

REPORT

Strategic and Retail Market Review

Strategic and Retail Market Review

A report issued by the Telecommunications Regulatory
Authority of the Kingdom of Bahrain.

28 February 2008

Purpose: To report on the Strategic and Retail Market Review
consultation.



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Executive Summary

This Report summarizes and addresses the comments TRA received on the Strategic and Retail Market Review Consultation released in August 2007.

In addition to input from consumers, TRA has received industry responses from Batelco, Zain, Mena Telecom, Friendi Telecom and Cisco. TRA would like to thank all respondents for their submissions. Based on the submissions received, and after undertaking further analysis, TRA has refined its regulatory proposals.

The regulatory measures outlined in this Report constitute a comprehensive package that will further promote competition and the interest of consumers. They support the achievement of the objectives of the Second National Telecommunications Plan.

The main measures are:

- Removal of tariff approval process for mobile services
- Major overhaul of the retail regulation regime (including rebalancing, notification of tariff changes with ex ante rules, low user scheme)
- Introduction of local loop unbundling on an exchange-by-exchange basis
- Introduction of both fixed and mobile number portability
- Award of a third mobile network operator license
- Development of competition guidelines
- Introduction of carrier selection

Their implementation will give Batelco more flexibility to compete within appropriate safeguards, contribute towards levelling the playing field for all licensed operators and will facilitate the growth of the sector for the benefits of the Kingdom of Bahrain. It is expected that this package will lead to overall significant net economic gains.

List of Acronyms

AREGNET	Arab Regulators Network
BD	Bahraini Dinar
BT	British Telecom
CAT	Customer Access Tail
CPI	Consumer price index
CPS	Carrier pre-selection
CPU	Central Planning Unit of the Ministry of Works
CS	Carrier selection
DWLFM	Directorate of Wireless Licensing, Frequencies and Monitoring
EU	European Union
FSO	Free Space Optics
FTTx	Fibre to the x, with "x" referring to the kerb, home, building or node
GCC	Gulf Cooperation Council
HHI	Herfindahl-Hirschman Index
ICT	Information and Communication Technologies
IDD	International Direct Dial
IMT	International Mobile Telecommunications
IP	Internet Protocol
ISP	Internet Services Provider
Kbps	Kilo bits per second
LLU	Local Loop Unbundling
Mbps	Mega bits per second
MNO	Mobile network operator
MPLS	Multi-protocol Label Switching
MVNO	Mobile virtual network operator
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
VoB	Voice over broadband
VoIP	Voice over IP
WiFi	Wireless Fidelity
WRC-07	World Radiocommunications 2007

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1. Introduction

1.1. Purpose

This report presents TRA's findings with respect to the Strategic and Retail Markets Review. It establishes a package of regulatory measures designed to further promote competition and the interest of consumers. Their implementation will give Batelco greater flexibility to compete within appropriate safeguards, contribute towards levelling the playing field for all licensed operators and will facilitate the growth of the sector for the benefits of the Kingdom of Bahrain. It is expected that this package will lead to overall significant net economic gains.

The Strategic and Retail Market Review Consultation released in August 2007 ("the August 2007 Consultation") sought comments on proposed retail market definitions, competition assessment and regulatory measures.¹ In addition to input from consumers, TRA has received industry responses from Batelco, Zain, Mena Telecom, Friendi Telecom and Cisco. The comments received have been summarised and addressed within this report. TRA would like to thank all respondents for their submissions. This input has been particularly useful.

Based on the submissions received, and after undertaking further analysis, TRA has refined its regulatory proposals.

The structure of this Report largely mirrors the structure of the August 2007 Consultation. It is organised as follows:

- Section 2 deals with high-level considerations and regulatory principles;
- Section 3 is the market review, in which markets are defined and competition is assessed with a view to designate operators with significant market power ("SMP"); and
- Section 4 defines the regulatory measures TRA will implement and outlines an indicative timetable.

Each section is organized in the same way, that is:

- Summary of what the August 2007 Consultation said;
- Summary of responses received; and
- TRA's analysis of the points raised and conclusion.

The regulatory measures and underlying analysis contained in this Report constitute the basis for TRA's Draft Statement (Reference: MCD/0208/014). Similarly, the analysis that underpins the Draft Determination of Significant Market Power Designation in certain retail markets (Reference: MCD/0208/016) is contained in Section 3 of this Report.

These findings are based on the existence of current wholesale regulation.

¹ TRA, 2007, *Strategic and Retail Market Review Consultation*, August.

1.2. The Second National Plan

The approval by the Council of Ministers of the Second National Telecommunications Plan (the “Second Plan”) on 13 February 2008 represents a major milestone for the Kingdom of Bahrain and the telecommunications sector in particular.² The Second Plan sets out the Government’s overarching vision for the telecommunications sector. The central objective of the plan is to further assist the telecommunications sector as a major force in the development of the national economy. This requires continuous improvements to the services offered to residential and business users alike in terms of availability, range and prices.

The Government, through the Second Plan, requires TRA and other authorities within the remit of their mandates to achieve specific objectives, including among others: greater involvement of consumers and businesses; enhancing the investment climate; promoting Internet and broadband use. The objective to continue the development of competition is of significant relevance to the Strategic and Retail Markets Review. In this respect, the Second Plan notably reaffirms key requirements for TRA, including:

- TRA’s duty to further promote competition and open market entry in the interest of users by removing and/or minimising barriers to entry and expansion in the telecommunications market;
- TRA’s role to take measures to promote competition and ensure that wholesale products, including infrastructure sharing, are available and appropriately priced;
- TRA’s role in the design and implementation of appropriate regulatory instruments where competition is not sufficient; and
- TRA’s duty to protect vulnerable users whilst moving to a pricing structure that better reflects the cost of providing services.

In refining regulatory actions based on submissions received, TRA has taken into account the objectives of the Second Plan to ensure that the regulatory actions planned by TRA are fully consistent with and support the achievement of the policy objectives expressed by the Government.

² The Second National Telecommunications Plan is available at:
<http://www.tra.org.bh/en/pdf/TheSecondNationalTelecommunicationPlanEnglishFinal.pdf>.

2. High-level considerations and regulatory principles

The August 2007 Consultation provided an overview of the telecommunications sector, which highlighted the improvements in terms of quality, availability and price of services achieved with the opening of the sector to competition and the increasing number of competing providers of telecommunications services in Bahrain. It also outlined the main characteristics of current regulation and key regulatory issues, such as the unbalanced structure of domestic fixed prices.

TRA identified features specific to Bahrain that TRA sought to take into account when considering the form and extent of regulation going forward. These included market size and growth potential in relation to minimum economic size, way-leaves and land reclamation, competition law in Bahrain and the announced shift to a unified licensing framework.

To better understand consumers' behaviour and consumption patterns, TRA undertook an extensive survey of residential and business users (the "Consumer Survey") the findings of which fed directly into the Review.³

TRA indicated that Bahrain is entering a period of regulatory transition. It defined a set of general regulatory principles to guide its decisions, including:

- Competition is generally preferred to regulation;
- Where regulation is necessary, providing incentives is better than taking control;
- Competition should be as deep into the value chain as possible;
- Technological neutrality is generally desirable as it reduces barriers to entry and enhances competition;
- TRA should be the guardian of fairness for customers.

To assess the form and extent of regulation required, TRA applied a framework consistent with regulatory best practice. This framework consisted of defining relevant markets, assessing competition and defining appropriate regulatory measures while removing and/or minimising unnecessary regulation and restrictions so as to allow competitive forces to operate fully.

Responses to the August 2007 Consultation

In its submission, Batelco noted that liberalisation policy of the Kingdom of Bahrain, as set out in the First National Telecommunications Plan and in Legislative Decree no. 48 of 2002, which promulgated the Telecommunications Law ("the Telecommunications Law") was now completed. Following market liberalisation, competition and the number of market players had increased. Batelco also pointed out the wide range of competing and innovative services available to customers in Bahrain and the development of the wholesale and access regime.

Batelco urged TRA to rely on a number of key principles for conducting this Review:⁴

³ The survey is available at <http://www.tra.org.bh/en/marketSurveys.asp>.

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- Adapt regulation to the size of the Kingdom of Bahrain;
- Recognize the need to provide and protect investment incentives for any operator wishing to invest in the Kingdom of Bahrain;
- Recognize that “regulatory creep” is to be avoided and to actively seek regulatory withdrawal, especially by preferring wholesale regulation to retail regulation; and
- Take a forward-looking approach to the development of competition.

With regard to the first principle, Batelco stated “that the size of the market in Bahrain should at all times affect how and when regulation is applied”⁵ and contends that the level of regulation is disproportionate in relation to the size of the country. It also questioned the appropriateness of the regulatory options defined in the August 2007 Consultation. In its submission, Batelco quoted extensively a report on regulation in microstates produced by the consultants Ovum / Indepen on behalf of incumbent operators of three small European states.⁶ Starting from a cursory analysis of economies of scale in the sector, this report identifies the implications for regulation in microstates and emphasises notably the importance to adapt regulation to local market characteristics and to maximize economic welfare rather than competition per se.

Turning to the second principle, Batelco states that it is important to preserve investment incentives for all market players while ensuring competition is effective and the interests of consumers are promoted. Quoting a study undertaken by economic consultancy LECG on behalf of ETNO (a European association of incumbent operators) on broadband, Batelco noted that there is a trade-off between access regulation and inter-platform competition.⁷ One of the findings of LECG’s simulation is that while access regulation may be effective at promoting intra-platform competition (i.e. competition based on the same technology such as DSL) it may dampen the incentives for investment in competing platforms and hence it may limit inter-platform competition. Batelco concludes that TRA should seek to boost investment incentives to roll out facilities and to confine access regulation.

With respect to the third principle, Batelco is of the view that TRA should consider a timely move towards safeguard remedies and/or competition law to avoid prolonged and increasing sector-specific regulation. It argues that competition law provisions are sufficient and notes that Ofcom concluded in 2004 that the promotion of competition at multiple levels coupled with a complex mesh of regulation at the retail and wholesale levels was unsatisfactory. This led Ofcom to push for the functional separation of BT, which BT ultimately accepted, in exchange for the relaxation of retail controls but not of wholesale regulation. Batelco also referred to the differential treatment of Kingston Communications, which operates in the Hull area in the UK. Compared to BT, Kingston Communications is subject to lighter regulatory obligations.

Batelco urges TRA to take at least a 2-3 year high-level view of competition. It argues that the timing of the Review is unsatisfactory given among other things, the rapidly changing competitive landscape with notably the launch of services of the National Fixed Wireless Services (“NFWS”) licensees, and the improvement to some access products.

⁴ Batelco, 2007, *Submission to TRA by Batelco in relation to the Strategic and Retail Markets Review*, 7 October 2007, para 22.

⁵ Cf. Batelco’s submission referred in footnote 4 above, para 23.

⁶ Ovum / Indepen, 2005, *Applying the EU Regulatory Framework in Microstates, A Report to the CYTA, EPT and Maltacom*, June.

⁷ LECG, 2007, *Access Regulation and Infrastructure Investment in the Telecommunications Sector: An Empirical Investigation*, September.

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Batelco also questions the Review exercise itself. It contends that the Review is tantamount to policy formulation whereas, according to the Law, it is the Council of Ministers who is responsible for developing the National Telecommunications Plan.

The last high-level comment from Batelco relates to new property developments. Batelco is of the view that these developments would most likely require a differential regulatory treatment because they are materially different in terms of risk profile and ranges of services provided.

In terms of high-level priority, Mena Telecom indicated that TRA should, in the short-to-medium term, nurture competition by levelling the playing field such that all licensed telecommunications operators can expect a fair return on their investment. It concurs with TRA's preference to focus regulatory actions at the wholesale level where appropriate.

Cisco, the manufacturer and distributor of IP-based hardware, software and services considers that TRA's main priority should be to facilitate the deployment of broadband infrastructure as it will be a key element in TRA's proposed regulatory strategy and to the economic transformation of Bahrain.

In a similar vein, Zain believes that the lack of competitive broadband offerings at speed above 2Mbps and the relatively low penetration of broadband are problematic given the economic development strategy pursued by the country and the importance of telecommunications services for the banking and finance sector. Zain is of the view that local loop unbundling ("LLU") is required to address this challenge.

Mena Telecom and Zain also raised the issue of access to international capacity at competitive rates. Under prevailing arrangements, OLOs are unable to purchase capacity on the basis of IRUs (Indefeasible Right of Usage) and are obliged to buy capacity to undersea cables from Batelco.⁸ They argued that competition is constrained and that their ability to compete on an equal footing with Batelco is hampered as a result.

TRA analysis and conclusion

The Telecommunications Law lays out clearly the duties and responsibilities of TRA. In conducting this Review, TRA has acted within its mandate. Under the Telecommunications Law, TRA's role includes in particular the promotion of effective and fair competition among new and existing licensed operators and the protection of the interests of users in respect to pricing, availability and quality of services offered.

Economics generally conceives competition as a means to an end, the end being the maximisation of economic welfare. Absent market failures, such as externalities or information asymmetries, competition produces outcomes consistent with the maximisation of economic efficiency and hence consistent with the interest of consumers.

In some circumstances, there may be trade-offs between the different forms of efficiency that the regulator must address. The three forms of efficiency are: productive efficiency which is achieved when costs are minimised, allocative efficiency which is achieved when prices are in line with costs and dynamic efficiency which relates to incentives over time to innovate and invest. For instance, if the minimum efficient scale is very large relative to market size, additional market entry could lead to an increase in unit costs. This potential loss of productive efficiency has to be balanced against expected benefits of further entry in terms of prices moving closer to cost (i.e. allocative efficiency gains) and

⁸ Cf. Mena Telecom, 2007, *Strategic and Retail Markets Review: Comments from Mena Telecom*, paras 8-11.

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innovative services being available (dynamic efficiency gains). In defining measures to promote competition and the interest of users, TRA gives due consideration to economic efficiency in accordance with its duties and powers as defined in the Law.

TRA bases its conclusions regarding the right mix of regulatory settings on local market conditions.⁹ TRA seeks in particular to align regulatory measures with the competition and regulatory issues identified. In that sense, TRA does not believe that size should ultimately determine regulatory policy and that regulation is disproportionate.

The competition and regulatory economics principles that underpin TRA's analysis are applicable to both large and small countries. 'Smallness', by making the trade-off between the three main forms of economic efficiencies more acute in some instances may affect the appropriateness of regulatory measures. It can also be expected to play a role in the choice of the optimal regulatory instrument and/or the design of regulatory instruments (e.g. optimal technical solution to give effect to number portability).

As argued by several submitters, regulation should be proportionate and wholesale regulation has a key role to play in fostering competition. Thus, it is paramount to have in place an appropriate suite of fit-for-purposes wholesale products reasonably priced such that retail regulation can be adapted and relaxed over time. When it comes to implementing regulation, a pragmatic approach to regulation is necessary. Other elements raised by Batelco with regards to regulation in small countries, such as contestability, are addressed in the relevant sections of the text below.

The telecommunications sector is an investment intensive industry characterised by fixed costs, the financing of which requires large capital expenditure. Investment in new networks and technologies allows new services to be brought to the market. TRA concurs with Mena Telecom that it is important for operators to have a reasonable expectation to make a return on their investment. TRA endeavours to promote efficient and timely investment and to stimulate innovations in the sector for the benefits of users. Open entry and a level playing field are essential to give licensed operators equal opportunities to invest and roll out their infrastructure.¹⁰ Published academic research has shown that the relationship between access regulation and investment is a complex one and more generally that there is no single combination of regulatory settings that is optimal in all circumstances.¹¹

How regulation may affect investment incentives is complex and depends on a large range of factors, including the nature of access regulation and the scope for competing infrastructure. When assessing regulatory options for access regulation, TRA considers the investment incentives of the incumbent and competitors as well as the impact on downstream (service-based) and upstream (facility-based) competition. In doing so, TRA seeks to put in place the right regulatory settings to facilitate competition and investment by all market players. To avoid distortions, the prices approved by TRA for access

⁹ TRA takes routinely into account the size of the country. For instance, the prices approved by TRA for Batelco's wholesale products reflect the scale of operations of Batelco as TRA relies principally on Batelco's own costs.

¹⁰ In this context, it is worth mentioning the on-going development of the Code of Practise on "Telecommunications Infrastructures Deployments" which will facilitate the deployment of infrastructure by licensed operators. It will in particular guide licensed operators through the processes provided in the Telecommunications Law that gives them equal access to public and private road corridors and other facilities. The Code will also encourage infrastructure sharing and joint work.

¹¹ See e.g. Guthrie, G., 2006, "Regulating infrastructure: The impact on risk and investment", *Journal of Economic Literature*, 44, 921-968, December.

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products allow for the recovery of efficiently incurred costs including a return commensurate with risk.

In deciding the form and extent of necessary regulation, TRA seeks to adjust regulation to market conditions. Whenever possible, TRA prefers to rely on competitive forces, rather than direct regulation to achieve the desired outcomes. In light of comments received, TRA has revised its original proposals. TRA is committed to adjust regulation over time in line with the development of competition. The proposals to remove the tariff approval process for mobile services and to introduce notification (with a preference for a same-day notification) for fixed services in lieu of the current tariff approval process are evidence of this commitment.

To a certain extent, the divergence of views with regards to the appropriate level of regulation required can be traced back to the different respondents' views with respect to the level of competition in the markets, and its expected development. There is an unavoidable amount of uncertainty involved in competition analysis especially given the rapidity at which the sector is changing (e.g. launch of Zain@home product range and the on-going improvement in wholesale products). Notwithstanding this, TRA has taken a forward-looking view of competition in its analysis which is in line with its approach to market definition and competition assessment defined in two previous determinations.¹²

TRA considers that the Review is particularly timely. The current regime has been in operation for some time now and it is important to adjust regulation such that it better reflects market conditions going forward. Further, it coincides with the approval of the Second Plan. In refining its regulatory measures, TRA has sought to ensure that they support the objectives of the Second Plan.

The development of broadband is a key priority for TRA. The availability of faster broadband, priced at rates that compare well by international standards, will contribute to the economic development strategy pursued by the Government. This report contains regulatory proposals that will facilitate the development of broadband, including on-going improvement to wholesale regulation, and a reform of the tariff approval process. These will complement other on-going initiatives, such as the Code of Practice on the deployment of telecommunications infrastructure.

TRA concurs with Batelco that more certainty is required regarding the regulatory treatment of new property developments. To that effect, a separate process to define a range of possible regulatory approaches to new property developments has been initiated. TRA intends to put forward a draft position for consultation during 2008.

¹² TRA, *Methodology for Determining Market Power*, A Determination issued 19 April 2003; and TRA, *Methodology for the Definition of Telecommunications Markets*, A Determination issued 19 April 2003.

3. Market and Competition Review

3.1. Analytical framework

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 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, 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.

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

Responses to the August 2007 Consultation

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

Batelco contends that insufficient weight has been given to demand and supply-side substitution in defining markets. Batelco claims, in particular, that TRA has 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 considers that TRA has failed to apply the concept of prospectively competitive markets correctly in several instances, and calls for a more forward-looking and prospective approach to the review of markets.

From a methodological standpoint Batelco is of the view that the standard concepts of market power analysis and substitutability, used by TRA and other regulators alike, need 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.

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

TRA analysis and conclusion

As part of its competition assessment TRA has 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. Conversely, the current retail regulation in place can 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.

¹³ Cf. references mentioned above in footnote 12.

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Despite the representation made in Batelco's submission, at the general level, TRA remains of the view that its approach is 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.¹⁴

TRA disagrees 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.

Similarly, TRA does not believe that adjustments to the concept of market power and substitutability are 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.

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

TRA would also like to note that market definitions are not to be applied in a mechanistic way and constitute an instrument to assess competition and, in the present case, assist in the definition of appropriate regulatory measures. A finding of effective competition and absence of dominance, in this context, does not preclude anti-competitive conduct in the future.

3.2. The definition of markets

The definition of markets forms an integral part of the analysis of competition. In its consultation document, 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 April 2003 Determination on this matter.¹⁵

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, or the significant non-transitory increase in price (SSNIP) test.

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

¹⁴ 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.

¹⁵ Cf. reference in footnote 12.

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The table below lists the relevant markets defined in the August 2007 Consultation along with the main rationale for defining each market.

Table 1: Relevant markets defined in the August 2007 Consultation document

Retail Market	Definition	Main rationale
1	Fixed access narrowband connections and domestic calls originating on fixed lines – non-residential customers	Non-residential / Residential split: observed price discrimination between the two groups of users; different expectations in term of services; limited supply-side substitution between non-residential and residential users. Fixed access and domestic calls: complementarity of demand between access and domestic calls; similar level of competition for both products at this point in time.
2	Fixed access narrowband connections and domestic calls originating on fixed lines - residential customers	Non-residential / Residential split: same as above. Fixed access and domestic calls: same as above.
3	All international calls made from a fixed location to Zone 1 countries (GCC countries), Zone 3 countries (USA, Australia, UK, France, etc) and Zone 4 countries (Others)	Definition of separate market for each of the 237 international routes deemed unpractical; instead routes were grouped into four zones reflecting potentially different levels of competition. Calls originated from fixed and mobile phones considered not substitutable and therefore constitute separate markets. Each of the fixed and mobile international calls markets encompasses all access methods (i.e. IDD, PPCC, CPS) because of demand side substitution (i.e. customer switching behaviour)
3b	International calls made from either a fixed or mobile phone to Zone 2 countries (South Asian countries)	Separate market based on the different consumption behaviour of customers that call to these destinations (mostly expatriate workers).
4	Mobile services, including mobile originated international calls to Zones 1, 3 and 4 countries.	Limited supply side substitution between fixed access and mobile access Supply substitution between access and call services
5	Internet access from a fixed location.	Dial-up and broadband in the same market based on considerable switching between broadband and dial-up services.
6	Leased line services (domestic and international leased lines).	Although on the basis of demand-side substitution, domestic and international leased lines could form separate markets, competitive conditions for both services do not differ such that the conclusion of the analysis of competition is independent on the choice of market definition.
Geographic scope	Kingdom of Bahrain	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. Although competitive conditions may differ in areas of reclaimed lands (e.g. Amwaj Islands), 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.

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

A first issue regarding these market definitions relates to the definition of separate markets for residential and non-residential customers.

Responses to the Consultation

Batelco did not comment specifically on this aspect of market definition. Zain supports this distinction.

TRA analysis and conclusion

In light of the comments received, TRA has decided to retain this distinction.

A second issue is whether to include access and domestic calls in the same market.

Responses to the August 2007 Consultation

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 supply-side substitution possibilities from calls to access given the economies of scale and sunk costs involved in the roll out of local access networks.

TRA analysis and conclusion

TRA sees some merits in Batelco's arguments that fixed access and fixed originated calls should be in separate markets.¹⁶ It is indeed common for regulators to separate access from calls. TRA has therefore decided to revise its market definition and to have separate markets for fixed access and domestic calls. TRA notes however that for the purpose of this analysis, the outcome of the competition assessment does not vary with the choice of market definition.

3.2.2. The international calls markets

Responses to the August 2007 Consultation

¹⁶ 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.

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Batelco supports the definition of international markets route-by-route adopted by TRA. However, it disagrees with the aggregation process whereby individual routes are grouped into four zones. Batelco also disagrees 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.

Batelco contends that TRA's grouping is 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. Batelco therefore argued that TRA's approach is not justified.

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

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 has not thereby defined a distinct PPCC market, and hence whether other fixed routes ought to be included in this market.

TRA analysis and conclusion

TRA remains of the view that its approach to the grouping of routes is both pragmatic and reasonable in light of data limitations. TRA acknowledges 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 will also be a disproportionately time 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 these markets.

Further, TRA notes that although Batelco calls for a route-by-route market definition, it has not submitted data and analysis at this level. Instead, it has chosen to look at international calls en masse. On balance, TRA considers that the aggregation of routes on a geographic basis is a reasonable compromise between a route-by-route and an overall analysis of international calls.

TRA has undertaken further analysis on the international calls market. TRA has 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, 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 is of the view that the definition of separate markets for residential and non-residential users is not warranted now.

TRA also considers that potential competition and regulatory concerns for each category of user can be addressed without separate market definitions. Accordingly, TRA has decided to retain a single market for international calls for both residential and non-residential customers.

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Another element of the market definition relates 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.

After further analysis, and based notably on comments from Zain (see below), TRA is of the view that it is more appropriate to define separate markets for fixed and mobile originated international calls to the four zones. TRA also considers it is preferable to treat mobile originated international calls as separate markets from the mobile services market. Although 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 customers use PPCC for international calls from their mobile.

The analysis of supply-side substitution between mobile originated international calls on the one hand, and mobile access domestic calls on the other hand, also justifies separating mobile originated international calls from mobile services. In fact, supply substitution between those services is one-way: in response to a price increase 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 (e.g. 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 has therefore decided to separate mobile originated international calls from the mobile services market.

Regarding the international calls market to zone 2 countries, TRA considers it is 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.

For the reasons set out above, TRA has decided 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 GCC countries;
 - To Zone 2 countries;
 - To Zone 3 countries; and

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- To Zone 4 countries.

3.2.3. The mobile services market**Responses to the August 2007 Consultation**

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

Similarly, it questions why separate markets for pre-paid and post-paid mobile services have not been defined, as well as why two separate markets for non-residential and residential customers have not been identified as is the case in the fixed access market.

TRA analysis and conclusion

Based on supply-side substitution considerations, it is appropriate to put residential and non-residential customers in the same market, as well as prepaid and postpaid customers. 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 applies to the distinction between non-residential and residential customers.

Therefore, with the exception of the adjustment regarding the exclusion of mobile originated international calls from the mobile services market, TRA considers that the comments received do not warrant a modification of the definition of the mobile services market.

3.2.4. The Internet access from a fixed location market**Responses to the August 2007 Consultation**

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

Consistent with the European Commission and 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 do not appear substitutes. Their prices 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 is a case to have two separate markets.

TRA analysis and conclusion

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In the first 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 concurs with Batelco regarding supply-side substitution. Overall TRA has identified dial-up Internet and broadband Internet access as separate markets.

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, for the purpose of the Review, the precise definition of the retail broadband market does not affect the outcome of the competition assessment. Regulatory and competition concerns do not differ materially between these two groups of customers. TRA has therefore decided to retain a single market for fixed broadband Internet access for both residential and non-residential customers.

3.2.5. The leased lines market**Responses to the August 2007 Consultation**

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

TRA analysis and conclusion

TRA disagrees with Batelco and remains of the view that there is a separate market for retail leased lines. TRA considers that the product's characteristics in terms of price, performance, and quality of the substitute technologies outlined by Batelco above are not sufficiently similar to be part of the same relevant market with the exception of leased lines services over MPLS.

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.

Having considered Batelco's comment, and based on supply and demand side considerations, TRA remains of the view that there is a separate leased lines market comprising domestic and international leased lines, including leased lines services provided over MPLS.

3.2.6. The geographic dimension of markets

Responses to the August 2007 Consultation

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 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.

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”;¹⁷ 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.

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 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”.¹⁸

TRA analysis and conclusion

TRA considers it is 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 ICT infrastructure are not settled yet. It is therefore not justified for TRA to define separate geographic markets at this point in time.

Further, as indicated above, TRA is in the process of developing its regulatory approach towards new developments and will be consulting separately on this matter. This consultation will consider the geographic dimension of market definition.

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

¹⁷ Cf. Batelco’s submission at page 40.

¹⁸ TRA, *Dominance in Wholesale Markets by Batelco*, A Determination, 22 January 2006, page 4.

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3.2.7. Revised list of relevant markets

The table below summarizes the revised list of relevant markets adopted by TRA.

Table 2: Revised list of relevant retail markets defined by TRA

Retail Market	Definition
1	Fixed narrowband access markets: - 1a: For residential customers; - 1b: For non-residential customers.
2	Domestic calls originating on fixed lines markets: - 2a: For residential customers; - 2b: For non-residential customers.
3	Fixed originated international calls markets: - 3a: to Zone 1 countries; - 3b: to Zone 2 countries; - 3c: to Zone 3 countries; and - 3d: to Zone 4 countries. Mobile originated international calls markets: - 3e: to Zone1 countries; - 3f: to Zone 2 countries; - 3g: to Zone 3 countries; and - 3h: to Zone 4 countries
4	Mobile services (excluding international calls)
5	Broadband internet access from a fixed location
6	Dial-up internet access from a fixed location
7	Leased line services (domestic and international leased lines)
Geographic scope	Kingdom of Bahrain (except Amwaj area for markets 1,2, 3a-3d, 5-7)
Zone 1 countries: 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, UK, USA, and Yemen;	
Zone 4: rest of the world.	

3.3. Competition assessment

Having defined the relevant markets, the next step consists of analysing the extent of competition in each market. The purpose of this is to determine whether competition is currently effective in constraining the behaviour of firms. In the first consultative document, TRA proposed that the outcomes of its competition assessment could be one of the following three:

- Effectively competitive;

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

To assess competition TRA considered a number of factors in line with its guidelines on assessing market power.¹⁹ For example it looked at market shares and market share trends; price trends; profitability; countervailing buyer power, and barriers to entry and expansion.

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With regards to the assessment of competition Batelco made several general comments. Batelco contested the findings of TRA that some markets are not competitive. More specifically Batelco disagreed with what it called the 'implied dominance' approach of TRA, whereby TRA has not explicitly found dominance in the identified markets, but has nonetheless determined a regulatory requirement on the basis that markets were prospectively competitive or not competitive.

Batelco is of the view that TRA has not properly factored into its analysis demand and supply-side analysis and has, in particular, failed to recognize existing, potential and prospective competition. Furthermore, Batelco disputes TRA's definition of effective competition and indicated that TRA should define the optimal number of suppliers that can be sustained in Bahrain before assessing whether competition is effective. Batelco also wants 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.

In its submission Batelco states that TRA has not defined what it means by cost. It contends 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.

Batelco disputes the findings of TRA for each market. Batelco claims that all markets defined are 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).

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

Table 3: TRA and Batelco conclusions regarding the level of competition in the relevant markets defined in the August 2007 Consultation

¹⁹ Cf. TRA 2006 as referred to in footnote 18 above.

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#	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

TRA analysis and conclusion

Based upon its findings resulting from this Review TRA has decided that it is appropriate to proceed with a formal significant market power designation (SMP) as part of its competition assessment. Once relevant markets have been defined and existing and prospective competition have been evaluated over the relevant time frame, regulatory obligations, such as retail price controls, can be designed to address regulatory and competition concerns in markets where operators with SMP have been designated. The SMP designation constitutes a legal basis for the application of regulatory obligations.

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 definitions, 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.”

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

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- 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
- Its experience in providing products and services in the market.

Each of these factors is considered in turn.

Ability of the Licensed Operator to influence market conditions

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

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. This point is further discussed where appropriate for each relevant market.

Turnover relative to the size of the market

Batelco's total turnover for its operations in Bahrain was BD 194,872,000 for the year ended in 2006.²⁰ This represents about 75% of the total revenues from telecommunications services in Bahrain.²¹

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

Control of the means of Access to Users

By virtue of the ownership and control of fixed access network, Batelco controls the means of access to most users for the relevant markets for which TRA is conducting an SMP analysis.²² This applies in particular for the fixed access markets for residential and non-residential customers, the broadband Internet access market from a fixed location and the leased lines market.

Financial resources

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

²⁰ See Batelco, Annual Report 2006, page 54.

²¹ Total revenues from telecommunications services were estimated at BD 235 millions. See TRA, 2008, *Telecommunications Services Indicators in the Kingdom of Bahrain*, February.

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

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net profit of BD 90,835,000 (BD 87,478,000 for Bahrain).²³ At 31 December 2007, Batelco had BD 213,657,000 in cash and cash equivalent.²⁴ Therefore, Batelco has substantial financial resources.

Other licensed operators do not have similar financial resources, although it is noted that Zain, as part of the Zain group, is likely to have access to large financial resources.

Experience in providing products and services in the market.

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 an ability to market products to its consumers.

Other factors

In addition to the above factors, TRA has also considered other criteria relevant to the analysis of market power. In its 2003 Determination defining its Methodology for Determining Market Power TRA concluded that in assessing SMP it will consider not only market shares, as suggested in the definition of SMP in the Telecommunications Law but also other criteria relevant to the analysis of market power. Those include for instance, barriers to entry, the control of infrastructure not easily duplicable and vertical integration. In the August 2007 Consultation and in this Report, TRA has look at criteria directly relevant to the markets defined in a manner consistent with the 2003 Determination.²⁵

TRA has also decided to exclude the mobile services market from its SMP analysis. TRA considers that legal entry restrictions at the wholesale level have represented the major significant impediment to further competition at the retail level. As explained below TRA has decided to allow the entry of a third mobile network operator, and therefore it deems unnecessary to undertake a formal SMP analysis for this market at this point in time.

TRA disagrees with Batelco's other points. TRA considers it is not appropriate for a regulator to second-guess the market or to pre-define the optimal number of market players that the market can sustain prior to conducting a competition assessment.²⁶ 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 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

²³ See Batelco as referred to in footnote 20 above, pp. 54-5.

²⁴ Batelco, *Consolidated Financial Statements 31 December 2007*, page 7.

²⁵ The list of criteria contained in Annex 1 of the 2003 Determination is only indicative and is non-exhaustive (Cf. TRA, 2003, Determination on the Methodology for Determining Market Power, page 7, referred to in footnote 12 page 11). 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.

²⁶ 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.

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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 detriments of consumers.

Although there might be exceptional circumstances, and specific sectors, where limiting entry might be appropriate to prevent destructive competition, TRA considers that this is not the case for the telecommunications markets analysed. This is consistent with the Second Plan and is in line with international practice in the telecommunications sector.

TRA takes 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.²⁷ 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 is analysed by TRA as part of its analysis of barriers to entry and the expansion of individual markets.

More generally, with regards to Batelco's points on contestability, TRA notes that the results of the theory of contestable markets developed by Baumol, Panzar and Willing 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.²⁸ This point appears to be largely neglected in Batelco's view on contestability.

TRA concurs with Batelco's view that, in a sector characterised by large fixed costs, a mark-up over marginal cost is not in itself indicative of market power, and that it can 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. 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.

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

²⁷ See, for example, Chruch, J., and Ware R., *Industrial Organization: A Strategic Approach*, MacGraw-Hill, 2000, page 507.

²⁸ See, for example, Chruch, J., and Ware R., 2000 referred to at footnote 27, at page 52.

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

The August 2007 Consultation concluded that the fixed access and domestic calls markets for non-residential and residential customers are not competitive. TRA noted the very high level of concentration in those two markets, with Batelco's market share in excess of 90% for non-residential users and close to [90%-100%] for residential customers. TRA also considered that there are 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.

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.

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According to Batelco these markets are prospectively competitive and therefore should not be subject to any form of retail regulation. It contends that current wholesale regulation provides appropriate access conditions to OLOs; the market is 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) will have a major impact. Further, it contends that there is, in any case limited scope for competitive entry into the fixed line access markets.

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 CATs, WiFi (mesh) networks, mobile and satellite networks.

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

For the non-residential customer markets, Batelco noted that there are a number of OLOs offering domestic calls services (via CPS or 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.

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.

In the case of residential customers, Batelco considers 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.

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TRA analysis and conclusion

TRA remains of the view the residential and non-residential markets for fixed access and fixed originated domestic calls are not effectively competitive. TRA considers that Batelco has SMP on these four markets.

With regards to the fixed access markets, it is worth mentioning Batelco's market share again. The table below shows that Batelco has virtually a [90%-100%] market share in both the residential and non-residential market and that no significant changes have 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 4: Estimated market shares: 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%

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

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

With regards to the fixed originated domestic calls markets, TRA disagrees with Batelco's claim that these markets are prospectively competitive. The table below summarizes Batelco's market share in these markets.

Table 5: Estimated market shares: 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%

Batelco controls virtually all the market for fixed originated domestic calls. Batelco's monopoly position has not been 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

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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. Domestic calls originated from a fixed location can also be offered 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 leased lines can constitute the basis to supply calls to non-residential customers only.

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 indicates that these wholesale products have not had any material impact. TRA has in fact received numerous complaints alleging for example delays in provisioning CAT and bitstream.²⁹ 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.

With regards to entry of the two NFWS licenses, as noted above it is difficult to predict their potential effect in the market. TRA considers that their entry is 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 seems 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.

For the reasons indicated above, TRA concludes that Batelco has SMP in the residential and non-residential fixed originated calls markets and that there is insufficient competition in these markets.

3.3.2. International calls markets

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.

TRA based its findings on an analysis of the level of concentration, of barriers to entry and expansion, of price levels and profitability as well as of countervailing buyer power.

Responses to the August 2007 Consultation

Batelco submitted that the international calls markets are effectively competitive and should therefore not be subject to any form of retail tariff regulation. To substantiate this

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

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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 [20%-30%], and its international outbound retail traffic from fixed phones at [40%-50%].

With regards to entry conditions, Batelco noted that current wholesale regulation (including CPS, PPCCs and VoB 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.

Further, Batelco indicated it is 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.

Batelco argued that calls from fixed locations to Zone 3 and Zone 4 are prospectively competitive and should therefore not be subject to price controls. It is 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.

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

TRA analysis and conclusion

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

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.

The second adjustment made relates to the treatment of traffic from PPCCs. Here, TRA considered that 20% of PPCCs traffic is made from a fixed line and 80% is originated from a mobile phone. This adjustment is based on the proportion of fixed and mobile phones in Bahrain. It implicitly assumes 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.

These adjustments are 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.

At the high level, the main insights from the quantitative analysis of international traffic are:

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- Whereas the volume of international traffic has increased dramatically,³⁰ 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 has 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.

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

Table 6: 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%]

The main findings from the analysis of market shares for each relevant fixed market are:

- The geographic distribution of 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%].

³⁰ 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>

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- 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 [60%-70%] 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 call to Zone 4 countries where the market share is about 8%. One CPS provider stands out.

The analysis of market shares suggests 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.

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

Table 7: 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%

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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%

The main findings from the analysis of concentration in each of the relevant mobile market are:

- 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 share 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 [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.

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The analysis of concentration in mobile originated international calls markets points 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.

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 international calls markets.

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 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.

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.

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 PPCC and CPS providers in international calls markets to GCC countries.

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.

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 is currently investigating a number of complaints regarding the CPS product provided by Batelco received from OLOs.³¹

³¹ Note that TRA has not at the time of the release of this Report made any conclusive findings.

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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 1 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 markets, entry barriers and the impact of wholesale regulation on downstream competition need to be considered as well.

On balance, it appears that except for international calls originated from fixed lines to Zone 1 and Zone 3 countries, the remaining markets are 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.

For the reasons set out above, TRA considers 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. No operator has SMP in the remaining international calls markets. These findings are predicated on the availability and effectiveness of wholesale regulation and in particular cost based call origination and effective CPS.

3.3.3. The fixed Internet access markets

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 shares of Batelco, the level of profitability of Batelco, and the limited availability of higher speed broadband services. TRA noted that it will monitor closely the impact of the entry of NFWS licenses on competition and competition from OLOs based on regulated wholesale DSL and bitstream.

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Batelco disputed this finding and argued that the fixed Internet access market is 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.

With regards to dial-up Internet access, Batelco indicated that this market has 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 has stopped all development plans for dial-up Internet products. Overall, Batelco believed that no retail regulation is warranted for this market.

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 argues that this results partly from the lack of effective competition in the Internet Services Provider ("ISP") market. Similarly, Zain underscores the lack of competitive broadband offers at speed in excess of 2Mbps and the low penetration of broadband.

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TRA analysis and conclusion

With regards to the retail dial-up Internet access market from a fixed location, TRA considers that Batelco has 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 concurs 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 regulatory treatment of this market.

Table 8: 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%

With regards to the retail broadband Internet access market from a fixed location, TRA remains of the view that competition is not effective and that Batelco has SMP in this market. Although competition is progressing with the entry of Zain into the market and access-based competition from OLOs, TRA considers that Batelco is highly likely to retain SMP over the relevant period of analysis.

The introduction of wholesale DSL and bitstream in Q2 2007 has 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 within the next four months.

Table 9: 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%

However, competition based on regulated access products will take time to have an impact on the market. Wholesale regulation is not considered effective yet. In the last six months there have been a number of issues which have affected the effectiveness of wholesale regulation. It is very likely that they prevented a more significant up-take of wholesale products. The uptake of wholesale products is still very limited. TRA has received a number of formal and informal complaints and comments regarding the non-price terms of access products and processes.³² Operation 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.

³² Note that TRA has not at the time of the release of this Report made any conclusive findings.

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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.

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).

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.

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 BD56 per month whereas the equivalent services from Batelco costs BD 25. This is a significant cost disadvantage.

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.

Overall, for the reasons above and included in the August 2007 Consultation, TRA considers that Batelco holds SMP in the retail broadband Internet access market and in the dial-up Internet access from a fixed location market and that there is insufficient competition in these markets.

3.3.4. The leased lines market

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.

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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.

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 expected 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.

TRA analysis and conclusion

TRA disagrees 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 cost 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 10: Estimated market shares: 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%

Wholesale regulation is not yet effective at neutralising Batelco market power at the wholesale level. Competition based on wholesale products has been problematic with a numerous issues relating to delays in the supply CAT's for example. 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.

For the reasons stated above, TRA concludes that Batelco has SMP in the retail leased lines market and that there is insufficient competition in this market.

3.3.5. The mobile services market

In the August 2007 Consultation, TRA indicated that the mobile market may be prospectively competitive at this point in time. Following the entry of Zain into the market, the number of subscribers and penetration has increased significantly. The Consultation document noted that Batelco had an overall market share of around 70% and there were no significant differences between the pre-paid and post-paid segments of the market. Since the entry of Zain into the market, there have been limited nominal

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changes to retail mobile offers. Instead, the primary pricing tool used by MNOs has been short-term promotions.

The main barriers to entry and expansion identified by TRA included legal and regulatory entry restrictions as well as switching costs. Switching costs relate to the unavailability of number portability and the obligation of post-paid customers to wait until the end of their contract before changing MNO.

A snapshot analysis of the profitability of the two MNOs suggested that their returns were above their cost of capital, although TRA acknowledged that profitability in itself was not conclusive of the state of competition.

Finally, TRA's analysis drew on the results of the Consumer Survey. The survey showed a high level of satisfaction with their mobile service, but lower satisfaction levels with regards to the price of services.

Responses to the August 2007 Consultation

Batelco put forward the view that the mobile market is effectively competitive. It welcomes the proposal to remove the retail tariff approval obligation but deems unnecessary the provisioning of MVNO, and the removal of mobility restrictions on NFWS licenses.

According to Batelco, the mobile market currently delivers an appropriate level of competition. The market has grown rapidly, with Zain's customer base now growing faster than Batelco and price levels comparing favourably with regional benchmarks. The relaxation of the approval process for temporary offers by TRA has led to increased competitive pressures and produced significant benefits to end-users. Batelco claims that the requirement to submit tariffs for approval is the primary reason for the lack of changes of retail prices as it limits Batelco's pricing flexibility. Finally, Batelco indicated that its churn rate is comparable to that of mature markets and a lot higher than identified in the TRA's market survey.

Zain considers that it is because of financial and operational constraints to the introduction of time of day pricing for prepaid customers that MNOs are relying predominantly on temporary offers and promotions as a pricing tool. Hence, Zain argues that in a prepaid dominated market MNOs use principally short term discounts and offers to attract customers. Zain is of the view that with a market share in excess of 70%, Batelco is dominant in this market and accordingly should be regulated. According to Zain, the main reason for observed low churn rates lies with the absence of number portability, whose introduction is supported by Zain.

TRA analysis and conclusion

As explained above in Section 3.3, having decided to remove the major impediment to further competition at the retail market by allowing the entry of a third mobile network operator, TRA considers it is not necessary to undertake a formal SMP analysis for the retail mobile services market at this point in time.

3.3.6. Conclusion on significant market power

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The table below summarizes TRAs' findings regarding SMP in the relevant markets. In all the markets where TRA considered that Batelco holds SMP, TRA also concluded that there is insufficient competition.

Table 11: Findings regarding SMP in the relevant retail markets

Retail Market	Definition	SMP
1	Fixed access narrowband connections markets: <ul style="list-style-type: none"> - 1a: For residential customers; - 1b: For non-residential customers. 	Batelco holds SMP
2	Domestic calls originating on fixed lines markets: <ul style="list-style-type: none"> - 2a: For residential customers; - 2b: For non-residential customers. 	Batelco holds SMP
3	Fixed originated international calls markets: <ul style="list-style-type: none"> - 3a: to Zone 1 countries; - 3b: to Zone 2 countries; - 3c: to Zone 3 countries; and - 3d: to Zone 4 countries. Mobile originated international calls markets: <ul style="list-style-type: none"> - 3e: to Zone 1 countries; - 3f: to Zone 2 countries; - 3g: to Zone 3 countries; and - 3h: to Zone 4 countries. 	3a and 3c: Batelco holds SMP Other markets: No SMP
4	Mobile services (excluding international calls)	Not analysed
5	Broadband internet access from a fixed location	Batelco holds SMP
6	Dial-up internet access from a fixed location	Batelco holds SMP
7	Leased line services (domestic and international leased lines)	Batelco holds SMP
Zone 1 countries: 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, UK, USA, and Yemen; Zone 4: rest of the world.		

4. Regulatory approach and the definition of regulatory measures

Following on the analysis of competition in the relevant markets of the previous Section, this Section deals with the regulatory measures that TRA will implement. The details of these proposals will be worked out in consultation with the stakeholders once the implementation phase begins.

This Section looks at high-level regulatory options before outlining TRA's approach to the definition of regulatory measures. The detail of regulatory measures, market-by-market, and an indicative implementation timetable follow.

4.1. High level regulatory options

In the August 2007 Consultation, TRA set out the context for its regulatory strategy, namely the achievement of important progress towards effective competition but significant challenges lying ahead. TRA identified three broad options for regulation:

- Option A: withdraw completely from ex ante regulation of retail markets, relying solely on ex post assessments of alleged anti-competitive behaviour and regulatory intervention at the wholesale level;
- Option B: recognize that, given the local circumstances of Bahrain, significantly more competition in retail markets is unlikely to emerge; or
- Option C: encourage further infrastructure-based competition in the sector over time, and gradually withdraw from retail regulation as competition progresses.

TRA indicated a preference for Option C on the basis that this option has the greatest scope to deliver significant benefits to consumers, will allow the development of sustainable competition in the telecommunications and the withdrawal of retail regulation where no longer necessary. Option C will also enable a gradual transition towards more competition and the progressive re-balancing of tariffs.

TRA identified four broad types of regulatory measures:

- Measures to strengthen competition: They may be warranted where some elements or features of the market mean that the competitive process is hindered. In considering the implementation of measures to support and strengthen the development of competition for the benefits of consumers, TRA stated that it would take a practical approach in defining specific measures. Likewise measures will be proportionate and justified.
- Ex ante regulatory measures: These may be appropriate where competition is not effective and when absent ex ante intervention, outcomes would be detrimental to consumers and competition. In such circumstances, the sole reliance on ex post intervention is unlikely to be sufficient.
- Deregulatory measures: it is important to remove ex ante regulation that is no longer necessary.
- Measures to remove unnecessary legal and regulatory barriers to competition: In some instances, legal and regulatory barriers hamper competition. Where legal

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and regulatory barriers are not necessary, they must be removed in order to facilitate competition and protect consumers' interests.

Taken together these broad categories of measures involve both regulatory change and deregulation in order to better reflect competitive conditions. Although the Review is primarily concerned with retail markets, TRA also considered the implications of its analysis for wholesale regulation.

Responses to the August 2007 Consultation

Batelco expressed a preference for an amended version of Option A, whereby regulation will be rolled back, potential problems in retail markets dealt with by ex-post competition provisions coupled with minimal safeguards. More specifically, Batelco deemed the following appropriate:³³

- Reliance on competition law;
- Obligation to supply reasonable demand subject to standard exceptions (e.g. impractical requests, insufficient demand);
- Obligation to publish terms and conditions, including prices;
- Obligation to ensure that tariffs are fair and equitable and non-discriminatory;
- Modified procedures for adjusting tariffs in non-competitive markets;
- Simplified and lighter accounting separation; and
- Undertaking to enter into a tariff re-balancing plan subject to Batelco board approval and agreement with TRA.

A second best approach for Batelco, labelled 'balanced and gradual', would consist of letting existing wholesale measures take effect and immediately removing the tariffs approval for retail markets. An assessment whether regulatory intervention is required would be conducted a year after.

Batelco made additional general statements. First, it put forward the view that the implementation of retail regulation is inappropriate since wholesale regulation can be used to create a level playing field and further competition in retail markets. Second, for prospectively competitive markets, it said that any regulation should be light touch. Third, any regulatory measures should be subject to a detailed cost-benefit analysis and be introduced only if there is a reasonable evidence that they will enhance consumer welfare compared to the counterfactual.

With regards to the conditions when ex ante regulation may be considered appropriate, Batelco is of the view that TRA should adopt the same approach as the EU where the following three conditions must be met to implement ex ante regulation:

- High and non-transitory barriers to entry;
- Insufficient dynamic towards effective competition;
- Insufficiency of ex-post competition law to adequately address potential market failures.

Batelco argued that prospectively competitive markets should not be regulated or at most very limited regulation may be warranted, as those markets will tend towards a

³³ Cf, Batelco, 2007, at page 80, as referred in footnote 4 on page 8.

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competitive state. The remedies imposed in those markets should only aim to remove barriers to switching.

The August 2007 Consultation noted that appeal processes applicable to ex ante regulation and the enforcement of ex post competition law provisions by TRA have proven in the past to be to a certain extent unsatisfactory, especially in light of the financial resources and time involved. Batelco interpreted TRA's position as suggesting insufficient tools to enforce competition law. In its submission Batelco expressed the view that there are appropriate competition rules in place (e.g. section 23 of the national fixed license, section 65 of the Telecommunications Law) and that TRA has at its disposal a wide range of tools to address anti-competitive behaviour. Those tools include for example TRA's investigative (e.g. section 53 of the Telecommunications Law) and enforcement (e.g. section 65(f)) powers and TRA's ability to issue guidelines on what constitutes anti-competitive behaviour. Further, Batelco considered that competition law should only be applied ex post and not in an ex ante context such as a tariff approval.

Mena Telecom considers that Option A should not be pursued at this point in time, because exclusive reliance on ex post assessment of anti-competitive behaviour are time consuming and expensive. Hence, it argued that Option A would not be in the consumers' interests given prevailing market conditions. Instead, Mena Telecom supports Option C and calls for some control over price reductions from Batelco to assist OLOs in achieving profitability.

Similarly, Zain favours Option C as it better reflects the state of competition in relevant markets and represents a more flexible approach, which will allow the gradual withdrawal of regulation where justified. Zain considers that prevailing competitive conditions make Option A inappropriate, as it may permit significant damages to competition to occur at a stage where competition is progressing. According to Zain, Option A would create a substantial enforcement burden for the TRA. Zain also points to the lack of generic competition law and secondary legislation on competition law as well as established jurisprudence. Zain also ruled out Option B on grounds that it does not reflect the progress achieved.

Cisco concurs with TRA that Option C is preferable in the current environment.

TRA analysis and conclusion

TRA remains of the view that Option C is the most appropriate option at this point in time. Encouraging facility-based competition in the sector where feasible is an important long-term goal for TRA. Similarly, the objective to roll back retail regulation where market conditions allow it is high on the agenda of TRA. Well-designed and managed wholesale regulation of access to bottlenecks is essential for the development of competition in retail markets such that when it is effective, the regulator can rely on ex post competition mechanisms and law instead of retail regulation. Well-designed access regulation provides for the recovery of efficiently incurred costs, including a return on investment commensurate with risks. Therefore, it produces adequate investment and entry signals.

The transition towards greater facility-based competition, increased reliance on ex post competition provisions and a focus on wholesale regulation instead of retail regulation can be better achieved with Option C.

Mena Telecom and Zain, the two OLOs which responded to the August 2007 Consultation, share TRA's preference for Option C. Batelco's counter high-level options are not appropriate given the state of the market. They suffer from major defects and

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would potentially be damaging to the development of competition and consumer welfare. For example, under Batelco's amended Option A, even in markets where Batelco retains market power, retail regulation would have little, if any, effect and would not offer sufficient safeguards as the scope for exemptions in its proposed retail tariff direction (see below) is so wide that it would render it ineffective.

Similarly, Batelco's second best approach - immediate removal of all retail regulation and exclusive reliance on wholesale regulation - supposes that wholesale regulation effectively constrains Batelco's market power at the upstream level. However, the wholesale regulation of some access products is still relatively new and as the competition analysis has shown, its effect on the market still is to be felt. This is especially the case for leased lines and broadband for example. The uptake of access products is still very limited. There are on-going and recurring issues with the provisioning and functioning of key wholesale products, such that delays in the supply of CAT services, handover of CPS and the handover and termination of bitstream customers.³⁴ Those issues suggest that the conditions necessary for the ability of wholesale regulation to create a level playing are not currently met. Absent retail regulation, Batelco could reduce the effect of those wholesale regulations. In the one-year period between the elimination of all retail regulation and the reassessment of the situation as proposed by Batelco, damage to competition and consumer welfare could be significant. Batelco would be able to further entrench its market power.

Undertaking systematic detailed cost-benefit analysis along the lines suggested by Batelco would be impractical. However, TRA considers that it is useful to at least spell out the expected benefits and costs of key measures and how they are likely to impact economic welfare.

In deciding the extent and form of ex ante regulation, TRA seeks to tailor its actions to the competition and regulatory problems identified. In particular, it gives weight to the extent to which, absent retail regulation, the market would be able to produce outcomes that maximise economic welfare. As such, although it is influenced by the underlying philosophy of the EU regulatory framework, TRA considers it inappropriate to apply the three criteria test rigidly. It grounds its actions in the Bahraini legal framework and adapts regulation to the state of competition.

When necessary, TRA will address anti-competitive behaviour forcefully according to the provisions included in the Law and the Licences conditions of operators. However, in response to Batelco's comments on the enforcement of competition provisions, TRA notes that in modern regulatory practice, the tools and approach to issues under ex ante regulation have been aligned with those of competition law in order to minimise the risk of discrepancies. Instruments have also been created to allow competition authorities to stop promptly firms from undertaking activities that are likely to materially affect competition. For instance, the New Zealand Commerce Commission can issue cease and desist orders to prevent anti-competitive behaviour from occurring.

Whilst this Report is primarily concerned with retail markets, there are obvious linkages with wholesale regulation. The analysis of competition also permitted the identification of regulatory barriers to entry and breaks to competition. TRA has refined its classification of regulatory measures and retained the following broad categories:

- Removal of ex ante retail regulation;

³⁴ See also Sections 3.2.4 and 3.2.5 above.

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- Ex ante retail regulation;
- Ex ante wholesale regulation; and
- Measures to remove entry restrictions and to strengthen competition.

4.2. Approach to the development of regulatory measures

This section deals essentially with ex ante retail and wholesale regulation.

Responses to the Consultation

In its submission, Batelco argues that ex ante regulation should be adjusted such that:

- in competitive markets ex ante remedies are removed;
- in prospectively competitive markets, ex ante regulation is avoided unless there is clear evidence that the market will not be effectively competitive within the period of the Review absent ex ante regulation; and
- in non-competitive markets ex ante remedies may be needed.

Referring to the European approach to the imposition of regulatory remedies, Batelco stated that remedies should be based on the competition problems identified, proportionate and justified in light of identified objectives.³⁵ Further, Batelco pointed out the importance of providing reasoned decisions as to why remedies are appropriate in line with the approach of the European Regulators Group, ERG.³⁶

With regards to the balance between wholesale and retail regulation, Batelco stated that retail regulation ought to be removed in favour of wholesale regulation, which itself should be implemented only if there is clear demand from access seekers.

Batelco also reiterated the need to have cost benefit analysis before any remedies are implemented. It indicated that prioritisation and scheduling of remedies as well as further consultation on the actual design of remedies was necessary.

Zain argues that in designing remedies, TRA should take into account the following two principles. The first principle, widely applied in Europe, states that wholesale regulation is preferable to retail regulation. Hence, when retail regulation is being removed, but the market is not effectively competitive, it is paramount to replace retail regulation by appropriate remedies at the wholesale level and/or to maintain adequate regulation at the wholesale level.

Proportionality is the second principle referred to by Zain. As Batelco, Zain considers that TRA should give weight to the principle of proportionality according to which the least burdensome regulatory measure should be selected to address an identified problem.

³⁵ The main objectives included in Art. 8 of EU Framework Directive (Directive 2002/11/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services), referred to by Batelco, include the promotion of competition, the benefits of users, encouraging efficient investment and the promotion of innovation.

³⁶ ERG, 2006, *Revised ERG Common Position on the Approach to Appropriate Remedies in the ECNS Regulatory Framework*, May.

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Finally, Zain indicated that attention should be paid to non-price discriminatory behaviour that may take place when a vertically integrated firm like Batelco is dominant at the wholesale level and faces downstream competition.

TRA analysis and conclusion

The range of competition and regulatory issues arising from SMP is broad. There is a correspondingly wide range of ex ante instruments that can be put in place. The appropriateness of specific ex ante instruments or mix of instruments naturally depends on the nature and severity of the problems identified. Ex ante remedies can be implemented at the retail and/or wholesale level. Wholesale regulation is to be preferred to retail regulation as it tackles directly the roots of market power. Where wholesale regulation is effective in the sense that it creates access-based competition at the downstream level and effectively constrains upstream market power, retail regulation can be removed and minimal safeguards maintained (e.g. competition provisions).

Reading the submissions made to the August 2007 Consultation by market players, these points appear uncontroversial. There is indeed a broad agreement between TRA and market players at the level of the principles. The divergence of views relates more to the translation in practice of those principles at the level of the relevant markets. In turn, these differences stem principally from diverging diagnostics on the state of competition and wholesale regulation.

Based on the submissions received and further analysis, TRA has refined its proposed regulatory measures. Overall, the revised proposals entail less retail regulation and are even better targeted at regulatory and potential competition problems and hence at the promotion of consumers' interests.

The Sections that follow outline in details the proposed regulatory measures. For the definition and selection of ex ante remedies TRA has sought to:

- Consider the impact of wholesale regulation to determine if retail regulation is warranted; and
- Explain how the remedies match competition risks and regulatory concerns (e.g. risk of price squeeze or predatory pricing) and are proportionate.

For ease of reference Annex 1 below contains the list, market by market, of regulatory measures envisioned by TRA in the August 2007 Consultation and the main rationale.

4.3. The regulation of retail tariffs

Section 58 of the Law states that licensed operators with significant market power shall be subject to tariff controls in relation to any telecommunications services for which TRA determines that insufficient competition exists. TRA has determined above that Batelco has SMP in a number of relevant markets and that competition in those markets is insufficient.

Retail tariff controls come in many flavours: they can be more or less stringent, give wide pricing discretion to the regulated operators, be simple or complex. The appropriate form of price control and retail regulation depends on the problems it is meant to remedy. Hence, it is typically market-specific.

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Retail tariff controls can take on many forms and rely on diverse instruments, including for example:

- Formal direct control of prices through a price cap / CPI- X% type of instrument;
- Approval of tariffs through a formal approval process;
- Notification of tariff changes without approval prior to implementation coupled with ex ante rules to refrain operators from specific types of behaviour likely to be detrimental to the development of competition and consumers' interests, such as excessive bundling of products, undue price discrimination or anti-competitive cross-subsidies.

Of course, these tools can be combined together. The choice of ex ante regulatory tools should principally be governed by the nature of regulatory and competition problems. For instance, in a market where there is limited scope for competition or wholesale regulation is limited, a direct price control is likely to be appropriate in order to keep/bring prices in line with underlying costs and to provide further incentives to the incumbent for operational efficiency. This would produce allocative and productive efficiency gains and ensure that consumers' interests are protected.

Conversely, in other circumstances, the scope for access-based competition, or more generally, the ability of competitors to bring prices to their competitive level and to discipline the incumbent, may be such that formal stringent price controls are not necessary. In such circumstance, access regulation and competitive forces are likely to do a better job at constraining retail market power than an aggressive price control mechanism.

However, appropriate safeguards would typically be warranted in order to prevent behaviour and practices that may be damaging to competition and that would take time to be remedied under competition law provisions, i.e. there is a high risk of market failure. For instance, the incumbent could nullify the effect of wholesale regulation by affecting a price squeeze on new entrants, i.e. by setting the retail price such that the margin between the wholesale charge faced by new entrants and the retail price is insufficient to cover downstream cost. This could occur if there is no retail regulation whatsoever.

Similarly, the incumbent could leverage its market power horizontally through the introduction of bundles that cannot be replicated by new competitors. Foreclosure of the market may occur as a result. The incumbent could also introduce discriminatory price and non-price terms to retail consumers with a view to maintain its dominant position in existing markets.

Therefore, ex ante rules to refrain from engaging in particular types of conduct can be a complement or an alternative to a formal price control. Ex ante rules of this kind are included for example in the Universal Services Directive of the European Union and are used by several European regulators.³⁷ While competition law provisions generally also cover the type of market failures addressed by those obligations, competition law can be ill suited at addressing competition problems in certain circumstances. This is the case where frequent or timely interventions are required for example. Competition law is a

³⁷ See Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services and also Cullen International, *Telecommunications Western Europe, Cross-country Analysis*, 7 January 2008, pp. 175-89.

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much slower tool and in dynamic markets, this can be problematic as significant damages to the competitive environment can take place.

To check compliance with particular ex ante rules, a notification process, that includes high level information (on prices and costs), may suffice.

4.3.1. Multi-year retail prices control

The August 2007 Consultation indicated that a multi-year retail price cap could be introduced to meet TRA's objectives to protect consumers and to encourage competition. TRA said that the price control could apply to a wide range of services: fixed access, fixed originated calls, fixed originated international IDD calls to Zone 1, 3 and 4, Internet services and leased lines. TRA also noted that while the exact scope of the control would have to be determined through a specific consultation, it sought to keep re-balancing options as open as possible by not excluding services at the outset.

Responses to the Consultation

Batelco considers the introduction of a retail price control inappropriate. This view is consistent with its own assessment that competition is at least prospectively competitive in all the relevant markets for which the August 2007 Consultation considered implementing a retail price control. According to Batelco, access regulation in place implies that all markets currently not effectively competitive should be viewed as prospectively competitive. Further, as explained above, Batelco contends that no ex ante regulation is required for prospectively competitive markets.

Overall, Batelco argues that the number of services that may require regulation is not sufficient to justify the cost associated with the design of a retail price control, and that a regulatory impact assessment is needed to assess the cost and benefit of imposing a retail price control.

In its view, the price cap could only realistically include fixed access to narrowband connections, and may therefore requires a positive X factor overall to allow re-balancing. Developing a re-balancing plan separately from a retail price control would, according to Batelco, eliminate the need to develop a price cap.

TRA analysis and conclusion

TRA has undertaken further analysis regarding the potential scope of a multi-year price control. TRA considers that a narrow multi-year price control is more appropriate as it will better reflect competitive and market conditions.

Price cap regulation limits the rate of change of an individual tariff or a "basket" of tariffs over several years. Price caps are used to achieve a wide range of objectives. They include for instance: protecting consumers from excessive pricing; bringing prices progressively to their competitive level; encouraging greater operational efficiency; giving more pricing flexibility to the incumbent; and moving to a tariff structure reflecting more closely underlying costs.

In general, one of the potential advantages of having a wide basket of services is that it allows price re-balancing to take place while achieving overall price reductions of the basket. In response to an overall price constraint, the incumbent will be able to adjust

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individual prices by increasing rental and decreasing other rates. Sub-caps can be developed to limit the pace of re-balancing and to mitigate the adverse effects of price re-balancing on specific categories of consumers, low user schemes are also typically implemented.

However, broad baskets may be problematic when the extent of re-balancing is such that to achieve guaranteed overall price reductions of the basket, services for which a formal price control are not strictly warranted and/or appropriate have to be included in the basket. As a consequence, the regulated basket may comprise services for which there is greater scope for prospective competition or that are already competitive along with services that are not competitive.

Overall, TRA considers that it is preferable for the market to rely on competitive forces to bring prices in line with costs wherever feasible, i.e. where there is scope for more effective competition, rather than to rely on stringent price controls, which reduce the incentive of OLOs to compete with Batelco. In some circumstances, to protect consumers against potential excessive pricing, a loose cap in the form of CPI+0 (rates cannot increase more than the inflation per annum) would be appropriate.

With a targeted price control comprised of fixed access and domestic calls, it is likely that given the extent of re-balancing anticipated, the price of the regulated basket will have to go up. As part of its multi-year price control, TRA will monitor wider representative consumer baskets that will include other services widely used by consumers such as mobile and Internet services. Given the relative prices of the telecommunications services consumed by typical consumers and their relationship with cost, TRA anticipates that over the next few years, consumers would overall experience significant price reductions in real terms. As part of the design of the multi-year price control, TRA will define consumer baskets. Those baskets will be monitored in order to show the extent to which consumers are benefiting from regulation and competition.

Vulnerable consumers will be protected by a low user scheme whose definition and implementation will be a key component of the multi-year price control.

Whilst TRA disagrees with Batelco that there need to be a sufficient number of regulated services to justify the development of a multi-year price control, TRA considers that the level of complexity of the instrument to develop should be commensurate with the scope of the services covered. Hence, given the narrow scope of the price control proposed, a relatively simple multi-year price control akin to an elaborated re-balancing plan would seem more appropriate than a complex and sophisticated control.

4.3.2. Notification

The August 2007 Consultation proposed to replace the current formal tariff approval procedures by a less stringent notification process that would apply to all services currently subject to tariff approval except mobile services and international calls to Zone 2 countries. It outlined a 2-stage simplified notification process applicable only to operators that are required to submit their tariffs for approval.

The first step would involve notification to TRA of any changes in the terms and conditions, including rates, to an existing tariff or the introduction of a new tariff within a predetermined period (e.g. 20 working days). The notification would include a description of the tariff proposal, an evaluation of the market in which the tariff would apply, and all

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the relevant cost and revenue information. Notification would not require formal approval by TRA.

The second step would be initiated only if TRA has competition concerns in the relevant market. It would involve a competition investigation under sections 53 and 65 of the Telecommunications law. TRA might then ask for the tariff to be withdrawn until further investigation has occurred or allow the tariffs to remain and ask for further information. Should TRA conclude that a tariff raises significant competition concerns, it would implement appropriate remedies, including amendments, modifications, and possibly require withdrawal of the proposals and/or impose fines as provided for in the relevant sections of the Telecommunications Law.

According to TRA's preliminary view, a second stage investigation would be unlikely where:³⁸

- tariffs proposals are not likely to reduce the downstream margin available for current or potential rivals to a dominant provider;
- tariffs proposals are unlikely to lead to prices that are below a relevant cost benchmark (likely to be the incremental cost of the service); and/or
- subject to the two previous scenarios, they are proposed as a reaction to a rival's new pricing offer.

Responses to the August 2007 Consultation

Batelco disagrees with TRA's proposal to replace the formal approval process by the notification process outlined above. It considers that the notification process envisaged by TRA does not provide improvements compared to the current process. It argues that the proposal is unlikely to be welfare enhancing, will distort competition, reduce incentives to innovation and will delay benefits to customers.

Batelco argues that the 2-stage notification will put Batelco at a competitive disadvantage and will adversely affect the ease and frequency of price changes as well as the introduction of innovative pricing packages. It considers the information requirements to be disproportionate, and the proposed 20 working days period not to offer significant improvements compared to the current system.

Batelco also expressed concerns over the "reduction of margins available to competitors" criteria proposed by TRA that may trigger a stage 2 investigation. It argues that this may inhibit pro-competitive price reductions and does not address potential competition problems.

Batelco further considers that the proposed notification process and the application of ex ante competition control will increase uncertainty and will require the development of detailed guidelines to offer sufficient guidance for internal compliance purposes.

More fundamentally, Batelco firmly disagrees with the use of competition law within the notification process in the manner suggested in the August 2007 Consultation. It argues that competition law rules should only be used in an ex post context once proof of anti-competitive effect can be established as per section 65(a) of the Telecommunications Law. This contrasts with TRA's approach which, according to Batelco, may lead to conjectural or hypothetical anti-competitive effects. Finally, Batelco indicated that the proposed

³⁸ See TRA, 2007 at page 108, referred to in footnote 1 at page 5.

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approach risks prohibiting pro-competitive behaviour and may increase the risk of type 1 error.

In its response, Batelco submitted an alternative proposal in the form of a draft retail tariff direction. Batelco's proposal includes two procedures. The main features of the first procedure, labelled the notification procedure, are as follows:

- It would be applicable to all services except new ones.
- In terms of format, it would include high-level relevant information regarding cost, the costing methodology used, service description, addressable market, etc.
- It would apply to operators with SMP that would have to notify TRA 20 working days in advance of the implementation of the tariff. If TRA has not notified the operators of its objections within 5 calendar days, the tariff would be deemed approved.
- Grounds for rejection/objection would be as set out in section 58(b) of the Telecommunications Law, i.e. tariffs should be fair and equitable, non-discriminatory and based on forward-looking costs.
- Tariffs would be automatically deemed approved when they meet competitors' prices, i.e. when the operator offers an equivalent service on substantially the same price and non-price terms.
- Automatically approved tariffs would also concern proposals for which the cumulative change to the rate included in the proposal and any other proposals over the previous 6 months are within a 20% limit for some international rates and a 10% limit for services subject to price regulation.
- Finally, the regime of exceptions would cover "near substitute". A proposal for a new service for which there is already a tariff in force for a near substitute would be deemed approved. This could apply for the pricing of a new 2Mbps circuit pricing if there is already a tariff in place for a 1Mbps tariff in place for instance.

The main features of the second procedure (labelled the full approval procedure by Batelco) are:

- The main difference with the current approval process relates to the scope of the full approval procedure. It would apply to only new services or when TRA has objected to a tariff subject to the notification procedure above.
- Tariff would be deemed approved if no objection is received within 30 days.
- Proposals could be rejected only on grounds that price, terms and conditions are: not fair and equitable; discriminatory; not oriented towards costs; or if there is a material miscalculation or mathematical error.

TRA analysis and conclusion

The design of a new notification to replace the current approval process will be consulted upon either as part of the consultation on the multi-year price control consultation or separately. Thus, it is not opportune to determine the exact content of the scheme at this point in time. However, TRA considers it is important to outline the general characteristics of the regime envisioned by TRA.

The deficiencies of the current tariffs approval process are well known. It is burdensome for TRA and Batelco, time consuming and resource intensive. It is also inflexible and catches all services. As a result it may hinder price competition and delay the

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introduction of price changes. Nonetheless the current process has some merit. When TRA assesses Batelco’s tariff applications, it looks to ensure that prices comply with the relevant provisions of the Telecommunications Law and licenses. By doing so, TRA has, on several occasions, prevented the introduction of tariffs where it considered them incompatible with the development of competition.

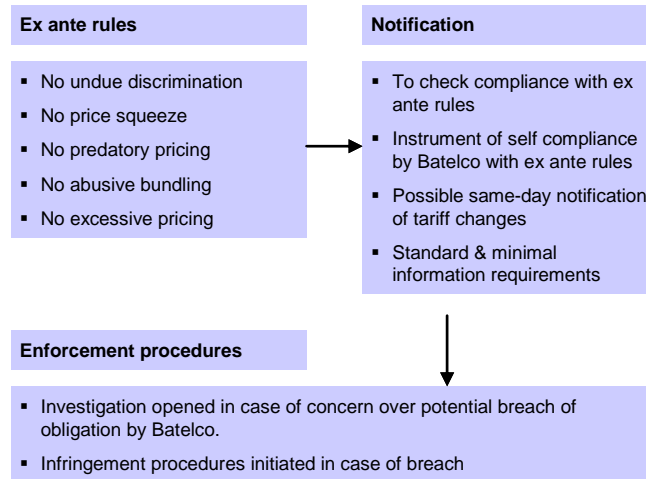
The successor of the current system should be improved in terms of compliance for TRA and Batelco, give Batelco greater flexibility while ensuring that potential competition concerns with tariffs can be addressed rapidly and effectively. The benefits of competition should not be unduly delayed to consumers, but sufficient safeguards to the competitive environment should remain.

Following Batelco’s comments on the 2-stage notification outlined in the August 2007 Consultation, TRA has carried out further work on its original proposal. Before outlining TRA’s new proposal, it is useful to comment on Batelco’s counter proposal. TRA considers that Batelco’s draft retail tariff direction suffers from significant drawbacks that make it unsuitable. Chief among those is the fact that it provides for very wide exemptions that would lead to tariffs potentially anti-competitive automatically approved. For example, the 10% cumulative price change rule could lead to below cost pricing. There are too many carve outs. More generally, the instrument is rather inflexible and not targeted at preventing potential problems that may arise with tariffs.

TRA considers that it is more appropriate and justified in the present circumstances to put in place a system composed of ex ante rules and a simple notification process that acts as a self-compliance tool. TRA’s preference will be for a same-day notification process provided that appropriate mechanisms can be put in place. TRA will consult on this option and other options as part of the forthcoming consultation on the retail regulation framework.

The figure below sets out the various elements of the proposed notification framework.

Figure 1: Notification framework



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Ex ante rules

As argued above, it is important to match competition and regulatory problems with regulatory tools. Ex ante rules to refrain from engaging into particular types of conduct would include:

- No undue discrimination: discriminatory practises can concern price and non-price terms and actions, omission or treatment. Undue discrimination occurs when differences with regards to price and non-price terms and actions, omission or treatment between categories of users and/or users cannot be objectively justified from a technical, commercial and/or economical standpoint. They can be detrimental to consumers and competition.
- No excessive pricing: excessive pricing can occur when a firm uses its market power to raise and/or maintain prices significantly above its costs, or the costs of an equally or reasonably efficient competitor. Excessive pricing can harm consumers. The prescription against excessive pricing is a softer constraint than cost-based tariffs as it gives more leeway to the operator.
- No price squeeze: a price squeeze occurs when a vertically integrated firm with market power in the provision of an input essential to the production of a final product sets the margin between the access and retail price such that the margin is insufficient to recover downstream costs. As a result, an equally efficient competitor is unlikely to remain viable and/or to earn a normal profit. This can deter and/or prevent the development of competition at the retail level. Ultimately price squeeze can result in market foreclosure, deterrence of future competition via reputational effect as well as deter upstream competition.
- No predatory pricing: whilst below cost pricing can be beneficial to consumers in the short run as they enjoy lower than normal prices, it is generally detrimental to the development of competition and hence to the long term benefits of consumers. TRA acknowledges that a blanket 'above cost pricing' obligation may be inappropriate for the launch of new products where penetration pricing may be needed to kick-start demand. Therefore TRA prefers the no predatory pricing wording. Below cost pricing for new innovative products cannot be expected to carry on indefinitely especially where this conduct could lead to a leveraging of market power in adjacent markets. Hence, a clear and realistic path to profitability would be required in order to balance the potential need for penetration pricing with competition concerns.
- No abusive bundling of products: the tying/bundling of services can be both pro-competitive and anti-competitive.³⁹ There are very legitimate reasons and potential benefits to bundles, such as reducing transaction costs, reflecting cost advantages and increasing output through better price discrimination for example. Thus, bundles can be welfare enhancing. At the same time, there can be strategic and anti-competitive motives to bundling. The concern with bundles is not with bundling per se, but with the potential adverse effects on competition. Bundles can be used as an instrument to leverage market power horizontally by bundling together a non-competitive product with a competitive one. This may lead to a softening or foreclosure of competition in the competitive market. It can also lead to the erection of artificial barriers to entry and a reduction of demand faced by

³⁹ The literature on bundling/tying is vast. For a useful survey see, for instance, OPTA, Bundling, *Economic Policy Note no 4*, 2004.

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competitors. Potential exclusionary effects are greater when products are complements and when there is an asymmetry between firms in their ability to bundle products. Hence, relevant considerations when looking at bundles include the level of competition in the products bundled, the ability of rivals to replicate the bundle, whether the products are also sold individually, and the availability of wholesale offers allowing competitors to offer similar bundles. The efficiency and price discrimination rationale of bundles need also to be considered.

Notification

The mere imposition of ex ante rules would be insufficient to ensure that Batelco systematically respects those rules. TRA therefore proposes to put in place a notification process in order to allow Batelco to be more reactive to competition. The notification will not involve TRA approving tariffs. Instead, Batelco would notify TRA of changes in tariffs and would be entirely free to set prices within the limits set by its ex ante rules and other legal requirements. As indicated above, TRA's preference will be for a same-day notification process provided that appropriate enforcement mechanisms can be put in place.

To facilitate the implementation of the new regime, TRA is also considering providing guidance regarding what would likely constitute a breach of those rules and setting out how specific conducts will be analyzed. Likewise, Batelco, as an SMP operator, will have appropriate guidance and the market will have sufficient certainty.

TRA would intervene only where there is a breach of those rules. The notification would include a compliance statement from Batelco explaining how it is complying with the rules applicable to the particular services. The guidance mentioned above will outline which broad elements ought to be included.⁴⁰

With regards to information requirements, Batelco, as an SMP operator, would be required to submit information required to establish compliance with the notification's rules. This would include the product description, predicted revenues and volume, and high-level information on costs and costing methodology.

Quality, completeness, accuracy and consistency of information submitted by Batelco, as an SMP operator, through the notification process would be of utmost importance for the new system to give TRA and more generally the market the level of confidence required for the relaxation of tariff approval.

Enforcement procedures

In case TRA has serious concerns over the compliance of Batelco with its notification's rules, TRA would open an investigation. As of part of an investigation, TRA would likely request additional information from Batelco. Typically, this information would be similar to what should normally be used by Batelco internally as part of its decision-making process and/or internal compliance procedures. Hence, the new system may require Batelco to strengthen its existing compliance procedures such that in case of serious concerns by TRA, appropriate information is readily available.

⁴⁰ For example, in the case of the no price squeeze obligation, Batelco would be required to demonstrate that the sum of the relevant wholesale product (where applicable) and retail cost is no greater than the retail tariff.

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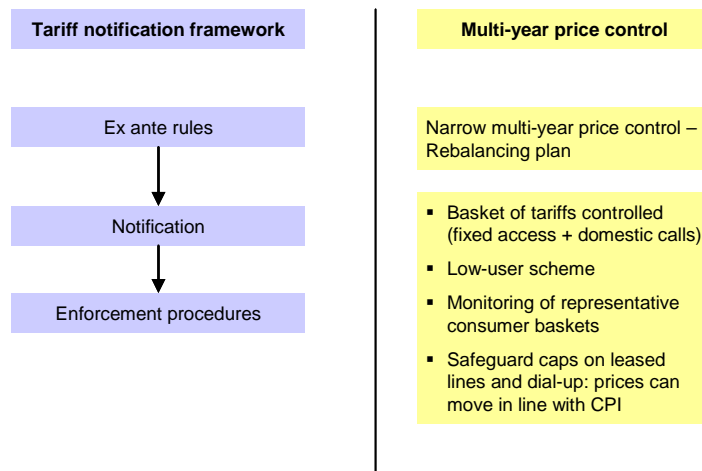
Should TRA conclude that Batelco is in breach with one or several of the notification’s rules, TRA would initiate an infringement procedure. This could ultimately lead to a fine to Batelco. As part of its forthcoming consultation on the retail regulation framework TRA will consult on the appropriate and proportionate enforcement procedures and mechanisms necessary to support the shift to a notification process.

TRA considers that to move forward with a same-day notification, there should be an emergency procedure, a kind of cease and desist order or injunction, allowing TRA to order immediate withdrawal or suspension of a tariff pending the completion of an investigation in case where there are grave concerns over a newly introduced tariff and/or there is an evident and serious breach of an ex ante rule. This procedure would only be applicable in limited circumstances and when certain criteria are met.

Competitive developments may justify adjustments to ex ante rules over time. TRA anticipates that it would be feasible to progressively remove rules applicable to some markets over time when competitive conditions warrant it.

To summarize, following the comments received on the August 2007 Consultation, TRA has carried out further analysis and amended accordingly its proposals. The figure below shows the main building blocks of the retail regulation framework TRA intends to develop further in consultation with the industry. The new framework will replace the current tariffs approval where some form of price control is deemed necessary in light of the analysis of competition (see below on the analysis market-by-market).

Figure 2: Retail price controls high-level framework proposed



The proposed framework will allow swifter introduction of price changes whilst providing adequate and proportionate safeguards such that potential problems can be addressed. Tariffs will no longer be approved by TRA. Instead TRA will set the ground ex ante rules whilst Batelco, as an SMP operator, will, within the limits set by those rules, be free to set its tariffs.

TRA expects that the new framework will lead to efficiency gains through: better targeted regulatory instruments minimizing distortions; greater pricing flexibility and ability to compete within appropriate safeguards; improved market entry signal by aligning prices with underlying costs; and lower compliance costs.

4.4. Competition law guidelines

To accompany the move from ex ante regulation towards increased reliance on ex post intervention through competition law provisions, the August 2007 Consultation considered developing Competition Guidelines setting out how TRA will apply competition rules and the type of behaviour it may consider as anti-competitive. TRA also proposed to undertake a study to inform its approach on the treatment of bundling/tying based on the competition principles set out in the Telecommunications Law with a view to provide more certainty to market participants as to when this type of practices may be pro-competitive or anti-competitive.

Responses to the August 2007 Consultation

Batelco supports the development of Competition Law Guidelines along the lines of those developed in Europe (e.g. those of Oftel in 1998 and those of the European Commission in 1991). As explained above, it argues that those guidelines should only be used in an ex post context once anti-competitive effects are known. Batelco disapproved the use of Competition Guidelines in a tariff notification context because it may result in tariffs being unnecessarily blocked, and would be mainly based on conjectural effects (i.e. what is likely or unlikely to happen) as opposed to actual anti-competitive effects.

Batelco considers that the treatment of bundling should be dealt with as part of the Competition Guidelines. Batelco encourages TRA to draw on relevant international practice, adapted to the local environment where needed, for the development of its guidelines. In terms of timing, Batelco considers those guidelines should be produced as soon as possible in order to provide the necessary guidance to the market and avoid unnecessary delays to the introduction of bundle products. Given the importance of such Guidelines, Batelco requests those guidelines to be put for consultation before being finalized.

Zain requests an explicit prohibition of predatory pricing, margin squeeze and bundles which cannot be offered by competing providers through the introduction of secondary legislation and the development of an appropriate framework for fines. Zain argues that because Batelco is currently the only provider able to offer multiple-play offers, it could bundle products in an anti-competitive manner to exclude rivals and/or reinforce its dominant position.

More generally, Zain is of the view that the development of a fully-fledged competition regime, with the creation of a Competition Authority and generic Competition Law, is necessary and would welcome the involvement of TRA in this process given its expertise.

TRA analysis and conclusion

There is broad support for introducing competition guidelines amongst respondents. TRA agrees with Batelco that relevant international practice should inform the development of TRA's competition guidelines and that the treatment of bundle and tying is unlikely to require a separate study.

Given their importance, TRA intends to consult on those guidelines. In terms of timing, TRA intends to put these guidelines in place by the time the amendments to the current

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retail tariff regulation regime come into force and the tariff current approval process is removed for mobile services and fixed originated calls to Zone 2 and Zone 4 countries.

Regarding the scope of the guidelines, TRA is minded to include a simple guide on how to lodge a complaint before TRA and the elements of information required for TRA to accept a complaint for an alleged anti-competitive behaviour. This should contribute to reducing the regulatory burden, allow TRA to focus its enforcement efforts whilst ensuring that important cases can be investigated within appropriate timeframes.

Those guidelines will naturally be consistent with the competition and other provisions as set out in the Telecommunications Law.

TRA expects that competition guidelines will: provide market players with greater certainty with regards to the process for assessing anticompetitive complaints; and the type behaviour that may breach relevant provisions.

4.5. Fixed access and domestic calls markets (non-residential and residential)

For the fixed access and domestic calls markets (for both non-residential and residential) TRA proposed in the August 2007 Consultation to introduce the following regulatory measures:

- 2-stage notification process to replace the formal tariff approval process;
- Introduction of a multi-year price cap control;
- Unbundled local loops;
- Carrier selection and improvement to current carrier pre-selection products; and
- Number portability.

Responses to the August 2007 Consultation

Batelco disagrees with the remedies proposed. It argues that only line rental could be subject to a price control as national calls are prospectively competitive with new infrastructure roll out, and competition from CPS and VoIP services providers.

According to Batelco, the basket composed of line rental would have to significantly increase in order to bring prices closer to costs. Batelco considers that developing a price control for this service only would be disproportionate. Batelco argues that only the safeguard provisions, as outlined above in Section 4.2 should apply in these markets together with its proposed notification procedures referred to in Section 4.3.2. above.

In its submission, Batelco concurs with TRA that re-balancing of tariffs is necessary to avoid cream skimming, remove distortions to competition induced by unbalanced rates and to facilitate efficient entry decisions.

Batelco refers to past re-balancing proposals that TRA rejected. Those proposals were rejected because they would have resulted in a very steep re-balancing, instead of the phased re-balancing advocated by TRA to mitigate the potential adverse impacts of re-

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balancing on some users. As indicated by Batelco, re-balancing can occur before the imposition of a price control and/or as part of the price control with the introduction of positive sub-caps. Batelco wishes to start re-balancing before the imposition of a retail price cap, should TRA ultimately decided to impose a price cap.

Cisco anticipates that the two NFWS licenses will constitute a competitive force in the Internet access market and indirectly for voice services as broadband access can be used to offer a broad range of products. Hence, Cisco reasoned that by encouraging the deployment of broadband, the need to regulate other services, such as voice, would overtime diminish.

TRA analysis and conclusion

Having considered submissions and based on further analysis of retail tariff controls, TRA considers that the following measures are appropriate for the fixed access and fixed originated domestic calls markets for both residential and non-residential customers:

- Removal of tariff approval process
- Reform of retail regulation regime:
 - Introduction of a notification process (objective is same-day notification) with the following ex ante rules: no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling, no excessive pricing;
 - Simple multi-year price cap control – re-balancing plan including low user scheme;
 - Monitoring of representative consumers baskets of services;
- Local loop unbundling on an exchange-by-exchange basis where demand for loops exists;
- Carrier selection and further improvements to the existing carrier pre-selection product; and
- Number portability.

On the basis of a careful analysis of competition and market developments in these markets, TRA is of the view that full removal of retail regulation in these markets is premature in the face of Batelco continued dominance.

Batelco agrees with TRA that it is important for re-balancing of tariffs to proceed in order to eliminate the risks of cream skimming and to avoid distorting market entry. As indicated in the past, TRA considers that unbalanced tariffs act as an entry barrier in the fixed access markets. It is important however to mitigate the adverse impact of re-balancing on consumers by phasing the process and developing a low user scheme. To this end, TRA remains of the view that a multi-year price controls is the most appropriate instrument. The price control does not have to be complex. As part of the process of designing the multi-year instrument, the adjustments required to individual prices can be carefully evaluated.

Whilst TRA acknowledges that there is a greater scope for further competition in the fixed originated domestic calls market, notably via voice over broadband offers, TRA does not consider that in the short-to-medium term competitive forces would be sufficient to constrain Batelco's market power.

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The multi-year price control needs to be complemented by a notification process with associated ex ante rules. Wholesale regulation in place does not at present and is not expected in the foreseeable future to create a level playing field in the related retail downstream markets. There is in particular limited scope for access-based competition in the fixed access markets. Absent retail regulation, there are risks that Batelco could seek to prevent the development of further competition by bundling potentially competitive products with products over which it has a de facto monopoly for instance. The implementation of practices of this nature is facilitated by Batelco's vertical integration, large product portfolio and market power across several markets.

It would be premature to rely solely upon the competition provisions within the Telecommunications Law to address those potential market failures given notably the potential damage to competition that could result and the time it would take to remedy them. Instead, TRA considers that the tariff notification framework outlined in Section 4.3.2 (i.e. notification and ex ante rules) is preferable. By freeing up Batelco from formal tariff controls and allowing further competition while providing appropriate safeguards, TRA considers that its proposals will enhance economic welfare.

Whilst TRA expects that local loop unbundling, where implemented, would have a more significant impact in the retail broadband and leased lines market, it may also boost competition in the fixed access markets for non-residential users. Local loop unbundling, carrier selection and number portability are discussed in other sections below.

4.6. International calls markets

The August 2007 Consultation envisaged the following regulatory measures:

- Calls from a fixed location to Zone 1, 3 and 4 countries: replacement of formal tariff approval process by a simpler 2-stage notification process coupled with a price control;
- Calls from a fixed location to Zone 2: removal of tariff approval process; and
- Calls from mobile phones: removal of tariff approval process.

Responses to the August 2007 Consultation

Batelco considers that neither formal price control nor notification requirements should apply to international calls. Retail price control for calls to Zone 1 only, the only international calls market not effectively competitive according to TRA, would be disproportionate given the size of this market.

Mena Telecom believes it is premature to remove the retail tariff approval process for mobile originated international calls. It argues that it may lead to the disappearance of products targeting price sensitive customers, such as pre-paid calling cards, by allowing price undercutting from Batelco and Zain.

TRA analysis and conclusion

Based on operators' comments and consistent with TRA's revised competition assessment and further analysis of remedies, TRA has refined its proposals for international calls markets as follows:

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- Fixed originated international calls to Zone 2 and 4 countries: removal of current approval process;
- Mobile originated international calls to all Zones: removal of current approval process;
- Fixed originated international calls to Zone 1 and 3 countries: replacement of current approval process by ex ante rules and a notification (objective is same-day notification); and
- Carrier selection as a wholesale obligation for fixed originated calls and further improvements to the existing CPS product.

Only markets in which TRA has found SMP are susceptible to ex ante regulation. With regards to Mena Telecom's concerns for mobile originated calls, TRA notes that no SMP has been found in those retail markets.

The ex ante rules for the fixed originated calls markets will include: no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling and no excessive pricing. In addition, carrier selection will be introduced in the reference offer and will be applicable to all fixed originated international calls.

After further analysis, TRA concurs with Batelco that it is not warranted to directly control prices through a multi-annual price control. Instead, given the scope for further competition based on wholesale products, TRA considers it is appropriate for the present time to rely on competitive forces to bring prices to their competitive levels. Nevertheless, a form of retail regulation is justified. The proposed measures will give Batelco greater pricing flexibility to respond to competition within appropriate safeguards. Hence, they will contribute to increasing economic welfare.

4.7. Mobile services market

TRA made several proposals in the August 2007 Consultation. They fell into two main categories:

- Removing entry restrictions and strengthening competition: facilitation of MVNO entry; removal of mobility restrictions in NFWS licenses; approach to spectrum for new technologies; and number portability; and
- Ex ante regulatory price control: deregulation of price setting by removing the tariff approval process applicable to Batelco.

The recently adopted Second National Telecommunications Plan reaffirms the Government commitment to the promotion of competition. The Plan notably requires TRA to continue to remove or minimise all barriers to entry and expansion in the telecommunications market.

In line with the Telecommunications Law and the duties it bestows on TRA, TRA has since its inception actively sought to promote fair and effective competition among new and existing and licensed operators.

TRA has decided to remove the main regulatory barrier to entry in the mobile services market by allowing the entry of a new mobile network operator.

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More generally, TRA is committed to remove unnecessary regulatory entry restrictions across the sector in order to further promote competition for the long-term benefit of end-users.

4.7.1. Attribution of a third mobile network operator license

After consultation, TRA issued in May 2007 a statement deferring the decision regarding the possibility of issuing additional mobile licenses to the completion of the Strategic and Retail Market Review.⁴¹ TRA has now decided to allow the entry of a third mobile network operator in the Kingdom of Bahrain. TRA considers there are no compelling reasons to limit the market structure to a duopoly of MNOs.

Once this Consultation is completed and after due consideration of comments, TRA will be seeking an expression of interest for the granting of frequencies and services license for the third mobile network. Should more than one firm be interested, TRA would then develop a competitive process for the granting of frequencies and attribution of service license.

The Telecommunications Law requires TRA to promote effective and fair competition. It gives TRA the authority to issue licenses. In particular, the Telecommunications Law states that the granting of additional MNO licenses is at the discretion of TRA once the two-year exclusivity period granted to the two existing operators after issuing a license to Zain (ex-MTC-Vodafone) has elapsed.

TRA is of the view that a continuation of the current duopoly would be contrary to TRA's duties under the Telecommunications Law to protect the interest of subscribers and to promote fair and effective competition among new and existing licensed operators. It would also conflict with the Government's guidance as encapsulated in the Second National Telecommunications Plan. Freedom of entry is a characteristic of competitive markets.

Since the release of the August 2007 Consultation, Mena Telecom expressed an interest in acquiring an MNO license. In its submission, Mena Telecom notes that the incremental addition of a 3G or GSM access layer to a WiMax network would be in the interest of consumers and will be proportionally less costly than the roll out a mobile network from scratch.

The entry of another MNO to compete with the existing incumbents can be expected to lead to increased competitive pressures, bring further price reductions and innovative offerings as well as revitalise the competitive dynamics of the mobile services market. The May 2007 statement indicated that expected consumer benefits were likely to be significant. Greater competition is expected to deliver significant economic efficiency gains.

Compared to a MVNO, a MNO rolls out its own network and hence is independent of its competitors. It can therefore differentiate more extensively its services and adopt the technology of its choice. The entry of a MNO provides for greater scope for competitive pressures in the form of infrastructure-based competition. It allows for competition between vertically integrated companies.

⁴¹ TRA, *The possibility of issuing additional mobile licenses in the Kingdom of Bahrain*, 13 May 2007. See also the accompanying report, TRA, *The possibility of issuing additional mobile licenses in the Kingdom of Bahrain*, 13 May 2007.

REPORT

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In the consultation on the possibility of issuing additional mobile licenses, Batelco and Zain objected to the entry of a third MNO, although they preferred MNO to MVNO entry. Their principal objection related to unit costs. In particular Zain and Batelco claimed that the entry of a third MNO would result in the loss of economies of scale and hence would drive average unit cost up. TRA contested this view and concluded that, if any, the loss of productive efficiency would be minimal. Economies of scale effects in mobile networks are complex, but with a particularly high population density and concentrated population in a small geographic area, it seems unlikely that further entry would result in material changes to unit cost.

Any potential loss of productive efficiency has to be weighted against other potential efficiency gains. TRA is of the view that any potential loss would be more than compensated by the allocative and dynamic efficiency gains expected.

An increasing number of regulators of small islands encourage greater openness of their mobile markets. For instance, there are three operators in Jersey Island and Mauritius. The French regulator, ARCEP, does not limit the number of mobile licences to its overseas department and territories. It awards mobile licenses on a case-by-base basis. There are 3 operators in Guadeloupe, Martinique, Guyane, Mayotte and La Reunion. In the case of La Reunion, Outremer Telecom, the third MNO, launched its services in April 2007 at which point mobile penetration was 117.9%. The table below presents relevant comparative statistics.

Table 12: Comparative statistics between Bahrain and other small territories

	Size (km2)	Pop	Pop density	# MNOs
Bahrain	665	1,046,814	1,574	2
Guadeloupe	1,703	448,713	263	3
Guyane	86,504	195,506	2	3
Jersey	116	95,871	826	3
Martinique	1,128	432,900	384	3
Mauritius	2,040	1,256,000	616	3
Reunion	2,512	793,000	316	3

Source: wikipedia, Central Informatics Organisation and TRA analysis.

For the reasons above, TRA has decided to allow the entry of a third mobile network operator in the Kingdom of Bahrain. TRA will make available spectrum in the GSM1800 and UMTS bands range for the new operator. Upon conclusion of this consultation and after consideration of submissions, TRA intends to issue a request for an expression of interest and organise a competitive tendering process if needed. This decision formally closes the consultation on possibility of issuing additional mobile licenses initiated in July 2006.

4.7.2. MVNO provisioning

In the August 2007 Consultation, TRA indicated its intention to allow the provisioning of MVNO to applicants which do not require a spectrum license in their own right to offer mobile services. TRA considered that commercial negotiations should enable the provisioning of MVNO services and proposed to monitor any negotiations between potential MVNOs and existing MNOs to ensure negotiations are conducted in good faith. In terms of licensing arrangements, TRA had not formulated a precise view with regards to the form and type of license it may apply to MVNOs, and whether to award such license before or after negotiation with MNOs.

Responses to the August 2007 Consultation

Batelco is against mandating access to the networks of MNOs for the purpose of establishing MVNOs. Its main objections include:

- Increase average cost of MNO driven by the administrative and MVNO specific cost as well as the potential loss of economies of scale at the retail level following the entry of MVNOs;
- Increase price competition which may undermine investment incentives for network upgrade and service innovation;
- Disincentive for MNOs to invest in facilities if access to 3G networks is regulated;
- Risk of hit and run entry by MVNO which may affect the sustainability of MNOs; and
- Risk of losing roamed traffic following the entry of an MVNO affiliated with a foreign operator of the region which could capture traffic that would otherwise constituted roamed traffic or international traffic to incumbent MNOs.

While Mena Telecom recognizes some of the merits of the MVNO model, it does not consider that MVNOs will lead to the introduction of innovative services and enhanced competition.

To foster effective competition in the mobile services market, Mena Telecom believes it would be preferable to allow the entry of a third MNO. Mena Telecom has expressed an interest in acquiring a MNO license.

According to Zain, MVNOs will not provide significant additional competitive pressures in the market. Zain agrees with TRA that MVNO entry should be left to commercial negotiations in the first instance. It also point out that potential MVNO regulation may undermine the business case for a third mobile operator and that the chances of success of an MVNO strategy are diminished by the absence of mobile number portability.

Friendi Mobile, a telecommunications company interested in becoming an MVNO in Bahrain commented extensively on the question of MVNO provisioning and the required steps to facilitate the entry of MVNOs. At the general level, Friendi Mobile contends that there is an adequate level of facility-based competition in the mobile sector (i.e. the number of MNOs is sufficient), but that more service-based competition in the mobile market could be achieved through the introduction of MVNOs.

It supports commercial negotiation for MVNO provisioning, but argues that for effective negotiations to take place, it is necessary for the regulator to actively monitor the process and to develop some form of backdrop regulatory mechanism. According to Friendi

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Mobile, a mechanism to open access to MNOs networks is required to give effect to the permission or license being granted to MVNOs. Its submission also includes a detailed proposed regulatory framework for MVNOs and an extensive discussion of operational matters associated with MVNOs.

TRA analysis and conclusion

Amongst the respondents, only Friendi Mobile strongly supported the introduction of MVNOs. Mena Telecom expressed a preference for allowing the entry of a third MNO while Zain considers that MVNOs should be left to commercial negotiations and Batelco was against any mandated solution.

There are potential benefits and costs associated with MVNOs.⁴² Potential benefits include: market expansion by reaching new or untapped market segments, improved network utilisation and economies of scale, lower operational expenditure, greater profit and wholesale business. Potential costs include the risk of cannibalisation of the host market, lower incentives to invest, margin and price erosion, greater customer churn and hence larger customer acquisition and retention costs.

Research indicates that the key success factor for successful MVNOs is when the creation of an MVNO is the result of a voluntary agreement between a host MNO and a prospective MVNO.⁴³ A voluntary agreement through commercial negotiations can be expected when the host will derive net benefits from the MNO-MVNO relationship. In such cases, the provision of wholesale access to an MVNO can be a win-win situation as both parties benefit from a complementary relationship.

TRA agrees with Batelco that a regulated solution is unlikely to be satisfactory in the first instance and that it could be disproportionate. The potential benefits of MVNO entry are unlikely to be realised through a forced agreement. TRA considers that the elements of the regulatory framework outlined by Friendi Mobile are not justified in the present circumstances.

For the reasons above, TRA considers that MVNO should be allowed through commercial negotiations. TRA will monitor developments in the market.

4.7.3. Removal of retail tariff approval process

The August 2007 Consultation proposed to withdraw the requirement for Batelco to submit the tariffs of its mobile services for approval.

Responses to the August 2007 Consultation

Batelco strongly supports this proposal.

TRA analysis and conclusion

⁴² See for instance, Dipppo, C. and Banerjee A., 2006, *Mobile Virtual Network Operators: Blessing or Curse?*, White Plains: 2006 and Nera, 2006, *The Economics of Mobile Virtual Network Operators*, Perspectives in Telecommunications, December.

⁴³ See references referred to in footnote 42 above.

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In line with the August 2007 Consultation and following the submissions received, TRA remains of the view that mobile tariff should no longer be subject to formal approval. TRA considers that as entry restrictions are removed so should the requirement imposed on Batelco to submit its mobile tariffs for approval.

TRA expects that the removal of tariff approval for mobile services will: give Batelco greater flexibility to compete in the mobile services market; lead to compliance costs savings; and more intense competition and ultimately lower prices and better services for consumers.

4.7.4. Removal of mobility restrictions in NFWS license

The August 2007 Consultation stated that TRA was minded to remove the mobility restrictions of the NFWS licenses to strengthen competitive pressures.

Responses to the Consultation

Batelco disagrees with this proposal. It argues that it would be tantamount to issuing additional MNO licenses. Batelco has two main objections. First, it argues that as a result of the removal of the mobility restrictions, the outcome of the initial auction may no longer be efficient. The value of licenses, as reflected in the bids made, is a function of potential revenues and cost, which are in turn dependent on the services that can be offered with a particular type of license. Hence, Batelco reasons that the broadening of the license beyond the provision of services from a fixed location would result in an implicit windfall gains to the successful bidders of the auctions. Further, Batelco contends that if the auction had been ran without the mobility restrictions in the first place, it may have produced a different outcome. Hence, Batelco argues the auction may not have resulted in an efficient allocation of licenses.

The second objection made by Batelco relates to the increased risk of cross-subsidization between the fixed line and mobile markets as Zain and Mena will be able to offer services in both markets. Here Batelco claims that the NFWS operators will be able to offer bundles of products, based on the same platform which will result in an implicit cross-subsidization across markets.

Mena Telecom supports the removal of mobility restrictions from the NFWS licenses.

TRA analysis and conclusion

Consumers could benefit from the removal of the mobility restriction of the NFWS licences. This would allow the NFWS licensees to offer a wider range of innovative services whilst, at the same time, enhancing competition. It would also encourage a more efficient use of spectrum by allowing operators to respond to customers needs.

In January 2007 TRA awarded, through competitive tendering, NFWS licenses to Mena Telecom and Zain. Along with the service license, Zain and Mena Telecom were also issued frequency licenses for spectrum in the 3.5Ghz band. was specified in the license terms and conditions, as well as in the bidding documents, that the holders of licenses will only be able to offer fixed and nomadic services, and not mobile services.

Whilst it would be premature to immediately remove the mobility restriction contained in the licenses of the NFWS operators, TRA considers that this restriction cannot be

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maintained in perpetuity. An overly long restriction would be detrimental to the ability of consumers to benefit from technological developments and possible new service offerings. It is essential that TRA provides a target date for lifting this limitation to give the market sufficient time to adjust and to ensure that the full potential benefits of the NFWS licenses are ultimately realised.

TRA considers it is important that the telecommunications market of Bahrain reaps the benefits from international technological and regulatory developments related to the use of the 3.4-3.6Ghz band.

The World Radiocommunication Conference 2007 ("WRC-07") concluded its deliberations with the adoption of an international treaty to meet the global demand for radio-frequency spectrum. The international treaty, known as Radio Regulations governing the use of the radio-frequency spectrum and satellite orbits were revised and updated by WRC-07 to achieve the global connectivity goals of the 21st Century.

During the WRC-07, the band 3.4-3.6GHz within which NFWS licenses in the Kingdom of Bahrain operate, was recognized and accepted by many countries in the world (most of region 1 and other countries from region 2 and region 3) including the Kingdom of Bahrain (in region 1) as suitable for International Mobile Telecommunications ("IMT").

This means that in the Kingdom of Bahrain, the band 3.4-3.6GHz is allocated to mobile services on a primary basis and is identified for International Mobile Telecommunications (IMT). As decided by WRC-07, this allocation is effective from 17 November 2010.

Therefore, TRA considers that the most appropriate date to remove the mobility restriction is the date at which the 3.4-3.6Ghz band will be allocated in the Kingdom of Bahrain to mobile services on a primary basis as per the outcomes of WRC-07.⁴⁴ Accordingly, TRA has decided to adopt 17 November 2010 as removal date of the mobility restriction.

TRA disagrees with Batelco's argument regarding the risk of implicit cross-subsidies between services. Cross-subsidies are not problematic per se. Cross-subsidies can be a cause of concern when a company compensates losses in a competitive market by profits in a market where it is dominant. This may result in distortions of competition.

Contrary to Batelco's claim, the future removal of the mobility restriction does not imply that the outcome of the initial auction is inefficient. Taking into account rapid technological development in the telecommunications industry, potential and actual bidders, and more generally market players, cannot expect spectrum and market entry conditions to remain static indefinitely, and that licence conditions would not be altered over their duration.

TRA's proposal will result in a variation of the NFWS licenses conditions well after they were granted in January 2007 and, with advanced notification.

The regulator of the United Kingdom, Ofcom, recently looked at a very similar case.⁴⁵ After an extensive consultative process Ofcom decided to remove the limitation to fixed applications included in the UK Broadband's licence. UK Broadband is the main holder of 3.5 Ghz spectrum in England after winning spectrum by auction in 2003. Ofcom considered a wide range of criteria in its assessment, including consumers' interests, optimal use of spectrum, integrity of the auction process, impact on competition, potential distortions and valuation of the spectrum. It concluded that consumers could benefit

⁴⁴ Cf. Provisional Final Acts of World Radiocommunications Conference 2007, para. 5.AAA.

⁴⁵ See Ofcom, 2007, *UK Broadband application for licence variation – Statement*, November.

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from increased choice and competition following the lifting of the restriction whilst competition in the mobile services market was unlikely to be distorted. It also noted that competition in broadband data services was likely to be enhanced.

For the reasons above and based on the comments received, TRA has decided to remove the mobility restriction on 17 November 2010. This is the date at which the 3.4-3.6Ghz band will be allocated to mobile services on a primary basis in the Kingdom of Bahrain as the result of WRC-07.

4.7.5. Approach to spectrum for new technologies

In the August 2007 Consultation, TRA considered it important to establish a regulatory regime that facilitates the introduction of new wireless technologies and, wherever possible, allow entry on a technologically neutral basis. Accordingly, TRA explained that it will continue to support Section 3.1.3 of TRA's Spectrum Policy and Planning Document which provides for an implementation, evaluation and approval process designed to stimulate and speed up the introduction of new wireless technologies. As part of the upcoming review of TRA's spectrum policy (at the time), Section 3.1.3 will be reviewed to determine if a fast track process for new technologies should be extended to include existing technologies in line with TRA's objective to promote technological neutrality.

Responses to the August 2007 Consultation

Batelco believes that the outcome of the Strategic and Retail Market Review, and in particular the possible extension of the fast track process to license existing technologies, may impact competitive dynamics and the returns of facility-based incumbent operators. Batelco is of the view that further consultation is required. Batelco calls for more certainty regarding the process and timeline as well as a better articulation of TRA's position regarding the balance between service-based and facility-based competition in the mobile service market.

Cisco calls for TRA to consider allocating spectrum in the 700MHz (the band currently used for terrestrial TV broadcasting) as this band presents characteristics particularly suited for broadband access. It estimates that subject to coordination with neighbouring countries, there may be a substantial amount of spectrum available that could be allocated to broadband access.

TRA analysis and conclusion

A review of the National Spectrum Planning and Allocation Policy has been initiated. A team of external consultants has been appointed for this purpose and are working with all relevant stakeholders for the formulation of a revised National Spectrum Planning and Allocation policy. The stakeholders include the Directorate of Wireless Licensing, Frequency and Monitoring (DWLFM), the Ministry of Defence, the National Guard, the Ministry of Interior, The Ministry of Information, Civil Aviation and Maritime authorities, and TRA.

The scope of this project is the design and production of a National Spectrum Planning and Allocation Policy, for the entire spectral resources of the Kingdom of Bahrain.

TRA is of the view that there is no need to elaborate on this issue at this point.

4.7.6. International roaming

In the August 2007 Consultation TRA indicated that it will continue to support the objectives of the Arab Regulators Network, AREGNET, to reach an agreement on whether, and if so how, to regulate international roaming charges.

Responses to the Consultation

Batelco is against any wholesale or retail price regulation for international roaming. It argues that regulation is unwarranted in light of current market dynamics, such as active marketing and promotional activity to attract international roamers, and that the transparency of prices, a major concern for customers, has improved significantly. Batelco considers that regulation of international roaming would be against the national interest, especially as effective regulation is not in place in other countries. Consequently, international roaming regulation may merely result in the transfer of margins to foreign operators and not in effective price cut for retail customers. Batelco urges TRA to have a full consultation on international roaming regulation on AREGNET recommendations.

TRA analysis and conclusion

TRA will continue to work with AREGNET's members on the international roaming initiative. As it is a regional initiative, initiated by the Arab Telecommunications and Information Council of Ministers, AREGNET's proposal will be dealt with at the regional level. In the first instance this will be according to the arrangements applicable to AREGNET and the League of Arab States.

4.8. Fixed Internet access markets

In the August 2007 Consultation, TRA considered the following regulatory measures likely to be appropriate for the fixed Internet access market:

- Introduction of a 2-stage notification process in replacement of the formal tariff approval process;
- Possible introduction of retail price control; and
- Unbundled local loops.

Responses to the August 2007 Consultation

Based on its own assessment of competition in the fixed Internet access market, Batelco considers any form of retail price control unnecessary.

With respect to local loop unbundling Batelco argues it is too early to assess: competition, the level of potential demand for unbundled loops, the impact of the two NFWS operators as well as the effect of current wholesale broadband regulation. Batelco also pointed to the potential risk of developing of a wholesale product for which there may not be

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sufficient demand once the product is developed. Batelco also believes that if unbundling is implemented, all other forms of wholesale regulation should be removed as LLU eliminates the need for other wholesale products in the broadband value chain.

Zain considers that wholesale regulation needs to be maintained. Access regulation should ensure that OLOs can compete with Batelco and that there is no price squeeze between access and retail rates. Zain argues that LLU will be instrumental to address the lack of competition in the Internet access market as it enables OLOs to have a greater control over infrastructure and their costs. It lowers their dependence on Batelco. Zain also supports the maintenance of additional regulatory measures in this market, as LLU will take time to have an effect in the market. It considers the introduction of a more lenient 2-stage notification process premature, as ex post intervention in this market may not be swift enough to protect the emergence of competition and prevent significant damages to competition.

In contrast, Mena Telecom argues that the introduction of LLU should be delayed by, at least, two years to allow WiMax operators to establish themselves and sufficient time for consumers to familiarise themselves with the services available.

TRA analysis and conclusion

Fixed broadband Internet access market is expected to grow rapidly in the coming years. This is an important market in which risks of damages to competition are substantial. Having carefully considered the submissions received, TRA proposes to introduce the following:

- Removal of tariff approval process;
- Reform of retail regulation regime:
 - Introduction of a notification (objective is same-day notification) with the following ex ante rules: no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling, no excessive pricing;
 - Monitoring of representative consumers baskets of services
- Local loop unbundling on an exchange-by-exchange basis where demand for loops exists.

TRA concurs with Batelco that a multi-year price control on the fixed Internet broadband market is not justified as there is scope to rely on competitive forces, and notably on access-based competition to bring prices closer to their competitive levels. However, this is not to say that ex ante retail regulation should be fully removed. TRA considers that the notification coupled with ex ante retail rules is necessary.

As explained above, wholesale regulation for broadband (i.e. bitstream and wholesale DSL) is not considered effective yet. It does not at present create a level-playing field. The uptake of wholesale products is very limited. There are non-price issues, which although may not necessarily be determined anti-competitive, will take time to be addressed. In its November 2007 Statement on local loop unbundling, TRA identified a number of improvements required for the bitstream product to be 'fit for purpose'.⁴⁶ For instance, TRA is currently exploring operational issues with respect to the provisioning of bitstream and to improve Batelco's bitstream products (e.g. modification of contention ratios).

⁴⁶ See, TRA, 2007, *Statement on Local Loop Unbundling in Bahrain*, 28 November, page 3.

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Without any form of retail regulation, Batelco could affect a price squeeze on new entrants thanks to its vertical integration and upstream market power. In the past, TRA has rejected tariff proposals on these grounds and/or has had to intervene. Similarly, there is the risk that by bundling products, Batelco could prevent the development of competition and leverage its market power horizontally. In the early stages of broadband development it is important to ensure that the retail products of the incumbent are replicable based on wholesale products.

Exclusive reliance on section 65 would be inappropriate as significant damage to competition could occur before the situation is remedied. In Europe there have been numerous cases of price squeeze or predatory pricing in the retail broadband market. In two of those cases,⁴⁷ after lengthy investigations the relevant competition authorities concluded that very significant damages to competition had taken place. Accordingly, the perpetrators were heavily fined.⁴⁸

By freeing up Batelco from formal tariff controls and allowing further competition while providing appropriate safeguards, TRA considers that its proposals will enhance economic welfare.

TRA concurs with Zain's view regarding wholesale regulation, but disagrees with Mena Telecom's request for protection. There is a need to continuously improve access regulation, especially as it relates to operational matters, such as provisioning procedures. TRA considers that local loop unbundling (LLU) can constitute an essential enabler of further competition at the retail level. Local loop unbundling has three main advantages over current wholesale offerings as an access obligation on Batelco:⁴⁹

- It allows the access seeker to choose the broadband technology used and allows the access seeker to fully differentiate its retail offerings;
- It gives the access seeker greater control over its cost and hence reduce its dependence on the access provider; and
- It has a track record internationally for aiding the development of competition in broadband markets.

Having determined that Batelco has SMP in the relevant downstream markets in which LLU is an input, section 40 of the Telecommunications Law requires unbundling of the local loop. However, TRA does not consider it appropriate for LLU to be implemented in all exchanges at once. Rather, in order to better align the costs of implementing LLU with the demand for it, TRA intends to require that unbundling is implemented on an exchange-by-exchange basis once there are firm orders at the exchange level evidencing sufficient demand. In other words, it will be required that LLU is implemented on a specific exchange when it is established that there is sufficient demand from OLOs.

Local loop unbundling is best considered as a product within a suite of wholesale products along the broadband value chain. It requires significant investment from access

⁴⁷ See Commission Decision of 16.07.2003 relating to a proceeding under Article 82 of the EC Treaty (Wanadoo Interactive COMP/38.233) [2005] 5 C.M.L.R. 5; France Telecom SA v Commission of the European Communities (Case T-340/03), [2007] 4 C.M.L.R. 21; [2007] All ER (D) 305; Commission Decision of 04.07.2007 relating to a proceedings under Article 82 of the EC Treaty (COMP/38.784 – Wanadoo España vs. Telefónica) (note that this decision is presently under appeal by Spain).

⁴⁸ The fine imposed by the European Commission on France Telecom (ex-Wanadoo in Wanadoo Interactive COMP/38.233, [2005] 5 C.M.L.R. 5) of 10,350,000 euros was confirmed by the Court of First Instance in France Telecom SA v Commission of the European Communities (Case T-340/03), [2007] 4 C.M.L.R. 21; Telefonica has been fined 151,875,000 euros by the European Commission in COMP/38.784.

⁴⁹ See also TRA, 2007, as referred to in footnote 46 at page 69 above.

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seekers. Given the economics of LLU, the footprint of LLU is unlikely to cover the whole of Bahrain due to the economic feasibility and potential concentration of demand. TRA disagrees with Batelco that if LLU is implemented then all other wholesale products ought to be removed. LLU and bitstream are complementary in nature as they provide possibilities for licensed operators to enter the market at different points of the value chain and to move along it.

LLU can be expected to bring significant benefits in the broadband and leased lines markets, especially for the offers targeting business customers, as well as in the fixed access and domestic calls markets. It will contribute to put pressure on broadband and leased lines prices and allow greater product differentiation by access seekers.

Therefore, for the reasons set out above, TRA is of the view that the regulatory measures outlined are appropriate and will overall lead to efficiency gains.

With respect to the dial-up Internet access market, TRA considers that, in recognition of the fact that this is rapidly shrinking market for which the prospects of entry are very unlikely, the following is appropriate:

- Removal of tariff approval process; and
- Reform of retail regulation regime:
 - Introduction of a notification (objective is same-day) with the following ex ante rules: no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling, no excessive pricing;
 - Safeguard cap of individual price increase equal to CPI per annum

4.9. Leased lines market

For the leased lines market, the August 2007 Consultation deemed necessary the following:

- 2-stage tariff notification process in replacement of the formal tariff approval process; and
- Multi-year retail price cap control.

Responses to the August 2007 Consultation

Consistent with its finding that the leased lines market is at least prospectively competitive, Batelco does not consider the imposition of retail price control warranted. It argues that wholesale regulation of leased lines and the offers of OLOs based on their own infrastructure are sufficient to protect consumers.

TRA analysis and conclusion

Batelco has SMP in this market. TRA considers that it is appropriate to maintain some form of retail regulation in the retail leased lines market. After further analysis, TRA proposes the following:

- Removal of tariff approval process;

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- Reform of retail regulation regime:
 - Introduction of a notification (objective is same-day) with the following ex ante rules: no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling, no excessive pricing;
 - Monitoring of representative consumers baskets of services
 - Safeguard cap on individual price increase equal to CPI per annum
- Local loop unbundling on an exchange-by-exchange basis where demand for loops exists.

As explained in the competition assessment section above, OLOs rely on Batelco's wholesale products (e.g. customers access tails, wholesale leased lines) to compete with Batelco in the retail market. Wholesale regulation has only recently been introduced and it is not fully effective. Its impact in the retail market has been marginal.

As suggested by some of the issues currently being explored by TRA, including, for example the availability of CAT services, there appears to be a number of areas for improvement with regards to the provisioning of circuits that need addressing. Those have resulted in delays and have hindered the ability of OLOs to compete with Batelco. Further, for reasons to do mainly with the representation of the telecommunications industry in the Central Planning Unit (CPU) and other issues relating to the availability of space on corridors, where they exist, OLOs have not been able to lay out their own alternative infrastructure to compete with Batelco. TRA is in the process of improving processes in order to give licensed operators equal access to public and private road corridors and other facilities as well as to encourage infrastructure sharing and joint work. However it will take time until the actual impact on competition is felt.

TRA agrees with Batelco that a multi-year price control is not warranted. Instead, it is preferable to rely on access-based competition to bring prices closer to their competitive level. However, given the current limited effectiveness of wholesale regulation and the time it will take to have a real impact in the market, TRA considers that appropriate safeguards must remain in place. TRA considers that wholesale regulation has not yet produced a level playing field.

The leased lines market is a critical market for the business community. The attractiveness of Bahrain as a home base for companies is dependent on the availability of state-of-the art products priced at competitive level.

Absent retail regulation, Batelco could hinder the development of the nascent access-based competition by affecting a price squeeze or predatory pricing thanks to its upstream market power and vertical integration. There are also risks that Batelco could stifle competition by leveraging its products portfolio and developing bundles that cannot be matched by competitors.

For the reasons set out above, TRA is of the view that the proposed measures are proportionate and justified. They will give Batelco greater pricing flexibility to respond to competition within appropriate safeguards.

4.10. Other regulatory measures

4.10.1. Number portability

The Consumer Survey suggested that the lack of number portability constitutes a significant barrier to switching for both business and residential customers. In order to reduce switching costs, TRA indicated in the August 2007 Consultation its intention to undertake a study into the practical steps required for the implementation of number portability.

Responses to the August 2007 Consultation

Batelco notes that the key legal requirement for the introduction of number portability is the legal test included in the Telecommunications Law according to which number portability is to be introduced “when the authority determines that sufficient demand exists for such a service” (Section 40 point 4 of the Telecommunications Law). This has also been enshrined in the Kingdom of Bahrain’s Free Trade Agreement with the United States. Batelco considers that the Consumer Survey is not an adequate proof of sufficient demand. To the contrary, Batelco believes the survey has overestimated potential demand by not mentioning to customers the cost of porting.

More generally, Batelco points to the complexity and high costs of implementing MNP which it asserts, in a country like Bahrain, may not outweigh the benefits of number portability.

Overall, Batelco is of the view that neither mobile number portability nor fixed number portability is justified.

Zain and Friendi Mobile, on the other hand, strongly support the introduction of number portability as a means to further foster competition in the mobile services market.

TRA analysis and conclusion

The lack of number portability creates switching costs for consumers. Switching costs are generally detrimental to economic welfare because they make entry more difficult and hinder the competitive process.⁵⁰ Thus, by lowering switching costs, number portability can be expected to lead to more intense competition and to efficiency gains.

The percentage of customers porting their number is only a partial indicator of the benefits and effects of number portability. In fact, because number portability facilitates switching, operators may lower prices and enhance their products offering in order to retain their customers and/or attract new ones in response to additional competitive pressure. This is likely to lead to increased customer satisfaction and hence lower incentives to switch provider.

⁵⁰ See Motta, M. 2004, *Competition Policy. Theory and Practice*. New York: Cambridge University Press, p. 81 and Klemperer, P. 1995 Competition When Consumers Have Switching Costs: An Overview, *Review of Economic Studies*, pp. 515-539

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Number portability provides benefits to porting and non-porting users. A usual typology of the benefits of number portability differentiates between the following:⁵¹

- the benefits that accrue to porting customers as a result of the availability of number portability (e.g. savings on telecommunications bill realised by switching provider);
- the benefits enjoyed by all users that correspond to price reductions, greater services range and efficiency gains resulting from increased competitive pressures; and
- the convenience and cost savings enjoyed by all users as a result of fewer numbers being changed.

As pointed out by Batelco, the Telecommunications Law contains a specific test for implementing number portability. TRA considers that this test is met. The Consumer Survey indicated that:

- For business users: 93% said that retaining their old number is important (71% said essential) whilst 36% indicated that the main reason for not switching fixed line provider was that they did not want to change their number. The percentage for mobile business users was 41%.
- For non-residential users: 40% said that retaining their old number is important

The fact that the Consumer Survey did not refer to the charge consumers may incur when porting their number does not invalidate those findings. The manner in which licensed operators decide to recover porting costs from users is a matter of commercial policy and subject to the appropriate regulatory framework, which will be subject to further consultation. Licensed operators could choose to charge porting customers specifically or to spread across their customer base number portability costs.

TRA intends to work with the industry to deliver the most cost effective and pragmatic solution to implement number portability in Bahrain having regards to expected benefits. There are more or less sophisticated and costly technical solutions for effecting number portability. A distinction is generally made between on-switch (e.g. call drop-back, tromboning) and off-switch (e.g. centralised database) solutions. TRA intends to quickly launch a study into the practical steps required for the implementation of number portability and will consult with the industry.

4.10.2. Carrier Selection and improvements to Carrier Pre-selection

In the August 2007 Consultation, TRA indicated it would consider whether to introduce carrier selection (CS) as a wholesale remedy to allow OLOs that do not control access to subscribers (mainly calling card operators who use 8-digit numbers) to compete more effectively in retail calling markets.

TRA pointed out that carrier pre-selection (CPS) has not been very effective so far. There are only about 1,000 subscribers out of a potential of 195,000 fixed lines. The main explanations for the limited success of CPS identified by TRA included: substantial set-up cost (e.g. establishment fee of BD10,000); large customer acquisition costs; inability of

⁵¹ Based on Monopolies and Mergers Commission, *Telephone Number Portability: A Report on a reference under section 13 of the Telecommunications Act 1984*, 1995.

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customers to pre-select different CPS providers for different international routes; and the current short override code applicable only to Batelco which might unduly favour Batelco.

Responses to the August 2007 Consultation

Batelco disagrees with the proposal to introduce carrier selection on the basis that CS will not in itself alleviate any of the issues identified by TRA with CPS. Batelco considers that CS should not be introduced because it is an unnecessary regulatory tool to develop competition. It contends that CS may undermine the profitability of CPS operators who have developed CPS-specific processes and invested in infrastructure assuming that only CPS would be introduced. Finally, Batelco argues that it is unreasonable to develop this product as Batelco has yet to recover the implementation cost of CPS.

TRA analysis and conclusion

TRA maintains its view and considers that CS should be introduced. CS can contribute to strengthening competition in fixed originated call markets especially as it relates to business customers. By allowing customers to select the least cost route according to the destination dialled, CS can be expected to lead to savings for customers.

The introduction of CS can be achieved at minimal incremental cost given that CPS is already in place, all national licenced operators can already have CS identities, and the implementation of call by call routing to OLOs can be done at the single point of interconnect provided within Batelco's network structure. TRA will also seek to remedy some of the defects identified with CPS processes. Greater use of carrier selection would contribute to the recovery of the initial cost of setting up CPS as required initially by the Telecommunications Law. TRA considers that this will contribute to enhancing economic welfare.

4.10.3. Measures to encourage the introduction of Elapsed Time Charging

The August 2007 consultation noted the very limited consumer awareness of the basis for charging domestic fixed calls. TRA indicated it may seek to introduce measures to encourage a move to per second pricing for all retail telecommunications services.

Responses to the August 2007 Consultation

Batelco is of the view that TRA should not undertake any actions to encourage elapsed time charging (ETC) and instead should leave it for the market to decide. It notes that in most countries, ETC has been introduced by incumbents on a voluntary basis. Where ETC has been mandated by the regulator, a hybrid form of ETC has been implemented with a minimum charge per call and per second pricing after. Batelco also contends that the introduction of ETC in other countries has led to increases in the effective rates charged to customers.

Batelco further claims that the switch to ETC would generate cost that Batelco will not be able to recover. As for the other actions considered by TRA, Batelco would like a regulatory impact assessment to be undertaken to assess if ETC is warranted.

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TRA analysis and conclusion

The charging basis used by Batelco for fixed originated calls is somewhat out-dated by international standards. In particular, the size of the unit, that is 3 minutes for fixed to fixed calls and 1.5 minute for fixed to mobile calls, seem particularly large. As the Consumer Survey has found, this can distort consumption choices. TRA is of the view that a potential move to some form of ETC should be considered as part of the process of developing the retail price control for domestic calls.

4.10.4. Data collection and dissemination

The collection, analysis and dissemination of accurate and timely market information significantly enhance the design and implementation of effective and proportional market regulation. Market information is often a central input into TRA's decision and allows the monitoring of market developments. The publication of market information is also useful for all stakeholders to track developments in the sector.

The main initiatives envisioned by TRA in this area are:

- Consumer survey: undertake and make publicly available a residential and business survey of the telecommunications market in Bahrain to provide insights on consumers' behaviour, including consumption patterns. The survey would likely be undertaken every two or three years.
- Put in place a standardised process of collecting, analysing and publishing market data information: In 2007, TRA initiated the process of collecting market information from licensed operators. TRA intends to continue this process on a bi-annual basis and make continuous improvements to the questionnaire. Relevant market information will then be published by TRA at an appropriate level of aggregation.
- Tariff comparator: information is critical for consumers to make appropriate choices. To improve the availability, accessibility and simplicity of information to consumers on tariffs, TRA is considering developing a tariff comparator, covering initially international calls. This comparator would be made available on a web page.

4.10.5. Safeguarding the interests of consumers

The Second Plan placed the users at the centre stage of telecommunications policy. The proposals outlined above give more room for competitive forces to promote the interests of consumers. They also include specific measures targeted at the most vulnerable consumers and at protecting consumers more generally. Wherever possible, TRA is seeking to rely on competition to foster consumers' interests in line with the Telecommunications Law. At the same time, it is a core responsibility of TRA to safeguard the interests of consumers. In addition to the price control arrangements proposed, the specific measures directly aimed at safeguarding consumers interests that directly follows from the analysis of markets and competition are:

- Number portability to facilitate consumer switching;
- Monitoring of representative consumers' baskets;

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- Development of a low user scheme to mitigate the impact of price re-balancing; and
- Publication of a tariff comparator to facilitate consumers' choice.

4.11. Other issues raised by respondents

4.11.1. New property developments

Responses to the August 2007 Consultation

Batelco is concerned with the lack of clarity from TRA on the future regulatory treatment of new property developments. It contends that the possibility of mandating wholesale access services to its network at cost-based rates undermines its incentives to invest in network rollout in new developments. According to Batelco, there is an unfair asymmetry between Batelco and other OLOs/bidders whose returns on investment in new property developments are not capped whereas Batelco would be subject to cost-based wholesale regulation. Batelco also contends that it does not derive any cost advantage compared to OLOs from its countrywide network in the roll-out of networks to new developments.

Batelco recommends the adoption of a light touch approach for new developments, whereby TRA would commit in advance to forebear from imposing access and interconnection obligations without time limit. This approach would apply in particular to FTTx deployments and instances where Batelco is awarded a contract through a competitive tendering process. Only residual obligations such as the obligation to terminate calls at nationally agreed regulated rates and to supply services to all the residents (both residential and business) of developments would remain.

Further, Batelco requests TRA to refrain from challenging the terms of any concession-type arrangement that Batelco may be granted, such as exclusivity rights, on the basis of competition law or other regulatory instruments. Should TRA not provide such guarantee, Batelco considers that TRA should level the playing field by imposing symmetrical obligations to Batelco and its competitors.

TRA analysis and conclusion

TRA intends to define its regulatory approach for new property developments through a separate process during 2008. A team of independent consultants has been appointed to assist TRA in developing a set of recommendations for the regulatory treatment of new property developments in Bahrain. The findings of this study will constitute an input into the definition of TRA's position. In 2008, TRA will put a draft position for consultation.

4.11.2. International capacity

Responses to the Consultation

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Mena Telecom and Zain raised the issue of international capacity in their submission. Both argued that the current arrangements whereby capacity to undersea cables can only be purchased from Batelco are unsatisfactory as they affect the ability of OLOs to compete with Batelco on an equal footing.

For example, Mena Telecom considers that the inability of OLOs to purchase international capacity on the basis of IRUs (Indefeasible Right of Usage) is hampering their ability to compete with Batelco as the rates that OLOs can obtain are close to commercial rates for international leased lines.⁵² And this put OLOs at a competitive disadvantage compared to Batelco. Whilst, Mena Telecom appreciates that there are likely developments within the next few years, it asks TRA do undertake necessary steps to enable OLOs to get access to international capacity at more economical rates.

TRA analysis and conclusion

The availability of international capacity at competitive rates is of increasing importance to support the expansion of broadband in the Kingdom of Bahrain. Due to a commercial agreement involving Batelco, independent access to undersea cables is restricted. TRA is aware that the cost of international capacity from Batelco is such that other operators have been investigating alternative ways to bring independent cables. There are several OLOs that are currently planning involvement in the roll out of alternative links to undersea cables to bypass Batelco. TRA is supporting those initiatives and is actively involved in ensuring rights of way for the sea passages, establishing landing points and the land based access to corridors to lay ducts and land cable.

4.12. Summary of regulatory measures market by market

The table below summarizes the regulatory measures defined for each market. For the reasons set out above and in line of market conditions, TRA is of the view that this set of measures represents an appropriate mix of actions.

It is expected that this package will lead to overall significant net economic gains.

Table 13: Summary table of regulatory measures

Retail Market	Regulatory measures
<p>1 Fixed access narrowband connections markets:</p> <ul style="list-style-type: none"> - 1a: For residential customers; - 1b: For non-residential customers. 	<p><u>Retail regulation:</u> Removal of tariff approval process Reform of retail regulation regime:</p> <ul style="list-style-type: none"> - Objective: Same-day notification and ex ante rules (i.e. no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling and no excessive pricing) - Multi-year price control: rebalancing plan - Low user scheme - Monitoring representative consumers baskets of services <p><u>Additional wholesale regulation:</u> Local loop unbundling on an exchange by exchange basis where demand exists</p>

⁵² Cf. Mena Telecom, 2007, as referred to in footnote 8 at page 5.

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		<p><u>Measure to remove entry restrictions and strengthen competition:</u> Number portability using cost effective solution (to apply to all operators)</p>
2	<p>Domestic calls originating on fixed lines markets: - 2a: For residential customers; - 2b: For non-residential customers.</p>	<p><u>Retail regulation:</u> Same as retail market 1 plus consideration of introduction of elapse time charging and safeguard cap on rates (e.g. rates allowed to increase in line with the Consumer Price Index ("CPI") per annum which mean that rates are constant in real terms) if domestic calls are not part of the multi-year price control</p> <p><u>Additional wholesale regulation:</u> Same as market 1 plus carrier selection and improvements to carrier pre-selection</p>
3	<p>Fixed originated international calls markets: - 3a: to Zone 1 GCC countries; - 3b: to Zone 2 countries; - 3c: to Zone 3 countries; - 3d: to Zone 4 countries.</p> <p>Mobile originated international calls markets: - 3e: to Zone 1; - 3f: to Zone 2; - 3g: to Zone 3; - 3h: to Zone 4.</p>	<p><u>Retail regulation:</u> Fixed originated calls (Market 3a and 3c): Same as market 2 less safeguard cap or multi-year price control Mobile originated calls and fixed originated calls to Zone 2 and Zone 4: Removal of tariff approval process</p> <p><u>Additional wholesale regulation:</u> Fixed originated calls: Same as market 2</p>
4	<p>Mobile services (excluding international calls)</p>	<p><u>Retail regulation:</u> Removal of tariff approval requirement on Batelco</p> <p><u>Removal of entry restrictions and strengthening of competition:</u> Granting of a third mobile operator license MVNO allowed through commercial negotiations Number portability using cost effective solution (to apply to all operators) Removal of mobility restrictions for NFWS licenses by 17 November 2010</p>
5	<p>Broadband internet access from a fixed location</p>	<p><u>Retail regulation:</u> Same as market 1 less multi-year price control and low user scheme</p> <p><u>Additional wholesale regulation:</u> Local loop unbundling on an exchange by exchange basis where demand exists</p>
6	<p>Dial-up internet access from a fixed location</p>	<p><u>Retail regulation:</u> Same as market 1 less multi-year price control and low user scheme plus safeguard cap (e.g. individual rates allowed to increase in line with CPI, which means that rates are constant in real terms)</p>
7	<p>Leased line services (domestic and international leased lines)</p>	<p><u>Retail regulation:</u> Same as market 6</p> <p><u>Additional wholesale regulation:</u> Same as market 5</p>
		<p>Development of competition guidelines</p> <p>Data collection and dissemination:</p> <ul style="list-style-type: none"> - Collection and publication of market data - Consumer survey - Tariff comparator
<p>Zone 1: 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, UK, USA, and Yemen; Zone 4: (rest of the world).</p>		

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4.13. Indicative implementation timetable

The regulatory measures outlined above constitute a comprehensive package aimed at promoting further competition and the interest of consumers. Their implementation will give all operators more flexibility to compete within appropriate safeguards, contribute towards levelling the playing field and will facilitate the growth of the sector for the benefits of Bahraini.

The details of some of these measures will be worked out in consultation with the industry once the implementation phase begins. Some of these will require changes to the relevant clauses of licenses. This applies in particular to modification to the tariff approval process. The implementation of this package is expected to occur in the context of a move towards unified licensing. As noted in the August 2007 Consultation, TRA intends to put in place a unified licensing regime whereby licenses contain only general and standards terms and conditions applicable to all license holders.

Table 14 below contains an indicative implementation timetable of the regulatory measures that directly stem from the conclusion of this Strategic and Retail Market Review. Other regulatory actions, such as the on-going monitoring and improvements of the wholesale products or the treatment of new property developments, are not singled out as they are taking place along separate tracks.

For each item, a start and completion date is indicated.

Table 14: Indicative timetable for the implementation of regulatory measures

Regulatory measure	Comment	Start date	Completion date
Retail regulation			
Removal of tariff approval process	For mobile services and for fixed originated international calls to Zone 2 and 4 countries Linked to the reform of retail tariff regulation regime and the development of competition guidelines	Q2 2008	Q4 2008
Reform of the retail tariff regulation regime	<ul style="list-style-type: none"> - Replacement of current tariff approval process by: - Objective: Same-day notification and ex ante rules: no undue discrimination, no price squeeze, no predatory pricing, no abusive bundling and no excessive pricing - Multi-year price control / rebalancing plan - Consideration of elapse time charging - Low user scheme - Monitoring of representative consumers baskets of services - Safeguard caps on a few services 	Q2 2008	Q4 2008
Wholesale regulation			
Local loop unbundling	On an exchange-by-exchange basis where demand exists	Q3 2008	Q2 2009
Carrier selection	Including improvements to existing carrier pre-selection product ("CPS")	Q3 2008	Q2 2009
Measures to remove entry restrictions and to strengthen competition			

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Award of a 3 rd Mobile Network Operator license ("MNO")	Through a competitive and transparent process	Q2 2008	Q4 2008 – Q1 2009
Removal of mobility restrictions for NFWS licenses	In line with the Provisional Final Acts of the World Radiocommunications Conference 2007 – ITU to which TRA is a signatory	Q3 2010	17 Nov 2010
Number portability (fixed and mobile)	Implementation of number portability based on a cost effective solution	Q2 2008	Q1 2009
Data collection and dissemination	<ul style="list-style-type: none"> - Collection and publication of market data - Consumer survey - Tariff comparator 	Ongoing Q3 2009 Q2 2008	Ongoing Q4 2009-Q1 2010 Q2 2009
Competition guidelines		Q2 2008	Q4 2008

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Annex 1: Regulatory measures proposed in the August 2007 Consultation

Table 15: Regulatory measures considered in the August 2007 Consultation

Retail Market		Regulatory measures considered	Main rationale
1	Fixed access and domestic calls (non-residential customers)	<p>2 - stage notification of tariff changes</p> <p>Introduction of a multi-year retail price cap control</p> <p>Local loop unbundling study</p> <p>Number portability</p>	<p>Replacement of cumbersome and costly formal approval process by a lighter 2-stage notification process</p> <p>Retail price control required to protect consumers from excessive or anti-competitive prices, allow re-balancing, the protection of vulnerable consumer groups, and the prevention of anti-competitive prices</p> <p>Lack of number portability identified as an impediment to customer switching in the survey, and hence is likely to lead to greater competition</p> <p>Wholesale line rental not proposed at this point in time given unbalanced tariffs</p>
2	Fixed access and domestic calls (residential)	Same as Market 1	Cf. above
3	International calls originated from a fixed location except call to Zone 2 (South Asian Countries)	<p>2 - stage notification of tariff changes</p> <p>Introduction of a multi-year retail price cap control</p>	<p>Cf. above formal approval process</p> <p>Notification process to address potential competition concerns</p> <p>Price control may be required to protect consumers from potential price increases although TRA acknowledged that competition could develop more quickly here</p>
3b	International calls to Zone 2 (South Asian countries)	Removal of retail tariff approval process	Removal of tariff approval process that may limit Batelco ability to respond to competition and may be stifling innovation
4	Mobile services (access, national and international calls to all destination except to Zone 2 (South Asian countries))	<p>Removal of retail tariff approval process</p> <p>Number portability</p> <p>Facilitation of MVNO provisioning</p> <p>Removal of mobility restrictions on NFWS licenses</p> <p>Approach to spectrum for new services/technology</p> <p>Support lower roaming tariffs objectives of AREGNET</p>	<p>Cf. above on removal of formal tariff approval process</p> <p>Cf. above on number portability</p> <p>MVNO provisioning expected to bring further competition. No ex ante regulation required, but depending on whether an MVNO was able to reach an agreement, TRA may consider regulatory intervention</p> <p>Removal of mobility restrictions to NFWS to encourage more innovative services</p> <p>Environment open to new technologies and innovative services. Part of the Spectrum policy review</p>
5	Internet access from a fixed location	<p>2 - stage notification of tariff changes</p> <p>Introduction of a multi-year retail price cap control</p> <p>Local loop unbundling study</p>	<p>Cf. above on formal approval process</p> <p>Tariff control required to protect consumers from excessive prices and ensure a level playing field</p>

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<p>6</p>	<p>Leased line services</p>	<p>2 - stage notification of tariff changes Introduction of a multi-year retail price cap control</p>	<p>Cf. above on formal approval process Price control required to protect customers from excessive or anti-competitive prices, plus incentive to operate and invest efficiently</p>
<p>More than one market</p>	<p>Ensure appropriateness wholesale products offerings and consider improvements to access products where warranted Carrier Selection Measures to encourage a move to per second pricing for retail calls Conduct an assessment of the competition aspects of the Telecommunications Law and consider issuing competition guidelines Consider study on tying-bundling based on competition provisions set out in the Telecommunications Law Data collection and publication of market information: (a) Improved data collection, analysis and publication; (b) Conduct bi-annual market survey; (c) consider developing a tariff comparator</p>	<p>To ensure that retail and wholesale price are consistent such that competition can flourish Carrier selection: need to monitor competitive conditions and establish if there remain issues with CPS and CS Study to develop TRA approach to bundling and tying linked to design of retail price control. Purpose is to ensure that innovative offerings by dominant market players that benefit consumers and do not damage competition are not hindered Publication of guidelines to support current competition provisions of the Telecommunications Law may be necessary to accompany the move away from formal tariff approval towards increased pricing flexibility and reliance on ex post competition law provisions As part of any future review of the Telecommunications Law, TRA may propose an assessment of competition provisions in the Telecommunications Law Market information is essential to effective regulation and on-going monitoring of sector performance. Review process has revealed information gaps that need to be narrowed for more elaborate analysis of competition Tariff comparator: the information available to consumers that are less price sensitive may not be sufficient</p>	