone 4	**2005**	**2006 Q1**	**2006 Q2**	**2006 Q3**	**2006 Q4**	**2007 Q1**	**2007 Q2**
Batelco	100%	[70% - 80%]	[60% - 70%]	[50% - 60%]	[40% - 50%]	[40% - 50%]	[20% - 30%]
Zain	0%	[20% - 30%]	[20% - 30%]	[20% - 30%]	[30% - 40%]	[20% - 30%]	[40% - 50%]
OLOs	0%	[0% - 10%]	[0% - 10%]	[10% - 20%]	[10% - 20%]	[30% - 40%]	[30% - 40%]
Total	100%	100%	100%	100%	100%	100%	100%

185. The main findings from the analysis of concentration in each of the relevant mobile market were:

- The geographic distribution of traffic based on volume is as follows: about 20% to GCC countries, 65% to Zone 2, 5% to Zone 3 and 10% to Zone 4. The percentages based on revenues are respectively about 30% 45%, 10% and 15%.
- For mobile originated international calls to Zone 1 countries, the market shares of Batelco and Zain are broadly in line with their relative position in terms of number of subscribers. Batelco has a market share of about [60%-70%] whilst PPCCs providers control about 6% of the value of the market.
- For mobile originated international calls to Zone 2 countries, PPCCs providers have about [80%-90%] of the market based on volume and [60%-70%] based on revenues. Three providers have substantial market shares in excess of the shares of the two MNOs.
- For mobile originated calls to Zone 3 countries, Batelco and Zain hold respectively about [30%-40%] and [10%-20%] of the market based on volume and about [50%-60%] and [20%-30%] based on revenues. Two strong PPCCs providers are emerging. They control about [40%-50%] of the volume of traffic.
- For mobile originated calls to Zone 4 countries, Batelco and Zain have respectively about [20%-30%] and [20%-30%] of the market based on volume. OLOs control about [30%-40%] of the value of the market.

186. The analysis of concentration in mobile originated international calls markets pointed to a possible position of SMP by Batelco for calls to GCC countries and Zone 3 countries as well as a position of SMP by Zain for calls to Zone 4 countries.

187. High market shares are not necessarily indicative of market power. It is necessary to assess barriers to entry. The August 2007 Consultation indicated that barriers to entry and expansion were likely to be low in retail international calls markets.

188. Competitors to Zain and Batelco fixed and mobile need not have their own infrastructure to operate in these markets. To complete an international call, there are two main inputs required at the wholesale level: call origination and wholesale transmission including termination at the far end. Call origination for international calls on Batelco fixed and mobile networks is regulated and provided at cost-based rates while Zain offers call origination services to PPCCs providers on a commercial basis. Batelco also offers a wholesale IDD service on a regulated basis as per the reference offer. Finally, for fixed markets OLOs have the possibility to offer services directly to customers through the regulated CPS service.

189. Through wholesale regulation, OLOs have been able to enter the international calls markets and to exert competitive pressures on Batelco and Zain. These pressures have been lesser for calls to GCC countries where incumbent operators have retained strong positions.

190. With low barriers to entry at the retail level and cost based regulation for call origination (or similarly regulated CPS), the level of competition in retail markets is largely determined by the competitive conditions at the level of wholesale transmission (including termination at the far end). At that level, barriers to entry may be significant. They arise as a result of the contractual arrangements required, the level of competition at the far end (i.e. the destination country), economies of scale, and restrictions such as the inability to by-pass the traditional accounting rate regime, a ban on simple resale or on VoIP termination. The level of competition and extent of restrictions at the far end are likely to explain to a degree the limited impact of competition from PPCCs and CPS providers in international calls markets to GCC countries.

191. Lower price sensitivity of callers and greater customer inertia are other likely reasons for the persistence of strong market shares in the markets for calls to GCC countries and fixed originated calls to Zone 3, and to a lesser extent to Zone 4 countries markets. Further, in these markets the proportion of business calls is likely to be greater than for the market to Zone 2 countries. This, combined with the fact that the only true alternative available for businesses is CPS, may also explain the limited market share captured by OLOs.

192. Although TRA does not have the breakdown of traffic between residential and non-residential users, business users, especially large companies, are unlikely to use PPCCs for their international communications. The Consumer Survey showed that business users make very limited use of PPCCs for their international communications, making instead extensive use of fixed IDD calls. CPS therefore constitutes the main source of competitive constraint to Batelco for international calls originated from fixed lines. In turn, the strength of this constraint depends on the effectiveness and implementation of the CPS regulation, which need to be constantly improved in order to facilitate customer switching. In this context, TRA notes that it has been investigating a number of complaints regarding the services related to the CPS product provided by Batelco received from OLOs.[28]

193. The market share threshold indicator of 25%, set in the definition of "Operator with Significant Market Power" in the Telecommunications Law would suggest that Batelco may hold SMP in the following markets: fixed originated international calls to Zone 1, to Zone 3 and to Zone 4 countries as well as mobile originated international calls to Zone 2 countries. However, when determining SMP, TRA must consider other factors, inter alia, the ability of the operator to influence market conditions, its turnover relative to size of the market, control of the means of access to users, financial resources, its experience or providing products and services to the

[28] Note that TRA has not at the time of the release of this Determination made any conclusive findings.

markets, entry barriers and the impact of wholesale regulation on downstream competition.

194. On balance, TRA was of the view that except for international calls originated from fixed lines to Zone 1 and Zone 3 countries, the remaining markets were competitive. For mobile originated calls, Zain provides a sufficient competitive constraint to Batelco and vice versa. With regards to the market to Zone 4 countries, this category is a residual group that includes all remaining destinations in which Batelco market share has been continually decreasing.

195. For the reasons set out above, TRA considered in the Draft SMP Determination that Batelco has SMP in the fixed originated international calls markets to Zone 1 and Zone 3 countries and that there is insufficient competition in these markets. TRA concluded that no operator had SMP in the remaining international calls markets. These findings were predicated on the availability and effectiveness of wholesale regulation and in particular cost-based call origination and effective CPS.

13.4 Responses to the Draft SMP Determination

196. Batelco repeated some of its comments made to the August 2007 Consultation. Batelco disagrees with TRA's conclusions with regards to most of the routes where TRA deemed Batelco to have SMP.

197. More specifically, Batelco deplores the absence of competition assessment at the level of individual routes and correspondingly the finding of SMP or no SMP at the zone level. Batelco considers that a continuous monitoring of the status of routes is required or that TRA should at least introduce a review mechanism. Batelco also argues that an analysis of market shares is insufficient, that the data relied upon is dated, and that TRA should also consider the evolution of market shares over time and the competitive interaction between market players.

198. Batelco contends that all routes where Batelco's traffic is experiencing a "downward sloping" trend should be deemed competitive. According to Batelco, this downward sloping trend may be explained by consumer making IP-based calls. Batelco provided graphs showing monthly volumes from January 2007 to February 2008 for some of the routes included in Zone 1 and Zone 3. Based on its own interpretative reading of those graphs, Batelco contends that two destinations of the five included in Zone 1 and seven destinations of the 12 included in Zone 3 should be deemed competitive or prospectively competitive, as Batelco traffic has experienced "discernible negative trends". Batelco also made the argument that any ex ante regulation is not warranted given the small proportion of fixed originated calls for the markets in which TRA has found Batelco to have SMP.

199. Finally Batelco claimed that the removal of retail regulation is justified because the current ex ante approval process restricts Batelco from lowering prices.

200. Zain concurs with TRA's market assessment for the markets for fixed originated international calls to Zone 1 and Zone 3 countries (i.e. market 3a and 3c). On the basis of the market shares held by Batelco in the markets for fixed originated calls to Zone 4 countries (market 3d) and mobile originated calls to Zone 1 countries and potentially mobile originated calls to Zone 3 countries, Zain contends that Batelco has SMP in those markets.

201. Lightspeed considers that Batelco also holds a dominant position for fixed originated international calls to Zone 2 and Zone 4 countries and that ex ante regulatory controls should be maintained in Batelco for those calls.

202. Mena Telecom concurs with TRA's conclusions.

13.5 TRA analysis and conclusion

203. TRA is unconvinced by the arguments put forward by Batelco, Lightspeed and Zain. TRA is of the view that the comments received do not justify a modification of the Draft SMP Determination findings.

204. In reaching its conclusion regarding SMP, TRA considered, amongst the other factors as indicated above, market shares and their evolution over a reasonable period of time. The specific characteristics of individual zones were, as far as feasible, also taken into account together with barriers to entry and the competitive and regulatory situations applicable for the underlying input relevant to the provision of international calls.

205. For instance, in the case of fixed originated calls to Zone 2 countries, although Batelco had a market share of [30%-40%] in terms of revenues which according to the Law is above the threshold for the finding of SMP, TRA concluded that Batelco does not have SMP in this market as this is a particularly dynamic zone in which market shares have fluctuated and some OLOs currently have greater market shares than Batelco. In addition to movements in market shares and the strength of the competitive constraint imposed by some competitors, TRA also looked at competition and the extent of restrictions at the far-end in its analysis.

206. TRA disagrees with Batelco that the mere presence of a "downward sloping trend" is in itself sufficient to make a route or zone competitive. Notwithstanding the concerns TRA has with the data submitted by Batelco and Batelco's interpretation of the data, a decline in Batelco's traffic cannot by itself be equated with the loss of market power.

207. For calls to GCC countries, Batelco still has a market share of [80%-90%] based on volume and in excess of 90% on revenues. For calls to Zone 3,

Batelco's market shares are respectively [70%-80%] and [80%-90%]. These are very substantial market shares. Further, the fact that Batelco market shares based on revenues have been consistently and significantly higher than based on volume may partly be explained by the presence of market power.

208. TRA has reservations with the information submitted by Batelco and Batelco's own interpretation of this information. TRA notes that the treatment of Batelco's PPCC traffic is not consistent: it is excluded from its analysis of Zone 1 but included in its analysis of Zone 3. The difficulty of identifying any discernible trends with a reasonable level of comfort based solely on one year of monthly data is compounded by the very wide fluctuations of traffic as seen in Batelco's monthly traffic data. These fluctuations are most likely indicative of seasonal variations. Based on the reading of certain graphs, TRA considers that it is not feasible to identify any discernable trends, whether upward or downward.

209. Another concern relates to the fact that Batelco has submitted only information regarding volume and not revenue. However, as shown above, Batelco's market shares based on revenues have been significantly and consistently greater than based on volume. Batelco has been more successful at limiting the erosion of its market share measured against revenues. This illustrates Batelco's ability to act independently of its competitors.

210. TRA is also unconvinced by Batelco's argument that no ex ante regulation is warranted because of the small proportion of fixed originated calls. A lot of businesses and residential users alike rely on fixed originated calls. Having found SMP, there is no reason why businesses and residential users should not be protected by some form of ex ante regulation. Furthermore and contrary to Batelco's assertion, the proportion of fixed originated calls is not negligible. In fact, TRA estimates that fixed originated calls to Zone 1 and Zone 3 countries represent about 60% of total revenues from fixed originated international calls and 40% of volumes. At the zone level the proportion of fixed originated calls within fixed and mobile originated calls is 30% based on volume and 40% based on revenues for both zones.

211. Batelco's comment that TRA restricts Batelco from price cutting is misleading. Provided that Batelco's price change requests are consistent with the approval requirements contained in their various licenses and the Telecommunications Law, TRA approves tariff changes. According to the tariff approval process, the power of initiative to modify a tariff lies with Batelco and not with TRA.

212. With regards to Batelco's suggestion to constantly monitor the evolution of international markets or to have a review mechanism, TRA sees merit in the latter suggestion. The determination allows for the review of the status of competition where changes in the market may justify it.

213. For the reasons set out above and having considered the comments received, TRA is of the view that Batelco has SMP in the following international calls markets:

- The retail market for fixed originated international calls to Zone 1 countries (GCC countries: Kuwait, Oman, Qatar, Saudi Arabia, and UAE). (Market 3a)
- The retail market for fixed originated international calls to Zone 3 countries (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA, and Yemen). (Market 3c)

214. TRA is of the view that no operator has SMP in the other markets and destinations.

14 The fixed Internet access markets

14.1 The August 2007 Consultation

215. In the August 2007 Consultation, TRA found the fixed Internet access market to be not effectively competitive. This finding was principally based on the very large market share of Batelco, the level of profitability of Batelco, and the limited availability of higher speed broadband services. TRA noted that it will monitor the impact of the entry of NFWS licenses on competition and competition from OLOs based on regulated wholesale DSL and bitstream.

14.2 Responses to the August 2007 Consultation

216. Batelco disputed this finding and argued that the fixed Internet access market was effectively competitive. Batelco referred to the large number of competing offers by OLOs, the set of wholesale products and the entry of the NFWS operators which, according to Batelco, will have a profound impact on competition. Batelco called for more retail pricing flexibility and deemed unnecessary the imposition of any form of retail regulation.

217. With regards to dial-up Internet access, Batelco indicated that this market had been declining rapidly and, accordingly, that market entry was unlikely. It also noted that no OLOs have taken up its wholesale offer and that it had stopped all development plans for dial-up Internet products. Overall, Batelco believed that no retail regulation is warranted for this market.

218. Cisco provided evidence of the extent to which Bahrain performance in terms of broadband penetration and service offerings (e.g. absence of unlimited offers) was lagging behind other countries. It argued that this resulted partly from the lack of effective competition in the Internet Services Provider ("ISP") market. Similarly, Zain underscored the lack of

competitive broadband offers at speed in excess of 2Mbs and the low penetration of broadband.

14.3 The Draft SMP Determination

219. With regards to the retail dial-up Internet access market from a fixed location, TRA considered that Batelco had SMP. Batelco is the only provider of dial-up services in the Kingdom of Bahrain and has therefore a 100% market share. As indicated in the table below, the number of dial-up subscribers has declined rapidly in the last few years. TRA concurred with Batelco that this is a declining market as dial-up Internet access is being superseded by broadband Internet access. This specificity needs to be reflected in the design of regulatory remedies in this market.

Table 6: Estimated market shares: dial-up fixed Internet access market

Dial-up	2005	2006	Q1 2007	Q2 2007
Number of subscribers	28,867	21,466	9,356	8,171
Batelco	100%	100%	100%	100%
OLO's	0%	0%	0%	0%
Total	100%	100%	100%	100%

220. With regards to the retail broadband Internet access market from a fixed location, TRA remained of the view that competition was not effective and that Batelco had SMP in this market. Although competition is progressing with the entry of Zain into the market and access-based competition from OLOs, TRA considered that Batelco was highly likely to retain SMP in the short-to-medium term.

221. The introduction of wholesale DSL and bitstream in Q2 2007 finally allowed OLOs to introduce retail broadband services in competition with Batelco. At the end of Q2 2007, the market share of OLOs was [0%-10%]. Infrastructure-based competition has also started to emerge in December 2007 with the entry of Zain and the launch of its fixed wireless broadband services. Mena Telecom is also expected to launch its services shortly.

Table 7: Estimated market shares: broadband Internet access market

Broadband	2005	2006	Q1 2007	Q2 2007
Number of subscribers	21432	38628	53754	58864
Batelco	100%	100%	[90% - 100%]	[90% - 100%]
OLOs	0%	0%	[0% - 10%]	[0% - 10%]
Total	100%	100%	100%	100%

222. However, competition based on regulated access products will take time to have an impact on the market. Wholesale regulation was not considered effective yet. In the last six months there had been a number of issues which affected the effectiveness of wholesale regulation. TRA considered it very likely that they prevented a more significant up-take of wholesale products. The uptake of wholesale products was still very limited. TRA had received a number of formal and informal complaints and comments

regarding the non-price terms of access products and processes.[29] Operational issues take time to be resolved. In the meantime Batelco enjoys a competitive advantage over its competitors as its upstream market power is not effectively constrained.

223. Compared to bitstream, the potential competitive impact of wholesale DSL is limited to price, as wholesale DSL does not allow OLOs to differentiate their services, it is a straight resale product.

224. Batelco's vertical integration and control of the underlying infrastructure for the provision of DSL services give rise to opportunities to leverage upstream market power in the downstream market. This can take place through non-price strategic behaviour (e.g. non-price discrimination between Batelco retail and OLOs) and pricing strategies (e.g. price squeeze).

225. The impact of market entry by the two NFWS operators is, as explained above, difficult to predict with any accuracy. However, the ability of NFWS operators to provide an effective competitive constraint to Batelco is limited by the technological capabilities of their networks. For limited incremental costs, Batelco's network is capable of delivering download speed of up to 8Mbps using ADSL2 and up to 20Mbps if ADSL2+ is implemented. Whilst in theory NFWS networks could attain sustainable bit rates approaching 8Mbps, substantial incremental investment would be required in order to maintain acceptable quality of service levels. Therefore, the ability of facility-based competitors to compete with Batelco on quality of services is constrained.

226. Furthermore, satellite-based broadband provides only a limited competitive constraint in the retail broadband Internet access market. In terms of market share, satellite broadband is marginal. The offers of competing providers, such as Mena Telecom or Orbit for example, have attracted a very limited number of customers. Satellite broadband suffers from significant cost and quality disadvantages, compared to other broadband delivery mechanisms, such as fixed DSL. As a result, satellite broadband is not well suited to compete in the mass retail broadband market. It is typically confined to users with specific needs that are located in areas, which are challenging to cover. The retail price of a 512kbps/128kbps of Orbit is BD 56 per month whereas the equivalent services from Batelco costs BD 25. This is a significant cost disadvantage.

227. Further, as noted in the August 2007 Consultation, the persistence of high retail broadband tariffs by international standards and prices well in excess of cost is suggestive of the persistence of market power.

228. Overall, for the reasons above and included in the August 2007 Consultation, TRA considered in the Draft SMP Determination that Batelco had SMP in the retail broadband Internet access market and in the dial-up

[29] Note that TRA has not at the time of the release of this Determination made any conclusive findings.

Internet access from a fixed location market and that there was insufficient competition in these markets.

14.4 Responses to the Draft SMP Determination

229. Batelco agrees with TRA on the assessment of the dial-up Internet market on the basis that Batelco has a 100% market share. However, Batelco considers that no retail regulation is warranted as this market is a small and declining market. Further Batelco argues that its ability to increase price is constrained by broadband offers through a one-way substitutability effect between dial-up and broadband and by the availability of access products allowing OLOs to offer competing services in response to a potential price increase. Batelco did not comment on TRA's finding of SMP in the retail broadband market.

230. Mena Telecom, Zain and Lightspeed concur with TRA's market assessment for the dial-up and broadband access markets.

14.5 TRA analysis and conclusion

231. For the reasons set out above and having considered the comments received, TRA is of the view that Batelco has SMP in the following markets:

- The retail market for dial-up internet access services from a fixed location. (Market 5a)
- The retail market for broadband internet access services from a fixed location. (Market 5b)

15 The leased lines markets

15.1 The August 2007 Consultation

232. TRA concluded in the August 2007 Consultation that the leased lines market, defined broadly to include domestic and international circuits, was not effectively competitive. It reached this view on the basis of the large market share of Batelco, and the substantial barriers to entry and expansion in the market, and in particular the magnitude of investment costs to enter the market. TRA also indicated it will monitor the development of competition following the launch of wholesale products.

15.2 Responses to the August 2007 Consultation

233. In its submission, Batelco found the market of leased lines to be effectively competitive or at least prospectively competitive. According to Batelco,

there are three OLOs offering domestic leased lines based on FSO technology, and three competing providers of international leased lines based on alternative technologies. Batelco also pointed to the loss of customers to competitors and the aggressive behaviour of OLOs as evidence of the level of competition in the market.

234. Furthermore, Batelco expressed the view that OLOs can effectively compete with Batelco in the retail leased line market thanks to the wholesale regulation of leased lines which has facilitated market entry and made the market contestable. Batelco also noted the limited level of entry that can be expected in this market and referred to the position of the European Commission according to which leased lines are not viewed as susceptible to ex ante regulation.

15.3 The Draft SMP Determination

235. TRA disagreed with Batelco's view on the level of competition and considers that Batelco has SMP in the retail leased lines market. Batelco has [90%-100%] market share. As indicated in the August 2007 Consultation, there are significant barriers to entry and expansion for facility-based entry in the leased lines market. They relate to the sunk nature of the costs involved and the difficulties for OLOs to gain access to ducts and, more generally, access to public roads corridors to roll out their own physical infrastructures.

Table 8: Estimated market shares (volumes): leased lines market

	Q1 07	Q2 07	Q1 07	Q2 07
	Domestic leased lines		International leased lines	
Batelco	[90% - 100%]	[90% - 100%]	n/a	[90% - 100%]
OLO's	[0% - 10%]	[0% - 10%]	n/a	[0% - 10%]
Total	100%	100%	n/a	100%

236. Wholesale regulation is not yet effective at neutralising Batelco market power at the wholesale and retail levels. Competition based on wholesale products has been problematic with a number of issues relating to delays in the supply CAT's for example.[30] As a consequence, OLOs have experienced significant difficulties in competing with Batelco in the retail market. The effect of the wholesale regulation in place has yet to be felt.

237. For the reasons stated above, TRA concluded in the Draft SMP Determination that Batelco has SMP in the retail leased lines market and that there was insufficient competition in this market.

[30] Subsequently to the publication of the Draft SMP, TRA issued in March 2008 an Order fining to Batelco BD100,000 for not providing wholesale leased lines services to 2Connect.

15.4 Responses to the Draft SMP Determination

238. Zain, Mena Telecom and Lightspeed concur with TRA's market assessment.

239. Batelco essentially repeated the comments it made to the August 2007 Consultation stressing the number of operators that provide domestic and international leased lines.

15.5 TRA analysis and conclusion

240. The changes made to the market definition (i.e. inclusion of alternative technologies and split between domestic and international leased lines) do not alter the findings of SMP.

241. In terms of market shares, the new market definitions make no difference as there is a trivial number of leased lines (both domestic and international) provided over alternative technologies by OLOs. Under the revised market definitions, Batelco retains a market share (based on volume) well in excess of 90% in both the domestic and international market for leased lines.

242. Optic links and satellites based leased lines have certain limitations which may explain why they are often used in specific circumstances (e.g. isolation) and/or in complement with leased lines based on fixed infrastructure. The effect of these is reflected in the currently very low level of penetration of leased lines based on optic links and satellites.

243. Similarly, whilst the two NFWS licenses could in theory enter the domestic leased lines market and offer leased lines over their WiMax networks in the future, TRA considers that, should they decide to supply such services, it would be very unlikely that their entry would be sufficient to curb Batelco's ability to act independently of its competitors over the relevant timeframe.

244. Overall, TRA considers that OLOs' supply of leased lines services based on alternative technologies will not undermine Batelco's virtual monopoly over the relevant timeframe. This also applies to the two NFWS licenses which could in theory offer leased lines services over their Wimax networks.

245. Other comments raised by Batelco were previously addressed in the Draft SMP Determination. Hence, TRA sees no need to elaborate on them.

246. For the reasons above, TRA is of the view that Batelco has SMP in:

- The retail market for domestic leased lines. (Market 6a)
- The retail market for international leased lines. (Market 6b)

16 Conclusions on significant market power

247. The list below summarizes TRA's findings regarding the markets in which it has found that Batelco holds SMP. In all the markets where TRA considers that Batelco holds SMP, TRA also concluded that there is insufficient competition. TRA concluded that Batelco is an operator with SMP in the Kingdom of Bahrain, with the exception of the Amwaj area, in the following markets:

- Market 1a, Market 1b; Market 2a; Market 2b; Market 3a; Market 3c; Market 5a; Market 5b; Market 6a; and Market 6b.

248. TRA did not analyse the mobile services market (Market 4). TRA found that no operator with SMP could be identified in the following markets:

- Market 3e; Market 3f; Market 3g; and Market 3h.

List of Acronyms

BAG	Business Advisory Group
BD	Bahraini Dinar
BT	British Telecom
CAG	Consumer Advisory Group
CAT	Customer Access Tail
CPS	Carrier pre-selection
CS	Carrier selection
FSO	Free Space Optics
GCC	Gulf Cooperation Council
HHI	Herfindahl-Hirschman Index
IDD	International Direct Dial
IP	Internet Protocol
IPLC	International Private Leased Circuit
ISP	Internet Services Provider
Kbps	Kilo bits per second
LLC	Local leased circuits
Mbps	Mega bits per second
MMS	Multimedia Messaging Service
MNO	Mobile network operator
MPLS	Multi-protocol Label Switching
NFWS	National fixed wireless services
Ofcom	Office of Communications (UK)
OLO	Other licensed operator
PPCC	Prepaid calling card
SCPC	Single Channel Per Carrier
SMP	Significant market power
SSNIP	Small but Significant and Non-transitory Increase in Price
TRA	Telecommunications Regulatory Authority of the Kingdom of Bahrain
UK	United Kingdom
USA	United States of America
VoBB	Voice over broadband
VoIP	Voice over IP
WiFi	Wireless Fidelity
WRC-07	World Radiocommunications 2007