

# **Comments on the Commerce Commission's Draft Report into regulation of Mobile Termination: Issues of market definition, market power and the application of TSLRIC**

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## **Introduction**

1. We are broadly in agreement with the Commerce Commission's approach and conclusions, as set out in its "Draft Report on whether mobile termination should become a designated or specified service" (the "Draft Report"), relating to 1) the market definition, 2) the consequences of the use by mobile operators of their market power in call termination and 3) the choice of TSLRIC as the 'factual' price for fixed to mobile termination.<sup>1</sup> We also agree with the Commission's view that mobile termination should be designated under the Telecommunications Act 2001. In this paper we elaborate on these matters, explaining why we agree with the Commission. We do not review here the Commission's cost benefit analysis, which is the subject of another report for TelstraClear.<sup>2</sup>

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<sup>1</sup> As we are addressing the issues at a fairly high level we do not adopt the distinction in the Draft Report between TSLRIC as given by a cost model and a proxy for TSLRIC derived by benchmarking with other countries where termination rates are set using a forward-looking cost-based methodology.

<sup>2</sup> Marsden Jacob Associates, "Review of the Cost-Benefit Analysis of Fixed to Mobile Termination", November 2004.

2. The views expressed in this paper are those of the authors, and not necessarily those of TelstraClear.

## **Market Definition**

3. The Commission's view is that the appropriate product market is the market for termination services on each mobile network. We do not think it necessary to rehearse the familiar arguments concerning the bottleneck nature of mobile termination under Calling Party Pays (CPP) regime, and merely note that we agree with the Commission's conclusion, which is also the conclusion reached by the European Commission, and national regulatory agencies in Australia, Ireland, the UK and elsewhere. As an indication of the pervasiveness of these concerns, we also draw the Commission's attention to the US FCC's recent Notice of Inquiry in the matter of the Effect of Foreign Mobile Termination Rates on US Customers, designed to investigate the impact of what may be excessive termination charged by Calling Party Pays (CPP) mobile operators outside the USA.<sup>3</sup>
4. Each of the above-noted decisions by National Regulatory Authorities explicitly addressed the question of market definition within the framework of the scope for supply and demand substitution, using the SSNIP test as a conceptual basis.
5. As the termination charge feeds into the retail price paid by the fixed-line caller, it is appropriate to consider how final users react to higher prices for calls to mobile networks. We need to distinguish between two types of users, those who make calls (the fixed-lines users) and those who receive them (the mobile users). Let us consider the fixed-line callers first. If the price of a call to a mobile network goes up, a caller would reduce the number and/or length of calls, according to his/her

demand elasticity, but, as acknowledged in overseas investigations, it is very unlikely that the fixed-line caller can find alternative contact methods effective enough to constrain mobile termination prices.<sup>4</sup>

6. Constraints on increases in the price of termination charges could also arise if receivers themselves react to an increase in the price of a call to a mobile. This is very unlikely to happen since a crucial aspect in the New Zealand mobile industry, as in many other jurisdictions, is that the party making and paying for the call is not the receiver of the call. Under CPP, the service is initiated by, and paid for by, the caller to the mobile phone, not the mobile phone owner. The mobile phone owner cares most about the prices he/she has to pay to subscribe to and place calls with a mobile operator, but overseas research has demonstrated that in most cases he/she will not take into account the prices paid by other callers to contact him/her when choosing a mobile supplier.<sup>5</sup> CPP means that mobile users are generally insensitive to the price of incoming calls.
  
7. Supply-side substitutability is also very limited since the originating operator cannot buy call termination on a given network from an alternative source. In principle, wholesale supply-side substitution could happen if access to the SIM card of a customer were available to more than one network. This is not available at present in New Zealand (nor elsewhere, to the best of our knowledge) and there is no evidence that it is likely to be in the immediate future.

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<sup>3</sup> IB Docket No 1 04-398, Released 26 October 2004. This report is publicly available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-247A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-247A1.doc).

<sup>4</sup> Clearly, substituting a mobile to mobile for the fixed to mobile call would in no way obviate the need for mobile termination.

<sup>5</sup> Competition Commission (UK) *Vodafone, O2, Orange and T-Mobile, 2002*; Commission for Communications Regulation (Ireland), *Response to Consultation and Notification to European Commission – Wholesale voice call termination on individual mobile networks*, 8 June 2004.

8. We show below that the problem that mobile phone users are insensitive to the price of incoming calls, is present, no matter what kind of competition prevails in the retail market for mobile costumers. However, the optimal approach for setting the termination rate cannot be always determined irrespective of such competition. In other words, while the basic problem exists in the market for call termination on an individual network, its assessment must also include other markets, notably the whole retail market for mobile services. This is not because the retail market constrains in any way termination rates, but because the effects of the problem in one market (e.g. call termination) may have an impact also in another market (e.g. call origination).
  
9. This observation has led some commentators to argue that the correct market definition should be one of a “two-sided” market, as the termination rate can affect both the price faced by a fixed user and the price faced by a mobile user. While we agree that, in principle, there is a two-sided relationship, this does not imply that mobile operators are constrained by mobile subscribers when setting their termination rates. This is explained below.
  
10. The concept of “two-sided” markets has been recently introduced in economic literature to describe situations where:
  - a. there may be some sort of externality between various groups of consumers, so that the prices paid by one group are influenced by what happens to other groups, and
  - b. firms can price discriminate between the groups.<sup>6</sup>

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<sup>6</sup> Examples of two-sided markets include “match-makers” that aid members of one or both sides in their quest for a match on the other side (e.g. real-estate brokers, stock exchanges), “audience-makers” that bring together advertisers and audiences (e.g. yellow pages directories, television, magazines). Another example is credit cards that meter transactions between the two sides of the market (see Rochet and Tirole, 2004, *Two-sided markets: an overview*, University of Toulouse).

11. In this sense, calls to and from mobiles are two-sided in nature since mobile networks can be seen as platforms that bring together two groups of agents with cross-group network effects, i.e. the actions of one group affect the well-being of the other group. In fact, calls to mobile phones are an example where one side of the market (mobile subscribers) wishes to “single-home” (i.e., customers wish to join at most one platform, e.g. subscribe to only one mobile network), but the other side (fixed-line subscribers) wishes to “multi-home” (i.e., fixed line customers may want to gain access to all agents on the other side, e.g. call all mobile subscribers).<sup>7</sup> Moreover, the decision to subscribe to a mobile network may affect the well-being of fixed-line users that want to call them. When one group single-homes and the other group multi-homes, competition implies that the former group is targeted aggressively while the latter group is exploited.<sup>8</sup> In the context of fixed-to-mobile calls, mobile customers do not pay for receiving calls and they do not take into account the cost of incoming calls when selecting a supplier. This implies that mobile operators are not constrained when setting their termination rates.<sup>9</sup> It is instructive to notice that the situation where one side multi-homes and the other side single-homes is termed by Armstrong as a case of “competitive bottlenecks” under the assumption of perfect competition for the side that single-homes. The leading example of Armstrong is by no surprise fixed-to-mobile termination. We stress that in this particular type of two-sided market, even if the market for subscribers is assumed to be perfectly competitive, regulation is warranted as unregulated mobile operators would choose the “wrong” structure of prices (monopoly termination rates above their efficient level and mobile subscription rates below their efficient level).

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<sup>7</sup> This terminology is used, e.g., in M. Armstrong (2004), *Competition in two-sided markets*, University College London.

<sup>8</sup> This discrepancy in competitive conditions makes it clear that the activities undertaken by single- and multi-homes cannot fall in the same market for the purposes of anti-trust analysis.

<sup>9</sup> On the other hand, if mobile subscribers also multi-homed, i.e. they had access to multiple mobile platforms, then mobile operators would be constrained when setting their termination rates.

12. We do not consider that the existence of two-sided markets invalidates the standard market definition approach based on supply and demand side substitution undertaken in the Draft Report and summarised above. Although the two-sided nature of the market implies that there may (under certain circumstances) be a relationship between termination rates and mobile retail rates, this does not diminish a mobile operator's ability to monopolise the market for calls terminated on its network.
13. The economics literature on two-sided markets typically bypasses the analysis of market definition and immediately looks at eventual market failures and associated remedies; in other words this literature is focussed directly on the presence or absence of constraints on the exercise of market power. An important example of this approach is the contribution of Julian Wright.<sup>10</sup> In this work, Wright does not provide a market definition for anti-trust purposes, but rather applies the "two-sided" markets logic to show that mobile operators typically have the freedom to set termination rates at the monopoly level, even when they are competing against each other in an intense way. This analysis leads to remedies that are entirely consistent with a more standard approach that first defines the termination market as the relevant market, and then looks at "affected markets" at the stage of defining remedies. In fact, the two approaches, when conducted appropriately, lead to the very same set of optimal remedies.<sup>11</sup>

## **The bottleneck problem**

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<sup>10</sup> J. Wright (2002), "Access pricing under competition: An application to cellular networks", *Journal of Industrial Economics*.

<sup>11</sup> See M. Armstrong (2002), "The theory of access pricing and interconnection", in: M. Cave, S. Majumdar and I. Vogelsang (eds.), *Handbook of Telecommunications Economics*, North Holland, Amsterdam; T. Valletti (2004), "Market failures and remedies in mobile telephony", *Journal of Network Industries*.

14. We argued above that mobile operators are able to set termination charges at the monopoly level, independently of the intensity of competition in the market for subscribers. If mobile operators do not compete against each other, then all mobile termination profits will stay with the mobile operators. On the other hand, if there is perfect competition among mobile operators, then the termination profits would be passed on to mobile users, for instance via lower rental fees or via cheaper handsets, and the excess profits are competed away.<sup>12</sup>
15. These two different scenarios matter for welfare comparisons and distributional effects. However, the fundamental distortion remains, no matter how intense competition for customers is. In both cases fixed users are charged inefficiently high (monopoly) prices. In other words, even if there is competition for mobile customers, there is no competition over calls directed to those customers.
16. Since this is the most important point in the call termination problem, it is helpful to take a stylised situation where the mobile sector is assumed to be perfectly competitive (i.e., operators do not make any super-normal profits) and mobile operators charge two-part tariffs to customers with identical preferences (for instance a monthly fee and a charge per minute for every call made). Also assume, for the sake of simplicity, that mobile users only call fixed users and receive calls only from them. Then operators would compete to attract customers by setting each call origination charge equal to its marginal cost and set the monthly fee to divide the surplus created between the operator and its customers.<sup>13</sup> These results ensue since there is no reason for mobile operators to set outgoing call charges above cost: marginal cost pricing is efficient and firms have another instrument (the rental fee)

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<sup>12</sup> This should make mobile operators indifferent in the long term about the level of termination rates.

<sup>13</sup> See R. Mason and T. Valletti (2001), "Competition in communication networks: pricing and regulation", *Oxford Review of Economic Policy*; M. Armstrong (2002), "The theory of access pricing and interconnection", in: M. Cave, S. Majumdar and I. Vogelsang (eds.), *Handbook of Telecommunications Economics*, North Holland, Amsterdam.

to eventually extract profits, so they do not need to impose any distortion on outgoing charges.

17. If, as assumed, the mobile industry were perfectly competitive, operators would earn zero excess-profits. Any increase in termination profits (for instance because the termination charge is set above its cost) would simply be passed to mobile subscribers via lower fixed charges. Fixed charges, of which handset charges are a component, might even in the limit become negative, as long as considerable excess-profits arose from termination: this may explain handset subsidies, a common feature in many mobile markets, but one that is not occurring in New Zealand, according to submissions from Telecom and Vodafone.<sup>14</sup>

18. Even if there are no excess profits in equilibrium, each firm will have a unilateral incentive to set the termination charges of calls it receives from fixed users at the monopoly level. In fact, mobile operators will want to maximise termination profits so as to subsidise their mobile subscribers as much as possible. If one operator did not set them at the monopoly level (but the rival did), it will be at a disadvantage and mobile customers will all go to the rival since the latter could offer a better deal, by passing on termination revenues, for instance in the form of cheaper handset or rental charges. The first operator will have forgone this opportunity by setting a lower termination charge.

19. We can thus conclude that even with perfect competition for mobile users, there is little competition for providing access to mobile subscribers. This remark suggests that if mobile operators are free to determine termination rates, they will set charges that extract all possible surplus from fixed users.

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<sup>14</sup> *Draft Report*, para 337.

20. What is an appropriate regulatory response to this circumstance? One approach would be for the regulator to intervene by setting mobile termination rates at the ‘Ramsey’ level – i.e. by allowing a mark-up over the marginal costs of the services provided by the mobile operator (to recover the fixed and common costs of running its activities) which is inversely proportional to the price elasticity of demand for the service.
21. This approach was considered in an earlier paper submitted to the Commerce Commission by one of the current authors.<sup>15</sup> That paper argued that setting such a price has considerable theoretical and practical disadvantages, notably the absence of authoritative estimates of the relevant elasticities, based on recent data, and the concern that if competition in the retail mobile market is inadequate, a higher mark-up on mobile termination charges, justified by relatively low price elasticity of demand, will not be compensated for by lower mark-ups elsewhere.
22. In its Draft Report (para 403-414) the Commission has noted these same concerns, and we concur with its conclusion that for these reasons it is not appropriate to adjust the estimate of mobile termination cost on the basis of Ramsey pricing principles.

### **Externalities and the waterbed effect**

23. In Section 5 of the Draft Report<sup>16</sup>, the Commission, having determined (correctly in our view) that unregulated termination prices are not set at an efficient level,

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<sup>15</sup> M. Cave, *Regulatory policy towards mobile termination*, July 2004.

<sup>16</sup> “Quantitative analysis of the impact of mobile termination regulation”.

proposes a TSLRIC price for fixed-to-mobile termination. It also considers three factors that may affect the regulation of terminations rates:

- a. The “waterbed” effect, i.e. the impact on mobile retail prices of reductions in mobile termination rates; the Commission does not consider that the waterbed effect is operating fully in New Zealand. (*Draft Report*, para 340)
- b. Externalities, i.e. whether the benefit to fixed users from calling mobile users is proportional to the number of mobile subscribers; the Commission does not comment on this factor alone as it links it to mobile penetration.
- c. Mobile penetration, i.e. whether higher termination charges encourage higher levels of subscription; the Commission analyses this issue in conjunction with network externalities<sup>17</sup> and concludes that the cost-benefit analysis should not take them into account. (*Ibid*, para 432)

24. The conclusions to the three points above all lead to the same implication, that is, that the TSLRIC termination price should not be amended to take such factors into account. We believe that the Commission’s approach is correct. In fact, the Commission has adopted a set of individually sufficient assumptions leading to the conclusion that the “factual” termination charge should not be set above TSLRIC.

### ***The “waterbed effect”***

25. In principle, one may want to allow higher termination charges to the extent that these induce mobile operators to reduce subscription fees and thereby attract more mobile subscribers. Conversely, if mobile operators kept termination profits for themselves, there would be no impact on mobile retail rates. In other words, the “waterbed” effect is related to the intensity of competition among mobile operators.

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<sup>17</sup> This approach of linking network externalities and mobile penetration makes practical sense; however these are two distinct concepts. There can be network externalities in a fully saturated market. Conversely there may be no network externality even if the mobile subscriber base is still growing. The latter case arises, for instance, when the marginal mobile subscriber is the one that joins a mobile network only to make emergency calls and does not expect to receive calls from existing fixed-line customers.

The Commission is not convinced that there is sufficient competition in the mobile retail market to ensure that termination profits are competed away and transferred to mobile subscribers.<sup>18</sup> It follows logically that the termination rate should be set at TSLRIC with no allowance for mark ups as these would not be passed on to mobile consumers.

26. We note an additional point. If there were no network externalities and there was high penetration in the mobile market, then the “waterbed” effect would be irrelevant under a public benefits approach. Both with and without the waterbed effect, the public welfare maximizing termination charge is the incremental cost of termination. If the “waterbed” effect were present, a change in producer’s surplus from termination would be always compensated by an equal change with the opposite sign in mobile consumer surplus. This is because, with a competitive “waterbed” effect (something that is not present in New Zealand), any termination surplus is passed on to consumers, for instance via lower mobile subscription fee. If the termination charge is cut, the mobile operator will increase its subscription fee. Thus the overall profit of mobile firms would not change. If, on the other hand, the “waterbed” effect were not present, then consumer surplus for mobile customers would not change and only the producer surplus would be reduced by lowering termination rates.<sup>19</sup> This is because, without a “waterbed” effect, any termination surplus is simply retained by mobile operators. In both cases, with and without the waterbed effect, fixed-line customers would gain, (assuming pass through into fixed-to-mobile prices) since, by lowering termination rates, fixed-to-mobile prices will also be lowered and fixed-line consumer surplus would increase. Table 1 shows the impact resulting from reducing termination rates from above-cost charges to their incremental cost. In the table, the gain in fixed-line consumer surplus ( $A > 0$ ) is always positive and bigger in magnitude than the loss in producer termination surplus ( $B < 0$ ) since  $A$  is equal to the absolute value of  $B$  + the so-called

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<sup>18</sup> *Draft Report*, para 340.

“deadweight” loss. Thus  $A + B = \text{“deadweight” loss} > 0$ . Both with and without a waterbed effect, termination rates set at TSLRIC are welfare improving.<sup>20</sup>

Table 1a Impact of cutting termination rates

Case:	Effect on:			
	Fixed-line subscribers	Mobile subscribers	Mobile operators	Overall effect
No waterbed	$A > 0$	No change	$B < 0$	$A + B > 0$
Full waterbed	$A > 0$	$B < 0$	No change	$A + B > 0$

27. Table 1b reports the overall effect of reducing termination charges to TSLRIC. The overall effect is positive both under a public benefit test and a consumer surplus test. The positive effect is larger in magnitude without a “waterbed” effect under a consumer surplus test as, in line with Table 1a, there is no change in mobile subscribers’ consumer surplus and the negative impact on mobile firms’ profits is not taken into account. If there were a “waterbed” effect, a test based on consumer surplus would still result in a positive impact of regulation, although it would be reduced in magnitude as mobile subscribers would face higher subscription fees after a reduction in termination rates and would suffer a loss in their consumer surplus ( $B < 0$ ). The important implication of this analysis is that regulation of termination charges to TSLRIC is always beneficial, no matter what test is used. The impact of such regulation depends on the test used and on the appropriate scenario of the “waterbed” effect. The biggest positive impact arises when the test chosen is “consumer surplus” and there is no “waterbed” effect.

Table 1b Overall effect of regulation

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<sup>19</sup> Assuming the absence of call externalities, see below.

<sup>20</sup> The table assumes that there are no network externalities.

	Test:	
Case:	Public benefits	Consumer surplus
No waterbed	$A + B > 0$	$A > 0$
Full waterbed	$A + B > 0$	$A + B > 0$

### *Externalities*

28. Network externalities are of course relevant in telecommunications. Consumers join networks with the purpose of communicating with other customers. Hence networks of very small size do not have a big value. However, it is also true that consumers tend to call and be called only by a subset of network subscribers. Given the current high penetration levels of mobile telephony in New Zealand, it is likely that the addition of a marginal mobile subscriber would not alter the calling behavior of most subscribers to the fixed networks. In other words, the network externality is probably very small in magnitude at present (if it exists at all). Notice that here we are not asking if there is indeed a marginal mobile subscriber that may be induced to join the mobile networks, but just what impact such a marginal customer would have on existing fixed subscribers. If this effect is small, then no matter how the “waterbed effect” operated or how high or low the mobile penetration rate is, there is no need to include any mark up above the termination incremental cost. Conversely, above-cost charges would be beneficial in the presence of network externalities to the extent that also two other conditions are jointly satisfied:

- a. the higher termination rates are used to subsidise the marginal mobile subscriber via lower subscription charges (i.e., the “waterbed” effect is present and influences marginal subscribers), and
- b. it is indeed possible to raise the equilibrium number of mobile subscribers (i.e., the penetration rate is not near saturation levels).

29. The Commission presents persuasive evidence that it is not the case that these two conditions are fulfilled.<sup>21</sup> As a result, there is no need to include a mark up above TSLRIC for mobile termination.
30. We note an additional point. The externalities considered by the Commission relate to network externalities. There is another type of externality known as “call externalities”. Call externalities are present when the recipient of a call receives a benefit when being called. These externalities must exist in practice, as otherwise consumers would never bother to answer phone calls. The simple fact that, on average, people answer most calls is evidence of the relevance of call externalities: receiving a call is a positive benefit, not a nuisance. The sender of a call typically does not take into account the “call externality”, but only the direct benefit he/she expects to obtain from the call and the price he/she has to pay. The external benefit conferred on the called party is not internalized: this implies that an inefficiently low number of calls will be initiated. In order to restore efficiency, the calling party must be induced to call more often, which would happen if the calling price is reduced. In the presence of calling externalities, mobile operators themselves will have an incentive to lower termination rates below the unconstrained monopoly rate – though this will be a weak incentive. This would allow them to terminate more calls, which confers a benefit on their customers. However, the basic problem arising from CPP would still be present and they will still exploit fixed-line customers. Mobile operators would still charge too high termination rates even in the presence of calling externalities. To see this, it suffices to notice that the optimal (welfare-maximizing) termination rate in the presence of calling externalities should be set below its incremental cost. In a benchmark situation without calling externalities it is efficient to set the termination rate at its incremental cost. As calling externalities become important, a termination charge below cost is needed in

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<sup>21</sup> The CC states that, even if there were rises in mobile calling charges due to reductions in termination rates, these would have little effect on marginal customers (*Draft report*, para 338). The CC also concludes that the level of externality diminishes at higher levels of mobile subscription (*Draft report*, para 430).

order to induce higher volumes of calls. This point has been forcefully made by Patrick DeGraba, who has recommended a “bill-and-keep” system, i.e. termination should be provided free of charge.<sup>22</sup> The main theoretical rationale underlying this proposal is based on “call externalities”: as both parties generally benefit from participating in a call, then both parties should split the cost of the call. Those networks that terminate calls could be forced to cover the termination costs by charging the called party directly, e.g. by increasing the subscription fees, or by introducing RPP billing systems without regulators having to mandate them.

### ***Mobile penetration***

31. We have already made clear that this point is linked to network externalities. If mobile operators were competing fiercely against each other, the market penetration were not high, and fixed users benefited from an expanded mobile subscriber base, then a termination mark up above incremental cost would be justified. Conversely, as mobile subscription grows the argument to “tax” termination calls to subsidise mobile subscription become weaker and weaker.<sup>23</sup> According to the Commerce Commission, mobile subscription in New Zealand is high – being 78.5%. Thus, even if the Commission had concluded that there were considerable network externalities, and that all the termination profits would be passed on to mobile subscribers, there would have been little purpose in allowing for any mark up above the incremental cost of termination.

32. The following table summarizes our discussion so far. We have considered the various combinations of the three factors. Eight cases are possible as shown in Table 2. Seven of them would lead to a termination rate that should be optimally set

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<sup>22</sup> P. DeGraba, 2003, “Efficient Interconnection Rates for Interconnected Competing Networks”, *Journal of Economics and Management Strategy*.

<sup>23</sup> A well-known result in taxation theory says that efficient mark-ups should decrease with an increase in the tax-base.

at the incremental cost of termination (TSLRIC). Only in case 8, that is when the waterbed effect is present, network externalities are relevant and mobile subscription is still at low levels, would an additional mark-up above TSLRIC be justified. Our reading suggests that the Commission’s Draft Report lies between cases 1 and 2 which we concur with. In either case, the Commission’s conclusion is appropriate. More importantly, the Commission’s assessment would have to conform to Case 8 to justify a mark-up over TSLRIC, and we regard Case 8 as highly implausible.

Table 2 Optimal benchmarks

	Is there a “waterbed” effect?	Are there network externalities?	Is there high take-up in the 2G mobile market?	Optimal benchmark
Case 1	No	No	Yes	TSLRIC
Case 2	No	Yes	Yes	TSLRIC
Case 3	No	No	No	TSLRIC
Case 4	No	Yes	No	TSLRIC
Case 5	Yes	No	Yes	TSLRIC
Case 6	Yes	Yes	Yes	TSLRIC
Case 7	Yes	No	No	TSLRIC
Case 8	Yes	Yes	No	TSLRIC + mark-up
The Commission’s view	No	No need to make allowance for a network externality		TSLRIC

33. Table 2 is also useful to illustrate the similarities, and possible pitfalls, between the standard market definition and the so-called “two-sided” markets. If one applied a standard market definition, without also considering “affected markets” at the stage of defining remedies, then the optimal benchmark will almost invariably be

TSLRIC. This “one-sided” logic in a market with two sides could produce an erroneous type of regulation in Case 8. However, a standard market definition, in conjunction with an appropriate analysis at the remedies stage, would indeed find the optimal solution.

## **Conclusions**

34. The purpose of this paper has been to review the Commission’s analysis in its Draft Report in three areas:

- The definition of operator-specific markets for mobile termination: here the acknowledgement that there may be an externality between groups of consumers in so-called two-sided markets may affect appropriate remedies but in our view does not over-ride the Commerce Commission’s market definition based on an analysis of the absence of constraints on mobile termination rates.
- The identification of mobile termination as a bottleneck, which operators can exploit to charge monopoly prices irrespective of the degree of competition in the outgoing mobile market.
- The appropriateness of TSLRIC-based pricing as a remedy in a wide range of circumstances except when three conditions are fulfilled – a waterbed effect, marginal network externalities, and low mobile take-up.

35. We agree with the Commission’s conclusion that a full waterbed effect does not operate and that the combined effect of the high level of mobile take-up and the scale of marginal network externalities makes it inappropriate to take account of network externalities within the cost-benefit system; therefore we consider its choice of TSLRIC pricing is an appropriate and correct remedy.

