TELSTRA CORPORATION LIMITED

Submission to the Australian Competition and Consumer Commission

Response to Draft Decision on the Mobile Terminating Access Service

June 2004

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Overview

Telstra welcomes the opportunity to provide comment to the Australian Competition and Consumer Commission ("the Commission") on its Draft Decision on the Mobile Terminating Access Service ("the Draft Decision")[1].

In the Draft Decision, the Commission proposes the use of a principle that would require mobile terminating access ("MTA") charges to decline to a target rate of 12 cents per minute by January 2007, where the target rate has been derived through benchmarking of overseas cost estimates and with reference to other sources. Telstra has serious concerns as to whether regulatory intervention of this type is in the long-term interests of end users, when both the direct and flow-on implications of the pricing principle are considered.

As was discussed in Telstra's initial submission to the Commission[2], Telstra does not believe that there is a case for intrusive regulation of MTA service. Evidence to date has shown that termination charges have declined over time, even when the existing pricing principle would have allowed termination charges to rise. For example, Telstra's average yield on termination charges decreased over the period June 2001 to June 2003 even though the retail benchmarking principle that was in place at the time would have allowed it to increase mobile termination charges by 3%. This indicates that there clearly is downward pressure on termination charges, even in the absence of explicit regulatory requirements to reduce charges. Given this, and the fact that intrusive regulation of mobile termination has the potential to substantially distort competition and investment in the mobile market as a whole, Telstra considers that the application of the pricing principle proposed in the Draft Decision is unlikely to promote the long term interests of end users.

Furthermore, Telstra considers that it is important to recognise the shortcomings of the Commission's proposed pricing principle. First, the use of an approximation of TSLRIC through benchmarking without any adjustment for network externalities or for Ramsey Pricing (the principle that relatively higher contributions to common costs should be made by the least price sensitive service) ignores well-established economic principles on welfare-maximising pricing, and the fundamental characteristics of mobile networks.

Second, while Telstra appreciates that the Commission is endeavouring to avoid the need for a full TSLRIC modelling exercise by drawing on existing data sources, Telstra considers that at least three of the four sources used by the Commission are simply inappropriate and ill-suited to the task of determining access prices that approximate TSLRIC (see Section 3.2 for a detailed discussion of this point). Telstra also considers that the use of international benchmarking should be treated with caution. Differences in a range of factors across countries means that international benchmarking could provide an estimate that is either substantially below ***or*** above the cost of service provision in Australia. The main text of this submission identifies a number of important considerations in this respect. Two examples are

1 Australian Competition and Consumer Commission (March 2004), *Mobile services Review: Mobile Terminating Access Service – Draft Decision on whether or not the Commission should extend, vary or revoke its existing declaration of the mobile terminating access service.*

2 Telstra (April 2003), *Mobile Services Review, Telstra's Initial Response to the Discussion Paper of the Australian Competition and Consumer Commission.*

that in attempting to draw conclusions about the likely TSLRIC of Australian mobile termination based on cost estimates from, say, the UK, one would have to take account of the facts that:

- the sparseness of the Australian population covered by mobile networks relative to that in the UK would tend to increase Australian network costs relative to those in the UK; but
- the relatively lower labour costs in Australia would reduce Australian network construction and maintenance costs relative to those in the UK.

Telstra finds it concerning that these types of considerations do not appear to be explicitly recognised in the Commission's Draft Decision. Rather, the Commission simply assumes that the benchmarking exercise would yield overestimates of the Australian TSLRIC[3] whereas in Telstra's view it is not clear that this is necessarily the case – without further investigation it is difficult to conclusively state whether Australian costs lie above or below costs in the countries surveyed by the Commission.

To the extent that the Commission's proposed new pricing principle yields prices that are below efficient levels, if this leads to the weakening and possibly exit of mobile players, this could in turn reduce the competitive pressure currently experienced by fixed networks players through multi-platform competition. More generally, the uncertainty created by what could be considered a fairly "rough and ready" approach to such an important issue could discourage further investment in mobile networks due to a perceived increase in regulatory risk. The mobile telecommunications industry is one that is undergoing substantial development - for example, at the current time a number of players are considering deploying 3G networks. The fact that the Commission is taking a non-transparent approach to regulation may make 3G investors think twice about what may happen further down the track in future regulatory decisions. This point does not appear to have been recognised by the Commission in its Draft Decision.

Finally, by way of overview, Telstra notes the comments attributed to Vodafone's Peter Stiffe (Australian Financial Review, 21st May 2004), that "both Telstra and AAPT have openly acknowledged in their submission that they do not pass reductions on to consumers". Since Vodafone does not provide PSTN services, it may not be familiar with how efficient pass-through of MTA reductions can occur. Notwithstanding, the statement attributed to Vodafone is plainly incorrect. Telstra's position was set out in its Initial Response of April 2003 (pp.7-8) that reductions in MTA rates are adequately passed through to consumers in the form of lower retail prices for PSTN services. Competition for PSTN services occurs in the provision of the full bundle of PSTN services (including basic access, local calls, STD, IDD and fixed to mobile). It is valuable to preserve flexibility in how pass-through occurs, since it will be guided by the differing demand elasticities for different services; and allows providers to flow through reductions in a way that is of most benefit to end-users.

The remainder of this report is set out as follows:

- Section 1 discusses market definition and explains why Telstra considers that the Commission's preliminary view yields a market definition that is unrealistically narrow;

[3] For example, the Commission states on p. xvii of the Draft Decision that "Using estimates outlined in Chapter Eight, the Commission has settled on a ***conservative*** benchmark target price of 12 cents per minute for the mobile termination service." (emphasis added)

- Section 2 provides comment on the Commission's market power analysis; and
- Section 3 details Telstra's view on the Commission's choice of pricing principle.

1 Market definition

The first stage of the Commission's assessment of whether declaration of the voice wholesale mobile termination service (hereafter referred to as "mobile termination") is likely to promote competition is the definition of the market in which the eligible service is supplied.[4] The Commission describes the eligible service as including fixed-to-mobile and mobile-to-mobile voice termination services regardless of the technology used, but excluding data termination services.[5]

The Commission's preliminary views on market definition are:

- the relevant product for the purpose of market definition analysis in this inquiry should not be defined more broadly than mobile termination;[6]
- there are no alternative services that are sufficiently good substitutes for mobile termination to be in the same market as mobile termination ;[7]
- from the perspective of the A-party making a voice call to a mobile subscriber, substitution possibilities between different mobile networks are unlikely;[8] and
- B-party consumers receiving calls to mobile networks have neither the incentive nor the awareness of differences in mobile termination rates to enable them to constrain mobile operators pricing of the mobile termination service.[9]

The Commission therefore arrives at the preliminary conclusion that there is a separate market for termination on each mobile network. As is discussed in more detail in Section 2, this leads the Commission to believe that all mobile operators have ***"absolute power"***[10] over the provision of termination services on their network, and that there is an ***"absolute barrier to entry"***[11] into the market.

The market definition is crucial not only to the Commission's assessment of the state of competition but also to the overall conclusions of the Commission, including on the preferred pricing principles to be applied to the eligible service. Telstra submits that:

- the Commission's view that the relevant market is limited to mobile termination alone ignores the two-sided characteristics of mobile telecommunications service provision and the non-separability of termination from origination;
- the demand-side substitution possibilities available to retail consumers who place calls to mobile networks *to communicate with a particular person* are understated by the Commission;
- the claim of limited mobile termination substitution possibilities between different mobile networks is nothing more than the direct consequence of the Commission's

4 Draft Decision, p. 27
5 Draft Decision, p. 25
6 Draft Decision, p. 39
7 Draft Decision, p. 41
8 Draft Decision, p. 42
9 Draft Decision, p. 45
10 Draft Decision, p. 57
11 Draft Decision, p. 46

narrow market definition, but the constraints on mobile termination pricing are far more substantial than the Commission argues; and

- technological developments may well occur within the three-year timeframe adopted by the Commission that could substantially alter the form and characteristics of the relevant market.

The remainder of this section sets out the rationale for these four points.

1.1 Why termination does not form a separate market from other mobile services

The Commission considers that the market for eligible service should be limited to the mobile termination service because it is not convinced that mobile termination is supplied as part of a 'cluster market' with retail mobile services. Using the same test, the Commission considers that retail services such as subscription services and outgoing calls are in a cluster market and hence are in the same market.

The arguments that the Commission uses to sustain this view are that:

- retail services and the mobile termination services are not sold in the same bundle and are paid for by different consumers; and
- retail services such as subscription services and outgoing calls are sold as a bundle.

Telstra does not believe that the Commission's conclusion that termination lies in a separate market from other mobile services is well founded. In particular, the 'implementation' of the Commission's test to define the market seems to be limited to whether the products are sold as a bundle – a test which is said to be passed for retail mobile services, but not for termination services. Telstra considers that this is not a valid approach to market definition. To put it simply, two products can be sold separately (that is "unbundled") but still be in the same market and conversely, some firms may bundle some products that are from separate markets. Economists have studied extensively the theory of bundling, which may have multiple rationales, but the fact is that bundling is in, and by, itself neither a necessary nor a sufficient condition in the definition of a market.

Telstra considers that some of the fundamental features of mobile networks are ignored in the Commission's draft report. First, a key characteristic of mobile service supply is that, not only are there strong economies of scope in supplying termination and retail services, termination is simply not separable from other mobile services. In other words, it is not possible to supply mobile termination without supplying origination services (either directly to end users, or indirectly via a reseller or MVNO).

Second, mobile networks essentially provide telecommunications services to two distinct types of users, each of whom derives value from interacting with users of the opposite type over a common platform. Every call to, and from mobile networks benefits:

- the calling party; and
- the receiving party.[12]

[12] One may rightly point at the occurrence of unwanted calls but this would not alter the fundamental point regarding market definition

Markets involving such external effects from the consumption of one group of consumers (calling party) to another group of consumers (called party) are referred to as two-sided markets. The economic theory of two-sided market has repeatedly pointed at the need to pay attention to both sides of a network for antitrust issues in general and market definition in particular. For example, Wright (2004) identifies some of the most common policy errors arising from a narrow focus on one side of the network rather than taking into account the joint provision of benefits to different customers.[13] Also, on the same topic, Evans (2003) analyses specifically the challenge arising from two-sided network characteristics when defining a market.[14] The general contention is that it is not possible to examine price effects on one side of a market without considering the effect on the other side and the feedback effects between them.

While the Commission agrees there are some complementarities in demand and supply with regard to the mobile termination and retail mobile services, it is not convinced that these services should be in the same market, essentially, as discussed earlier, because these services are sold to different consumers. This argument is not robust and, on the contrary, calls for a market definition that takes explicitly into account the two sides of the network, that is, retail services such as subscription services ***and*** the termination of inbound calls. To adopt a narrow focus on one side of the market will lead to erroneous conclusions on the existence of market power through a failure to recognise that it is the firm's ability to earn economic rents across the two-sided market as a whole that is of relevance, rather than the contribution margins earned on any narrower definition. The Commission's narrow focus on one side of the market is inconsistent with both the commercial reality of the mobile service supply and with the economic literature.

1.2 Substitution of terminating calls

The Commission examines whether there are substitute services that could constrain mobile termination charges by considering options available to A-party consumers, including:

- calling a mobile subscriber on or from a fixed-line network;
- sending a mobile subscriber an e-mail message;
- sending a subscriber an SMS message;
- calling a mobile subscriber using voice over Internet protocol (VoIP) technology; and
- utilising call-back arrangements.

In all cases, and without supplying any quantitative evidence, the Commission finds that these alternatives are not sufficiently substitutable for calls to mobile networks. Accordingly, the Commission believes none of these alternative services should be included in the same product market as the mobile termination service.

Telstra is of the view that the Commission significantly underestimates the substitutability of these services for mobile termination, and that even if these options are not considered to be sufficiently substitutable for fixed to mobile calls so as to fall into the same market, there will be at least some constraining effect on termination charges as a result. This may, for example, be

[13] The market definition used by the Commission for the provision of mobile termination services explains, at least partially, why the Draft Decision may be contrary to its stated objective. See Julian Wright, 2004, "One-sided logic in two sided markets", *Review of Network Economics*, 3-1:44-64.

[14] David Evans, 2003, "Some empirical aspects of multi-sided platform industries", *Review of Network Economics*, 2-3: 191-209.

evidenced by the fact that mobile termination charges have continued to fall over the past two years even when the Commission's termination charge pricing principle would have allowed for price increases. This point is discussed in more detail in section 2.1**.** Telstra believes that this is an important consideration in determining both whether or not declaration of mobile termination is required as well as what the appropriate pricing principle is. Telstra also believes that merely asserting a belief that services are not sufficiently substitutable is not an appropriate level of proof. A more appropriate level of proof would require a more detailed empirical investigation into and quantification of the linkages that exist between the relevant services and their cross-price movements. As far as Telstra is aware, the Commission has not undertaken such an investigation.

1.3 Substitution between mobile networks and the B-parties' influence on pricing

The Commission investigates, from the point of view of the calling party "To what extent are termination services on different mobile networks substitutable with each other?" and "To what extent will B-party consumers be willing and able to constrain pricing of the mobile termination service?"

With regard to the calling party the Commission's findings are:[15]

- that there is no possibility of substitution for terminating calls on a given network, because all network operators have control over calls that terminate on their networks;
- that it is unlikely that a calling party is aware of the network to which a called party is connected and about the difference in prices of calls to different networks;
- changes in termination rates are not indicated to consumers of F2M and M2M; and
- differences in on-net and off-net call prices do not necessarily reflect differences in termination charges on these networks.

With regard to the receiving party the Commission's findings are:[16]

- receiving parties are unlikely to exert pressure on terminating charges in their network because for this they would first, have to be highly altruistic and second, be aware of the level of termination charges.

Because the underlying flaws in these arguments are the same, Telstra comments simultaneously on both the substitution possibilities for calling parties and the price constraints imposed by receiving parties on termination charges in their network.

The Commission argues that consumers (calling, as well as receiving, parties) are not aware of call prices and takes this as evidence for limited substitution possibilities. Telstra submits that this is erroneous in three respects. First, whether calling party ignorance is widespread or not should be demonstrated rather than assumed. Second, there are good reasons to believe in many important respects that calling party ignorance may be much less important when it matters. While it is true that a calling party does not always know which network the receiving party is on during the time of the call, the monthly bill will show this. That means the calling party would be warned if the price had been higher than expected. To the extent that people

15 Draft Decision, pp. 42-44
16 Draft Decision, pp. 44-45

tend to call the same people over and over, rather than random mobile subscribers, one would expect them to develop an awareness of calling costs. Moreover, some, perhaps the minority of, customers are likely to be highly price conscious.

If, as a result of these two tendencies, a nontrivial plurality, say 10-20 percent, of calls are made in an informed manner, this will have important effects at the margin on call demand. Put another way, *a priori* arguments claiming ignorance, and even apparent evidence of ignorance, cannot replace evidence of price effects. That is, the real question is whether consumers respond to prices, not whether they appear to be ignorant.

Second, when assuming that calling parties who care about the price for incoming calls must be altruistic, the Commission overlooks that the frequency and length of incoming calls is decreasing in the price that the calling party pays: if the calling party pays more, then sooner or later they will find out about it from the bill and will call the same receiving party less often and keep the conversation shorter. Provided that receiving a call increases the utility of the receiving party, the receiving party suffers a utility loss from an increase in price of calls it receives. The Commission could not make this point because it assumes that the frequency and length of calls is not related to price, because consumers do not have information about call prices -- an assumption that Telstra finds highly doubtful. The Commission assumes that there is a given number of calls and a given duration of calls, no matter what prices are. Even if one thinks of a call to a party that happens only once so that the calling party does not know the price for this call and finds it out only from the bill, it can be assumed that receiving parties care about calling parties' costs, since telephone calls are only one aspect of complex interactions among people who care about their reputation. In other words, calling parties can "punish" the receiving party by rejecting or shortening future calls, and by tools available through other aspects of their interaction.

A third and crucial aspect that the Commission ignores and which introduces bias, is the fact that different networks are in the long-run substitutes for making and terminating calls. This is because consumers choose to subscribe or not to subscribe to a network. Thus, the "monopoly" power that arises because a specific call is not substitutable by another is fairly limited since there is network competition.

1.4 The temporal dimension of the market definition

The temporal dimension of a market refers to the timeframe over which substitute services could potentially exert a competitive constraint on the pricing and output behaviour of a provider of the eligible service. The Commission notes that[17]

- a timeframe that is too short may exclude alternatives on the demand or supply side that are actually constraining conduct in the market in question; and
- a timeframe that is too long risks including those services that are not effectively constraining behaviour currently or for the foreseeable future.

The Commission does not foresee any developments in mobile telecommunications technology, or in other communications technology, that will produce any substitute services for the mobile termination service in the short-to-medium term other than those considered

[17] Draft Decision, p. 47

under the product market discussion above, which the Commission does not include in the same market as the market for mobile termination services.[18]

Whilst the Commission does not specify what it means by “short-to-medium term” and even why this “short-to-medium term” would be the correct timeframe, it nonetheless proposes some pricing principles over the next three years (and possibly extended beyond). Therefore, it would be logical to assume that what the Commission has in mind is a temporal dimension of at least three years. In this case, Telstra contends that the Commission’s analysis of substitution possibilities, at best, is unsupported by any evidence, and more likely will become outdated within the regulatory timeframe.

[18] Draft Decision, p. 47

2 Analysis of market power

In respect of market power, the Commission argues that:

- at least some firms have market power on termination services;
- at least some firms have market power on retail mobile services;
- at least some firms have market power on F2M services; and
- cost-based pricing would address the market power concerns and encourage efficient use and investment in telecommunication

The following sections explain why Telstra believes that these conclusions on market power are misplaced.

2.1 Market power in termination services

In analysing market power in the market for termination services, the Commission argues that given mobile termination services provided on each individual mobile network are defined as lying in their own individual product markets, it follows that each network operator has a monopoly over the provision of mobile termination services on its own network. Also, since the Commission does not believe there are practical substitutes available for termination services on a particular operator's network, it claims that an absolute barrier to entry into the market exists, as another operator is unable to provide termination services on any other operator's network. Moreover, the Commission claims that the prices for mobile termination services are much higher than what it estimates as the cost of providing these services. Finally, the Commission uses its observation of a relative absence of changes in termination charges to claim that mobile operators have market power on this service. Telstra comments on each of these points below.

Market concentration and barriers to entry

Telstra notes that both the 'monopoly power' and the 'absolute barrier to entry claims' are the direct consequence of the Commission's market definition. The implication of this market definition is that the Commission implicitly assumes that the extent of mobile networks and, hence, the need to terminate calls on them, is exogenously given. This completely ignores that mobile networks compete ***for*** rather than ***in*** the termination market. The immediate consequence is that the Commission assumes monopoly pricing behaviour on networks of a given size. Because, in contrast to the view of the Commission, the network size is not given but rather results from competition, it is clear that monopoly pricing for termination could only be sustainable if it had no influence on the number of subscribers. As was discussed in Section 1.3, call charges do affect subscription to and therefore the size of a network. Thus, to the extent that termination charges are passed through to retail call prices, termination charges have an effect on network size.

Pricing conduct

Although the Commission recognises that termination prices have fallen since 1996, it also describes that the vast bulk of this reduction appears to have occurred during the period prior to January 2001. The Commission notes that price falls for the mobile termination service have largely stalled during the last 12 months while the Commission has considered appropriate pricing principles for this service. The relative absence of recent price changes in termination charges, as alleged by the Commission, is used to claim that mobile operators have market power on this service. This analysis is misleading for a number of reasons.

First, in Telstra's own experience mobile termination charges have declined significantly in recent years. Telstra's yield per minute for mobile termination has declined over the period June 2001 to June 2003. Telstra fails to see how price reductions of a magnitude such as that evidenced by Telstra's yield decline are consistent with the Commission's claims of "absolute power" over the supply of termination. This is particularly the case when the comparison is made with the price changes that would have been permitted under the Commission's retail benchmarking principle: although the pricing principle would have allowed Telstra to ***increase*** its termination charge by 3%, the actual outcome was a ***reduction***.

Second, as a matter of principle even if price reductions had slowed, Telstra notes that this would not in itself constitute a sufficient proof of market power.

Third, the Commission seems to be concerned that the mobile termination charge reductions that have occurred have taken place primarily as a result of the threat of regulation, given that the service is declared. Telstra does not consider that this is necessarily true because, due to the reasons discussed above in Section 1, there are a number of pressures on the pricing of mobile termination. However, even if it were the case that the reductions have occurred primarily because of the threat of regulatory intervention, Telstra considers this a good reason to conclude that regulatory forbearance is appropriate for this market, as opposed to intrusive cost-based regulation.

An additional critique to the Commission's analysis of pricing conduct in the mobile termination market is that it refers to price-cost margins without being explicit about whether their measure of costs includes the costs caused by the receiving party. As noted in Section 1.1, mobile calls serve two different groups of customers, callers and receivers, and socially efficient pricing of the service might not be related to each group's direct costs. Thus, to draw sensible conclusions about harmful market power from price-cost margins, one would need to demonstrate that the sum of the revenues from the two sides of the market are larger than the sum of the costs to serve both customer groups. Telstra therefore suggests that the Commission clarify which cost base was used in the calculations.

2.2 Market power in the retail mobile services market

The Commission's conclusion on the state of competition in the retail market is that, while it exhibits encouraging market outcomes, it is unlikely to be effectively competitive as yet.

The supporting evidence provided by the Commission includes:

- a measure of retail market concentration based exclusively on ***network owning*** providers;
- the barriers to entry to the mobile services market at the ***network level***;
- the growth of the mobile market;
- price conduct; and
- the profitability of the market participants.

Before commenting on each of these points, Telstra submits that the Commission's approach to infer market power on the retail market based on alleged market power at the wholesale layer is misleading. For instance, when justifying the use of measures of concentration for the wholesale instead of the retail market the Commission claims:[19]

> There is little reliable information available regarding the market shares of CSPs, resellers and MVNOs. However, as carriage on a mobile network is an essential input to any retail subscription package, an examination of the market shares of the mobile network carriers is a useful indicator of the degree of market concentration in the overall mobile services market.

While it is correct that the control that network operators have, might have implications for the retail market; this does not justify analysing market power at the network level ***instead*** of retail market power as the Commission does. Network owners might restrict the number of retail competitors and also affect the terms of their wholesale contracts. Thus, the wholesale market can have an impact on entry barriers in the retail market. However, the retail firms that actually enter the market through wholesale arrangements do compete with the network operators.

Concentration in the retail market

The Commission uses the Herfindahl Index as a measure of concentration. It argues that, using market share based on both subscriber numbers and revenues, the HHI of the retail mobile market is 0.359 for 2002-03, which indicates a level of concentration in the market greater than that of three equal-sized triopolists (0.33).

Telstra submits that this measure of concentration is misleading since it relies on the market shares of Telstra, Optus, Vodafone and Hutchison, ignoring carriage service providers such as resellers and mobile virtual network operators ("MVNOs").

Telstra submits that simply ignoring a large number of mobile operators is misleading for the purpose of an analysis of retail market concentration and that publicly available information indicates that the HHI may well already be below the concentration associated with three equal-sized triopolists. SingTel's Financial Report for the period ended 31 December 2003 showed that it sold approximately 965,000 mobile services through its wholesale business. If it were to be assumed that these were supplied by, say, five equally sized wholesale customers then this would indicate that the HHI would be 0.316, which is below the triopolist threshold. This calculation ignores the wholesale customers that are supplied by Telstra and Vodafone, therefore the HHI may be even lower than this and would likely decline in the future.

More generally, Telstra is aware of at least five MVNOs and ten mobile resellers. The presence of such a substantial number of players is not indicative of a retail market in which there are high barriers to entry. Whilst these carriers may account for less than 10% of the market, these players may have a disproportionately strong effect on competitive dynamics.

Barriers to entry at the network level

The Commission considers three types of barriers to entry in the mobile markets:

- the need to obtain spectrum;
- the importance of achieving wide geographic coverage; and

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[19] Draft Decision, p. 61

- sunk costs related to network infrastructure.

While entry at the retail level is possible by building a completely new network, it is not the only avenue: potential retail competitors can negotiate wholesale agreements with existing network providers. The presence of numerous resellers and a number of MVNOs shows that this is viable and in many cases the more cost efficient way to enter the retail business then investing in a network. Since the importance of entry barriers is determined by the least costly alternative to enter, the omission is critical and likely overestimates the barriers to entry at the retail level.

The following comments relate to the barriers to (network) entry as analysed by the Commission.

According to the Commission's own analysis spectrum is unlikely to constitute a barrier to entry at the network level. The Commission argues that:

- part of the 3G spectrum is owned by firms that could be new entrants: Qualcomm and PBBA;[20]
- there is currently a significant unused spectrum capacity over the short and medium term;[21] and
- as technology develops, currently unusable radiofrequencies may become capable for use in the delivery of communications, including mobile telephony services.[22]

Overall, the Commission provides evidence that spectrum is unlikely to be a significant barrier to entry in the mobile market and yet concludes in a highly speculative manner:

> Access to spectrum for mobile telephony services represents a potential barrier to entry in the future. In the event that all spectrum identified for use for mobile telephony is utilised by incumbent carriers […] and the ACA does not auction new spectrum to meet demand, then access to spectrum could be (but will not necessarily be) a significant barrier to entry to the retail mobile services market.

Market growth

The Commission considers that, without a significant change in the market (such as a highly valued new product), the moderating revenue growth and the decreasing ARPU may indicate the mobile market will not experience rapid growth in the future. The Commission concludes that "without significant growth in the future, additional market participants may not have sufficient incentives to enter the mobile services market".[23]

Telstra's view on market growth and its implication for competition is discussed in the following:

First, there is the potential for continued growth in the mobile telecommunications due to the availability of data services and the increasing substitutability of fixed and mobile services, especially with the growth of 3G services which have the potential to provide higher quality

20 Draft Decision, p. 66
21 Draft Decision, p. 67
22 Draft Decision, p. 67
23 Draft Decision, p. 76

voice services than existing 2G services. For example, ABN AMRO predict that growth of the mobile telecommunications industry in revenue terms will occur at a rate of 8-9% over the next five years.[24]

Second, growth is not a necessary condition for strong competition. In general, the relationship between market growth and competition is rather weak (although market growth can reduce barriers to entry by creating new demand that is not serviced by existing players and therefore potentially easier to contest). Specifically the current situation in Australian mobile telephony is that the industry is characterized by substantial over-capacity that can be used at extremely low cost. Overcapacity is likely to increase drastically as the 3G build goes ahead. Should overcapacity prevail, for example because demand for data services might not grow quickly enough to counterbalance the capacity increase, then this would trigger fierce retail price competition. Of course, excess capacity means barriers to expansion by existing carriers, if not entry by new carriers, are trivial, making it unlikely any firm could have substantial market power.

Price conduct

Telstra's experience of retail mobile prices is that there has been a continual and steady decline in yields. Telstra's mobile yields have reduced over the period July 2002 to March 2004. This downward trend does not indicate that the supply of retail mobile services is characterised by the presence of substantial market power. To the contrary, the observed trend in yields is consistent with the hypothesis that there are strong competitive pressures at work in this market.

Profitability of market participants

The Commission considers apparent high levels of profitability enjoyed by the market participants, particularly those with large market shares imply that the retail mobile services market is not displaying outcomes one would generally expect in effectively competitive markets.

In the first sentence of its section on "Profitability" (p81), the Commission asserts, "In a competitive market carriers would be constrained to earning normal profits…" However, in actual highly competitive markets, a wide range of profitability levels is observed. Some firms simply operate better and more efficiently than others, and hence earn higher returns than the industry average. What might be expected in a competitive market is that the industry average return is a reasonable economic return for the level of risk involved in the business. However, even in a competitive market one may not observe the reasonable return in a given year for a number of reasons.

There are a number of significant measurement issues in evaluating a company's return. The components that are used to calculate returns (e.g., revenues, expenses and assets) are conventionally measured in accounting terms. Even when an attempt is made to correct for known accounting principles that are not consistent with an economic measurement, such as is done by JP Morgan in its analysis of the mobile business, the result will still be an imperfect reflection of economic profit.

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24 ABN Amro (Thursday 20 November 2003), *Telecommunications Services – Australian Telecommunications 2004,* p.40

A clear example of the difficulty of measuring the economic concepts of profits and returns is illustrated in JP Morgan's report on Telstra[25]. "On our adjusted numbers, we calculate ROE at around 10-11% for FY01, well short of the ACCC's published 30% estimate for Telstra." JP Morgan describes the Commission's regulatory approach to Telstra as "aggressive" and states "Message to the regulator: 'Telstra does not earn extortionate returns'."

As a consequence of the measurement difficulties, there is volatility in measuring profits or returns from period to period, in addition to any "real" economic changes that occur. This measurement error in reports of profits and returns means that analysis of the performance of a company should be done with caution and preferably over an extended period.

Another difficulty in assessing returns is determining what is a reasonable or normal return for a company in a period. The focus here in Australian regulation is on the Weighted Average Cost of Capital (WACC). It is well known that there is considerable measurement error in the estimation of the WACC. None of the required parameters can be directly and unambiguously observed. The market risk premium is an important parameter in estimating the cost of equity capital. If analytical (rather than strictly empirical) approaches are used, in which the estimate is generated by deduction from economic theory in a manner consistent with the assumptions of the CAPM, then a very wide range of estimates results – values can go as low as 2 per cent and as high as 25 to 30 per cent.[26] The uncertainty in measuring the systematic risk (beta) of a company is equally fraught with difficulty. This is particularly difficult when the business is in a relatively new area such as mobile telecommunications. There is little doubt that the mobile business is high risk, therefore warranting a commensurately high beta and high WACC.

Faced with significant measurement issues in reported returns and in the standard to which these are to be held (i.e., WACC), an observed difference between the two should be treated circumspectly, even within the framework conventionally adopted by Australian regulators.

Even greater caution is warranted if an attempt is being made to say that a particular rate of return is "too high", in the sense of implying that the returns involve some inappropriate exercise of market power. Even a rate of return that seems "high" may not connote excessive profits.

Firms may earn more than their WACC for reasons that are unrelated to market power. For example, some firms may be more efficient than others, say in managing their production operations. That these firms earn a higher rate of return is not a sign of market power, or at least of the kind of market power that might be of concern. This is a normal occurrence in a competitive market.

Equally, a firm may earn what appears to be a high rate of return because its investments prove to be lucky. It may, for example, find that it has made the 'right' investment decisions, with demand for the services it supplies being especially high. The high apparent rate of return may have no relationship to market power. Rather, in a context where the average excess

[25] J.P. Morgan Securities Australia Limited, "Telstra Corporation: Return on Capital," August 28, 2001, p4.

[26] Very low values are generated if one uses the method set out by Fama, E., and J. Macbeth, 1973, "Risk return and equilibrium: Empirical tests," *Journal of Political Economy* 81(3), 607-636. Conversely, the approach originally set out by Lucas (Lucas, R., 1978, "Asset prices in an exchange economy," *Econometrica* 46, 1429-1445) and subsequently developed by French, Schwert and Stambaugh (French, K., G. Schwert and R. Stambaugh, 1987, "Expected stock returns and volatility," *Journal of Financial Economics* 19, 3-29) will yield very high or very low values depending on whether reinvestment is not allowed (as in the CAPM) or allowed.

return across the industry may well be zero (i.e., merely earning its cost of capital), the high return to the lucky firm offsets the lower returns made by its less fortunate rivals. Allowing the high return, which is not the result of the exercise of market power, provides the incentive that is necessary for investment. An additional benefit of allowing the high return to accrue to the firm is that it signals the specific areas into which new investment should flow. Allowing the full realisation of favourable returns thereby sets in train the self-corrective forces that characterise a well-functioning market.

It follows that even the fact that a profit-maximising firm persistently achieves earnings in excess of the cost of capital, does not necessarily imply either significant market power or monopoly pricing.

A final complexity exists in the mobile termination business. As with most products or services, this will have a life cycle. Currently it is a nascent business with a future that is difficult to forecast over the long term. A common pattern of financial performance for companies in such businesses is that early investors experience losses in the earliest stages. As the business becomes established, the returns may become greater than the company's WACC. Generally the early entrants to such an emerging industry establish themselves with benefits from economies of scale and superior operating experience. In the mature stage of the life cycle, competition will tend to compete away superior returns, but not perfectly. Finally in the declining stage, most participants will realise poor returns. In the sense of a grand average, the returns over the full life of an area of business will tend to be appropriate for the risk involved. However, fixing on the returns of a single company in a short time period within the life cycle is likely to be an inappropriate basis for evaluating whether the observed returns are too high or too low.

In summary, evaluating whether returns to a company are excessive is a very difficult undertaking that is plagued by at least three areas of distortion. Returns are measured with error. Appropriate returns are measured by WACC, which is subject to considerable estimation error. Observed high returns may be the result of superior management or luck rather than the exercise of market power. Returns at a particular point in time may be significantly different from the returns that are appropriate over the life cycle of a business area.

2.3 Market power in the retail F2M market

The Commission believes the main source of ineffectiveness of competition in the market within which F2M services are provided stems from the price of mobile termination services being well in excess of cost. It explains that pricing of termination services at cost would likely reduce the competitive advantage vertically-integrated carriers have over fixed-only operators for F2M calls that terminate on the vertically integrated carrier's network.[27]

For example, the Commission believes the current structure of the fixed-to-mobile retail services and mobile termination markets means there is the potential for anti-competitive price squeezes to occur in the market within which fixed-to-mobile retail services are provided.[28]

Another example is the Commission's view that the vertically-integrated nature of the two providers of F2M calls with the greatest market share gives them the ability to raise rivals costs

27 Draft Decision, p. 100

28 Draft Decision, p. 91

in a way that may might inhibit the ability of fixed-line only operators to compete effectively in the provision of F2M (and possibly the bundle of F2M, STD and IDD calls) to end-users.[29]

The Commission seems also to rely on a series of anticompetitive claims, which even if not strongly put, are nonetheless used as an evidence of market power.

Telstra submits that:

- while the Commission identifies a number of ***necessary*** conditions for an anticompetitive price squeeze to occur, these conditions are not ***sufficient*** for a price squeeze to be possible and rational;
- the current pricing structure gives an incentive to fixed-line only operators to enter the mobile market. That is, if there is indeed a competitive advantage associated with being vertically integrated, this should be seen as positively affecting competition in (a) the retail mobile market and (b) the F2M market; and
- the anticompetitive claims are not substantiated and, consequently, cannot be used as a proof of market power in the F2M market and, in any case, provide no basis for the proposed regulation. Such behaviour could be appropriately remedied by the application of competition law, so do not need to be addressed through the proposed regulation.

Each of these points is considered in turn.

Scope and incentives for an anticompetitive price squeeze

The Commission refers to the report prepared by NERA for the Commission, which argues that there are three necessary conditions for an anticompetitive price squeeze to be a rational and viable strategy for an integrated firm:

- two markets must be vertically-related and the upstream product must be a necessary input into producing the downstream product;
- at least one firm must be vertically-integrated and possess market power in both the upstream and downstream markets; and
- the downstream market must be open to competition from rival, non-vertically integrated firms.[30]

The Commission claims that all these conditions are satisfied in the market within which F2M services are provided, where integrated operators provide the termination access service as an essential wholesale input to the provision of F2M services at the retail level, as well as compete in that same retail market with non-integrated service providers.

Telstra submits two comments with regard to the price squeeze.

First, the Commission's assumption that there is upstream market power in terminating mobile calls is a direct consequence of interpreting terminating providers as monopolists of their own networks, which is in turn a consequence of the market definition applied by the Commission.

[29] Draft Decision, p. 99

[30] NERA, 2003, Imputation Testing for Bundled Services.

As discussed earlier in Section 1.3, this market definition assumes that subscription to a particular network is “naturally” given and not determined in the process of network competition. Thus, the presumption of upstream market power hinges on the allegation that there is no or very little network competition.

Second, while the conditions listed above are necessary for an anticompetitive price squeeze to occur, they are not sufficient. If an integrated firm with upstream market power that provides an essential input to downstream production (F2M), engages in a price squeeze, it foregoes economic profits. This is because the definition of a price squeeze is that the difference between the wholesale and retail price is below the avoidable cost of efficient downstream production. To be profit maximising in the short run, the difference between wholesale and retail price would have to exceed downstream avoidable cost. Thus, a price squeeze can only be rational if this short-run profit sacrifice is compensated in the future, or immediately via the sales of other goods.

The rationale of an anticompetitive vertical price squeeze is to offer a downstream price which forces downstream competitors out of the market and then, once significant downstream market power is established, to increase the downstream price. For this strategy to be feasible it is extremely important that first, the upstream product is essential (which the Commission assumes due to its market definition) and second, that downstream entry barriers prevent potential competitors from entering the market in the period where the downstream price increases above competitive levels.

Therefore, to assess the conditions for an anticompetitive vertical price squeeze it is important to analyse downstream entry barriers. The Commission has done this in a different context, where it acknowledges that entry barriers into the retail F2M market are low, because mobile termination services are declared.[31] Thus, by the Commission’s own argument, the scope for an anticompetitive vertical price squeeze in F2M seems extremely small, since low entry barriers will prevent future F2M price increases which could otherwise give the rationale for a short-run profit sacrifice implied by the price squeeze.

The market for single-basket preselection bundles

The current pricing structure gives an incentive to fixed-line only operators to enter the mobile market. That is, if there is indeed a competitive advantage associated with being vertically integrated, this should be seen as having a positive effect on competition in (a) the retail mobile market and (b) the F2M market.

In the discussion of market power the Commission first considers F2M as the relevant market and then extends the market definition to cover a wider bundle of fixed line services including NLD and IDD.[32] Then the Commission argues that (retail) competitors in this arena depend on Telstra’s originating and terminating wholesale services; and thus seems to derive retail market power from wholesale market power.

Again, the Commission seems to use evidence of price developments over recent years as an indication of market power without identifying the sources of these price movements.

[31] Draft Decision, p. 86.
[32] Draft Decision, p. 92.

Altogether, Telstra submits that in the discussion of the preselection bundle the Commission deviates from the market definition applied earlier without a clear reason and inappropriately infers retail market power from ownership of a network.

Anticompetitive claims

In relation to market power in the F2M retail market, the Commission presents a series of anticompetitive claims, which even if not strongly put, are nonetheless used as an evidence of Telstra's alleged market power.

While the Commission seems (appropriately) careful with its anticompetitive claims, the fact it uses these allegations without proof blurs the debate unnecessarily. Telstra considers that if anticompetitive conduct does occur, it is best dealt with under section 46 of the TPA.

3 Pricing principle selection and implementation

In its Draft Decision the Commission concludes that it is appropriate to extend the declaration of mobile termination service. It proposes to adopt a TSLRIC pricing principle and sets out in the Draft Decision a target rate of 12c per minute to be achieved by 1 January 2007, and an adjustment path that would be applied from 1 July 2004.

Telstra submits that it is far from clear that such an approach to regulation of mobile termination charges is justified as opposed to regulatory forbearance. Telstra also has concerns with the process that the Commission has used to derive the charges that it proposes should be applied, especially given the potential implications for market development and future mobile investment. These concerns relate both to the fact that: (1) established economic principles have been ignored that imply charges set at cost, without accounting for network externalities or price elasticities, will not maximise welfare and be in the long-term interests of end users; and (2) the analysis undertaken to arrive at the target rate could be described as very “rough and ready” given the importance of the decision for the development of the mobile industry.

These points are expanded upon below.

3.1 Choice of pricing principle

Given the fact that mobile termination charges have been subject to substantial reductions to date, even during the period in which the Commission’s retail benchmarking principle would have allowed for price increases (see section 2.1), it is far from clear that an intrusive approach to regulation is required. Although there is some ambiguity as to what has driven the termination charge reductions – that is, whether they have been driven by the threat of future regulatory intervention or by some form of competitive pressure – there is no reason to believe that the incentives to reduce mobile termination charges will not continue if the Commission were to show forbearance.

Despite this, the Commission’s conclusion in its Draft Decision is that TSLRIC would be an appropriate pricing principle. Telstra submits that the Commission’s position is ignorant of some fundamental economic principles, and its proposed principle is characterised by some not insignificant regulatory risk that could substantially damage the economy’s welfare.

As described earlier in this submission, mobile services are sold within the confines of a two-sided network – for a mobile call to take place both the call initiator and the call receiver must jointly consume it. The theory of two-sided networks tells us that, in contrast to the view of the Commission, the mobile termination charge that maximises social welfare may not even resemble mobile termination costs. In fact, it would take reasonably extreme assumptions about a variety of price elasticities of demand in order to arrive at a result that says the welfare maximising mobile termination charge should closely resemble mobile termination costs. Telstra’s views on the Commission’s treatment of mobile network externalities and Ramsey pricing are discussed in more detail below.

Mobile network externalities

The Commission is not convinced that mobile network externalities justify a surcharge on the price of the mobile termination service at present. This is for two main reasons:

1. No evidence has been provided to the Commission to quantify the size of such externalities either infra-marginally or at the margin. Further, no party provides any indication of how any such externality benefit could be measured; and

2. It is unclear whether surcharges on the price of the mobile termination service would be the most efficient way to finance subsidisation of mobile subscription charges if such an externality was relevant.

Telstra's views on the Commission's reasoning is as follows.

First, the Commission's draft Report does not reject the presence of a mobile network externality, which would justify an appropriate pricing correction. The pricing principle it proposes (price at cost) does nothing to take into account this externality. In other words, the Commission's position is possibly misleading in that it confuses the lack of quantification with the proof that the externality should not be internalised.

Second, the Commission argues that, even if the termination services were priced at cost, the subsidisation of subscription may continue, because the mobile operators are hugely profitable. This is misleading because (1) as discussed in Section 2.2, when properly analysed mobile networks operations may not be as profitable as the Commission is inclined to believe; and (2) the success of mobile operators (and their profit) is the result of the current pricing structure.

Ramsey pricing

In respect of Ramsey pricing, the Commission states the following:

> "the Commission considers that arguments presented relating to Ramsey pricing of mobile services are neither well-articulated nor supported by robust empirical evidence."
>
> "Ramsey pricing at any level requires market power, without which carriers could not hold prices above attributable costs.
>
> Further, Ramsey pricing is exactly the pricing scheme that will be adopted by a profit-maximising monopolist, with the overall level of prices dependent on the constraint (if any) on profits."

First, whilst Ramsey pricing does require some degree of market power, it does not need much. In a very competitive markets, price discrimination consistent with Ramsey pricing is often observed and it is widely recognised that this can lead to significant improvements in consumer welfare and economic efficiency overall. Further, the Commission seems to argue that Ramsey pricing would not be possible because of a lack of market power, but contends, in many other parts of the Draft Decision, that mobile operators do have at least some market power.

Second, the Commission uses the same argument as for the earlier rejection of external effects in mobile services: no quantification and hence it should be rejected. What the Commission does is claim that the optimal Ramsey mark-up should be zero, which is even more unlikely given the relative price elasticities for different services.

Third, the Commission is misleading when it compares the Ramsey pricing to the pricing scheme of a monopolist. Whilst the principles are indeed the same at the general level, the consequences in terms of efficiency are radically different.

Whilst accepting that the price elasticities of demand that are necessary inputs into determining the welfare maximizing mobile termination charge are difficult to estimate, Telstra believes that given the enormous amounts of money that some stakeholders stand to lose from lower mobile termination charges it would be worthwhile for the Commission to pursue a much better understanding of the size of these elasticities at current and prospective mobile penetration rates, rather than simply dismissing the concept altogether.

3.2 Issues with the target rate

The Commission has referred to four different sources in deriving the target rate of 12 cents per minute, these being:

- cost estimates from overseas jurisdictions (international benchmarking);
- the accounts produced under the Regulatory Accounting Framework (RAF);
- PowerTel's analysis of MTM retail prices; and
- modelling done by an Australian carrier to estimate costs.

As is discussed below, Telstra has a number of concerns with the Commission's reliance on these analyses. In particular, Telstra does not think it appropriate to rely on any of the last three sources listed above, and that it should be recognised that benchmarking could potentially either under or overstate the Australian TSLRIC given the difficulties inherent in benchmarking.

International benchmarking

The Commission has cited a number of international estimates of mobile termination, which it draws on to determine the proposed target rate of 12 cents per minute. As is clear even from the estimates cited by the Commission, mobile termination costs can vary widely by country.[33] Given this fact, Telstra finds it concerning that the Commission's report does not even consider how country-specific factors affect the termination charge in considering what an appropriate rate would be in the Australian context.

There are a large number of drivers of mobile costs that differ, in some cases substantially, by country. To begin with, geography and network coverage are important determinants of the cost. Costs are very specific to the type of geography in the country being considered and, especially, the dispersion of the physical plant necessary to provide service. The type of geography can affect local costs in very significant ways. For example, the geography of a country will play an important role in determining the number of base stations required per head of population.

The dispersion of target customers is also a very important determinant of costs. In many of the countries used as comparisons for benchmarks, the population dispersion can be described as quite dense, requiring the use of relatively little infrastructure in order to reach a very large percentage of customers. Belgium is a particularly egregious example of this, the UK somewhat less so. The US is more directly comparable with Australia, but there are still significant differences between infrastructure needs of the two nations.

[33] See Table 5.3 of the Draft Decision.

The number of base stations required to serve a customer base is only part of the issue with dispersion; the infrastructure needed to connect these base stations with the central switch also has a cost structure that depends heavily on that dispersion for obvious reasons. As an example, for a F2M call from a fixed line customer on a resold Telstra line in Darwin to a Telstra mobile in Darwin, the call would be routed through the MSC in Adelaide because there is no MSC in Darwin. This means that the mobile termination service provided by Telstra in this case would include long-distance transmission of the call from Adelaide to Darwin. This will clearly mean that the costs of mobile termination service provision will differ substantially from costs in smaller, more densely populated countries than Australia, at least for a proportion of calls.

The total number of mobile customers and their usage patterns (for example, whether demand is variable across time or other factors) will also impact on the costs because this will determine the amount of spare capacity required. The higher the spare capacity required, the higher the network costs.

There are also a number of important economic factors to be taken into account in comparing costs between countries. For example, the economic theory justifying the use of benchmarking for ratemaking is heavily dependent on the assumptions of similar conditions applying to the various countries. Thus, possibly important differences are overlooked by taking a simple international comparison of costs. These differences include the cost of capital. Another economic factor that differs between countries is the cost of labour used in the construction and maintenance of the network – this would have the effect of increasing costs in countries such as the UK where labour is relatively more expensive than in Australia.

Further differences in cost by country will arise from:

- variation in spectrum costs;
- equipment costs: prices of vendor equipment will differ by country as these are largely dependent on the number of vendors and the number and buyer power of the mobile network operators;
- the use of different technologies (eg, GSM vs CDMA); and
- differences in size and treatment of handset subsidies.

Given all of these factors it is difficult to say whether the TSLRIC of Australian mobile operations would be higher or lower than costs in other countries. However, it is important that the Commission recognise this. As it stands, the Commission's draft decision gives no indication of these caveats of international benchmarking, nor of how it considers they would affect the resulting estimate.

Use of the RAF

A second source referred to by the Commission is Telstra's accounts provided under the RAF. The Commission states that: "the information collected under the Regulatory Accounting Framework (RAF) indicates that the TSLRIC (inclusive of a contribution towards organisational-level costs) of providing the mobile termination service in Australia is likely to lie within a range of cost estimates collected from overseas jurisdictions."[34] Telstra does not see how the Commission can come to this conclusion given, first, that the RAF contains historic

[34] Draft Decision, p. xvii.

costs and these will by definition differ from TSLRIC. Use of the costs from the RAF will therefore be inconsistent with the Commission's choice of TSLRIC as a pricing principle.

Second, use of the external wholesale RAF will not capture all of the costs that should be included when calculating the MTA rate. This is because the MTA rate should include a contribution to all the costs of providing the mobile service, not just the cost of providing a network facility. That is, it must include all the costs incurred by a mobile provider. In addition to network costs, these include:

- handset subsidies;
- billing system costs;
- marketing costs;
- channel costs; and
- management costs.

The addition of these costs to the figures derived by the Commission from the external wholesale account would likely have a substantial impact on the size of the cost estimate.

MTM retail call prices

The Commission refers to comments by parties suggesting that prices for MTM calls could be used as a basis for inferring underlying cost. Telstra considers it totally inappropriate to rely on this approach in estimating the TSLRIC of mobile termination. As has been recognised by the Commission in its market analysis, retail mobile services are provided to consumers as a bundle. There are a number of components of the bundle pricing including:

- connection charges;
- monthly subscription charges;
- flagfall; and
- per minute charges.

The party referred to by the Commission (PowerTel) appears to have considered the flagfall and the per minute charges but to have ignored the monthly subscription charges. In Telstra's view this is a nonsensical approach to examining retail mobile prices. The per minute charges vary substantially by plan according to the monthly subscription fee committed to by the customer. In general, customers who pay a higher monthly fee are rewarded with lower call charges and/or free minutes. Due to the strong interrelationships between the various component prices, it is completely inappropriate to refer to individual aspects of the pricing, particularly when attempting to determine the TSLRIC.

Telstra also finds the Commission's approach to be inconsistent in, on the one hand, rejecting the existing retail benchmarking principle of linking termination charges to retail mobile prices, while at the same time appearing to use the level of retail mobile prices in determining the target MTA rate.

Modelling done by an Australian carrier to estimate costs

The Commission states that a final source that it has referred to is modelling done by an Australian carrier and supplied to the Commission on a commercial-in-confidence basis. It is not clear to Telstra what model the Commission is referring to but it considers it inappropriate for the Commission to do so without providing at least a description of the methodology or assumptions used for comment.

Conclusion on the target rate

The Commission's conclusion on the target rate is as follows:

> "Overall, therefore, the Commission has available to it a number of measures that could be used to estimate the cost providing the mobile termination service. These range from 5-6 cents per minute to around 12 cents per minute. Accordingly, the Commission is confident in setting 12 cents per minute as a conservative price target for the mobile termination service."[35]

Telstra does not share the Commission's optimism that the analysis set out in the Draft Decision would necessarily provide a conservative estimate of the TSLRIC of mobile termination. As discussed in detailed above, Telstra has serious concerns with all four of the data sources relied on by the Commission and 12 cents could either overstate or understate the Australian TSLRIC.

Given the large number of potentially significant flaws in the Commission's analysis Telstra does not consider that the application of the proposals contained in the Commission's Draft Decision would constitute sound regulation, and is concerned that it faces a high probability of substantial downside regulatory risk, which left unchecked could substantially discourage investment by incumbents. It could also act as a significant barrier to future entry and impetus for current exit.

Regulatory risk arises when the interaction of uncertainty and regulation affects the value of a firm. The economic literature on this topic has, broadly, distinguished three types of such interaction: *non-market risk*, *asymmetric risk* and *the hold-up problem*. Of particular relevance in this case are the concepts of non-market risk and the hold-up problem.

Non-market risk arises from the inclusion of a random element in firms' expectations of regulatory outcomes, whether this results from the fact the regulator has private information or that the process of regulation contains an unpredictable component.[36] The hold-up problem arises when the typical market risk faced by a firm is biased or otherwise distorted by a discretionary regulator expropriating a firm's surplus from a sunk investment on behalf of consumers.[37] In the current case, that the **potential** for such hold-up to exist is sufficient to create a bad environment for further investment.

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35 Draft Decision, p.167.

36 The uncertainty of regulatory outcomes may arise even when the current regulator's commitments are credible, if a review of the regulation occurs within the lifetime of the asset.

37 The hold-up problem is discussed in Grossman, S. J. and Hart, O.D. (1986), "The Costs and Benefits of Ownership: A Theory of Vertical Integration," *Journal of Political Economy*, Vol. 94, pp. 691-719; Hart, O. D. and Holmström, B. (1987), "The theory of Contracts," in *Advances in Economic Theory: Fifth World Congress*, Bewley, T. (ed), Cambridge University Press: Cambridge and more recently in Hart, O. D. (1998), "Incomplete contracts", Eatwell, J., Milgate, M. and Newman, P. (eds), *The New Palgrave : A Dictionary of Economics*, London: Mcmillan, Vol. 2, 752-759.

There are two factors, present under the current circumstances, which increase the perceived magnitude of regulatory risk.

First, the extent to which the regulator can act in a discretionary way. The more discretion the regulator is allowed the more ease with which it can expropriate firms' surpluses generated by sunk investments, that would otherwise be returned to the firm.

Second is the extent to which firms perceive regulatory policy to be random or difficult to predict. Perceived uncertainty about regulatory policy arises for a number of reasons including - regulators having private information about their preferences or information that could affect regulatory outcomes; regulators themselves changing policy in an unpredictable way; regulatory rules not being well defined; and, regulatory rules involving explicit uncertainty.

As noted, increased regulatory risk can discourage investment. This is because the risks faced by investors due to hold-up and other risks associated with over-broad regulatory discretion adds to the variance of returns from the regulated firms relative to other possible investment options. Therefore investors will require a higher return for this extra element of risk introduced by regulation, especially as this risk cannot be fully hedged[38]. One important empirical study which has confirmed these relationships is due to Bittlingmayer[39] who found that antitrust case filings (as a proxy for regulatory risk) has had a severe impact on the level of investment in the US over the period 1947-91. In addition, Ergas et al has used statistical theory and a simulation study to demonstrate that the standard Capital Asset Pricing Model (CAPM) of financial theory tends to underestimate the magnitude of regulatory risk. This finding has obvious implications for the weight that regulators should place on this issue.

The discouragement of investment because of an environment of high regulatory risk may have particularly severe effects in the mobile telecommunications industry for three reasons. First, the mobile telecommunications industry is one that is undergoing substantial development - for example, at the current time a number of players are considering deploying 3G networks. Regardless of whether or not the Commission's decision on mobile termination will directly affect the return on that investment (this depends on whether or not the cost-based principle will apply only to 2G or to 3G as well) the fact that the Commission is not taking a rigorous and transparent approach to regulation may make 3G investors think twice about what may happen further down the track. In effect, they may fear getting 'held up' by the future regulation.

Second, because mobile networks represent real multi-platform competition (ie, an alternative to the fixed network) distortions to mobile investment will not only affect competition for mobile services, but it will also have repercussions for competition in fixed voice telecommunications services. In particular, any undermining of investment in the mobiles sector may reduce the potential for this sector competing with the fixed voice sector, resulting in foregone gains to consumers. In addition, the increased scarcity of capital in the mobile telecommunications industry that may result from the developments discussed here would also act as a barrier to future entry. This is because potential entrants may prefer to invest in other markets that are subject to more sensible and principled regulatory scrutiny and which have correspondingly lower regulatory risk.

38 For more details see Ergas, H, J. Hornby, I. Little and J. Small 2001, 'Regulatory risk', Paper prepared for the ACCC Regulation and Investment Conference, Manly, 26-27 March 2001.

39 Bittlingmayer, G. (2001), "Regulatory Uncertainty and Investment: Evidence From Antitrust Enforcement," *CATO Journal*, Vol. 20 (3), pp. 295-325.