SUBMISSION TO THE AUSTRALIAN COMPETITION AND CONSUMER COMMISSION

vodafone

Access Undertaking

Mobile Termination Access Service

23 March 2005

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Overview

On 21 March 2005, Vodafone Australia submitted an Access Undertaking ("the Undertaking") to the Australian Competition and Consumer Commission pursuant to the Trade Practices Act in relation to the Mobile Terminating Access Service (MTAS). The Undertaking is for 3 years and only applies to the supply of the MTAS for voice calls supplied on Vodafone's 2G/2.5G mobile network ("the Service").

Structure of the Undertaking

The Undertaking consists of the following elements:

- Non price terms set out in the Agreement ("the Agreement") which are attached to the undertaking;
- A definition of the Service to be supplied by Vodafone to Access Seekers ("the Service") which is contained in Part A of the Service Schedule to that Agreement ("the Service");
- Prices for the MTAS for each calendar year ("Usage Charges") which are contained in Part B of the Service Schedule; and
- A fixed-to-mobile (F2M) Pass-through Safeguard ("F2M Safeguard") which is contained in Part C of the Service Schedule and which provides incentives to fixed carriers to reduce their F2M retail prices over the same period that Vodafone reduces its Usage Charges for the Service.

Usage Charges

In considering whether to accept or reject an Access Undertaking, the Commission is required by s152BV(2) to satisfy itself that the terms of the Undertaking are consistent with the relevant statutory criteria, ie., the Standard Access Obligations ("SAOs") and "reasonableness" including the long term interests of end-users ("LTIE"), the legitimate business interests of the Access Provider, interests of Access Seekers direct costs, and the economically efficient operation of networks.

The Usage Charges for the Service proposed in the Undertaking involve a glide path in equal absolute decrements from current market rate (21 cents per minute) to a "target Usage charge" of 16.15 cents per minute from1 January 2007. Vodafone considers that its proposed MTAS Usage Charges are consistent with the statutory criteria for the reasons outlined below.

A price which was consistent with the Commission's definition of TSLRIC+ as recommended in its Final Decision and its 1997 Access Pricing Paper, is likely to be consistent with the statutory criteria. However, TSLRIC+ is not the only approach which would be consistent with those criteria. A number of approaches would be consistent provided they were robust proxies for the forward-looking efficient economic cost of providing the service.

In order to calculate the target Usage Charge, Vodafone engaged PricewaterhouseCoopers ("PwC") to undertake cost modelling of the forward-looking efficient economic costs of supplying the service to the extent possible given time, cost and data constraints. PwC and Vodafone concluded that a bottom up modelling exercise was not possible within those constraints. The proposed target Usage Charge is therefore based on a Fully Allocated Cost (FAC) approach, which is underpinned by current cost asset valuation principles to ensure a closer approximation of forward-looking efficient economic costs. This approach:

- is forward-looking to the extent that network capital assets have been re-valued;
- is conservative since the application of tilted annuity depreciation is likely to underestimate capital costs compared to cash-flow based economic depreciation and a number of cost allocation assumptions are also conservative (in particular, the treatment of customer care costs);
- is assumed to be efficient, since there is no basis on which to presume – in the face of long-standing competitive pressure – that Vodafone's network architecture and operating expenditure are not efficient; and
- observes the general principles of robust cost modelling – cost causality, transparency and reconcilability.

This modelling indicates a target Usage Charge of 16.15 cents per minute.

As the Commission has acknowledged, comprehensive calculations of TSLRIC+ require substantial time and data. The "first best" approach to determining forward-looking efficient economic costs is likely to be a TSLRIC+ model calculated on a "bottom-up" basis, and then reconciled with top-down accounting data to ensure its hypothetical assumptions are realistic. When bottom up modelling exercises for the MTAS have been attempted, however – for example in the UK, Sweden and Greece, they have taken up to two years to complete.

The proposed Undertaking would apply for 3 years from the date on which the Commission accepts it. As far as Vodafone is aware, neither the Commission nor any carriers have commenced, nor plan to commence a substantial bottom up cost modelling exercise. Vodafone's proposed price is therefore likely to be the price most consistent with the statutory criteria available during the term of the Undertaking.

Vodafone also considers that its proposed target Usage Charge represents a far more robust proxy for the forward-looking efficient economic costs of the MTAS on Vodafone's network than the Commission's "target price" published in Schedule 2 of MTAS Determination. That "target price" of 12 cents per minute (cpm) was determined on the basis of conversions of unadjusted overseas cost estimates, and unadjusted historic cost accounting data submitted under the Regulatory Accounting Framework. As consistently indicated to the Commission during the Mobile Services Review, Vodafone does not consider that either of the approaches provide reasonable guidance as to the forward-looking efficient economic costs of the MTAS, and specifically does not provide “TSLRIC+”, a “reasonable estimate of TSLRIC+”, or the identification of a “range of reasonable estimates of TSLRIC+”.

Key assumptions

It is important to understand the approaches to key issues which underpin the proposed target Usage Charge, and the reasons why Vodafone has taken the approach it has. This includes the approaches to inflation and efficiency gains, and also to welfare-maximising outcomes – that is, allocating fixed and common costs using Ramsey pricing principles and adding a mark up to represent network externalities.

In relation to adjustments for forecast inflation and efficiency gains, Vodafone is proposing a glide path to the target Usage Charge using equal annual decrements. Ideally, the glide path (and outputs of the PwC model) would be adjusted for both forecast inflation and any efficiency gains that might be expected to be achieved in providing the Service over the term of the Undertaking.

At a general level, Vodafone concluded that adjusting for forecast CPI was unlikely to be sufficient to fully reflect likely cost inflators given that factors specific to the telecommunications industry are likely to have a significant effect. For example, the historic trend demonstrates that substantial costs such as wages in the telecommunications industry have exceeded the experience of factor inflation in the general economy. Further, to the extent future efficiency gains may or may not offset an increased inflation adjustment, the analysis would involve a degree of complexity and require significant data and time. Vodafone therefore elected not to make adjustments for potential forecast cost efficiencies or cost inflators since:

- there is no basis on which it can be presumed that any forward-looking efficiency gains are likely to exceed or even match inflation forecasts; and
- the available time and the complexity of the task involved in both forecasting factors which would inflate and deflate current costs did not allow it to fully and robustly calculate such significantly complex adjustments.

Vodafone reserves the right to review its position on this issue if given the opportunity to present its case on appeal.

Vodafone considers that welfare-maximising prices for the Service would be most consistent with the statutory criteria. Welfare-maximising prices involve:

- the adoption of Ramsey pricing principles in allocating fixed and common costs to services; and
- a mark-up to reflect the presence of network externalities.

Vodafone requested Frontier Economics to model the likely welfare-maximising prices for the Service and provides this analysis to the Commission as part of this submission. However, Vodafone has not included the outputs of the Frontier analysis in the target Usage Charge. This is because Vodafone wishes to ensure an orderly and timely assessment of the Undertaking by the Commission.

In response to previous submissions on these issues, the Commission appears to be vigorously opposed to considering welfare-maximising prices for the Service to the point of having predetermined its position. Vodafone considers, for the reasons set out in this submission, previous submissions[1] and also the paper by Frontier Economics (contained in Appendix 3), that the Commission's prior views on these issues are flawed. Vodafone considers, as a matter of economic theory, that Ramsey pricing and the inclusion of a mark-up to reflect network externalities, is the approach likely to be most consistent with the relevant statutory criteria since it produces efficient, welfare-maximising prices.

Vodafone reserves the right to review its position on these issues if given the opportunity to present its case on appeal.

The results of the modelling by Frontier Economics indicate that the welfare-maximising price for the Service is between 22.32 and 32.73 cents per minute. The estimate of the externality mark up ranged between 4.23 and 8.29 cents per minute whereas the Ramsey mark up for fixed and common costs ranged between 6.40 and 14.58 cents per minute. The range exists due to an acknowledgement of a degree of uncertainty surrounding various input values, in particular elasticities and also market wide fixed and common costs. However, the Commission and other regulators have regularly incorporated similarly complex decision-making and data into their determinations while acknowledging the limitations of available data, and using the available data provided they ascertain the range of outcomes which are possible given the uncertainties which arise from that data.

Vodafone did not adopt Ramsey and externality mark-ups for the reasons outlined above. However, the Commission can be assured that the target Usage Charge is therefore likely to be conservative compared with the price that would best satisfy the statutory criteria.

Glide Path

Vodafone implicitly adopts Ramsey pricing concepts to allocate and recover fixed and common costs across the various products and services it supplies. As the Commission is aware, the elasticities of demand for outgoing calls and subscription services are higher than the elasticities of the MTAS. Consequently, the Service is currently priced (implicitly) on the basis that it recovers a higher proportion of fixed and common costs than will be the case under Vodafone's undertaking. In order to move to the target Usage Charge for the Service, Vodafone must therefore rebalance its prices to move from an implicit Ramsey allocation to

[1] Frontier Economics, *Principles Governing the Regulation of Fixed-to-Mobile Termination: Report prepared for Vodafone Australia*. 2 September 2003.

an equi-proportionate mark up (EPMU), which requires substantial price changes for not only the Service, but also outgoing calls and subscription services.

There are substantial constraints on this exercise, not least of which is the fact that Vodafone must re-allocate [c-i-c] in present value terms from the Service to other services Vodafone provides including outgoing calls and subscription prices over the term of the Undertaking. To require such substantial price changes over a short period of time would not be possible, and would certainly not be consistent with the statutory criteria. The long term interests of end-users would not be served by sudden price rises for subscription and outgoing calls. Price changes impact on a wide range of long-term business planning, commercial and marketing projects, many of which have committed resources on the basis of the current pricing structures. This process, as well as customers and shareholders, rely upon predictability and certainty in the regulatory regime.

The Commission is currently considering an Undertaking from one firm – Vodafone – in a competitive market of 4 major infrastructure operators. The markets within which subscription and outgoing calls are provided are highly competitive. In the short term, therefore, it is possible that Vodafone's legitimate business interests would be harmed by sudden price movements which would reduce its relative market share. Over the longer term, however, the Commission's declaration is more likely to require all firms which provide the MTAS to perform such a re-allocation to the extent that they also currently implicitly price on a Ramsey basis.

Vodafone's legitimate business interests require a sufficient time period to perform such a fundamental re-allocation of costs and re-pricing of a range of services. Vodafone has made significant investments in the infrastructure required to provide the Service on the basis of the Commission's previous light-handed approach to regulating the Service. To immediately implement an alternative approach to pricing the Service will impact investment incentives moving forward. Any immediate implementation of the target Usage Charge would therefore cause substantial disruption to Vodafone and its subscribers which Vodafone does not consider to be in the long term interests of end-users or Vodafone's legitimate business interests.

Vodafone therefore considers that the statutory criteria require the Commission to ensure a glide path is implemented which is appropriate to address these considerations. Vodafone considers that the minimum time period in which it would be able to perform the re-allocation without substantial detrimental impacts is 3 years.

The Usage Charges proposed in the Undertaking are therefore the following:

Validity Period	Usage Charge (cents per minute)
1. 1 July 2004 – 31 December 2004	21
2. 1 January 2005 to 31 December 2005	19.38
3. 1 January 2006 to 31 December 2006	17.77
4. 1 January 2007 to 30 June 2007	16.15
5. Any subsequent Validity Periods	16.15

The decision by Vodafone to submit the Undertaking does not in any way detract from its view that there is no justification for the MTAS to be declared under Part XIC of the TPA. It should be noted that Vodafone has applied for judicial review of the Commission's Final Decision regarding the MTAS[2] in relation to the "target price" contained in Annexure 2 to that decision.[3] The Undertaking, this submission and attachments are submitted on the basis that Vodafone makes no admissions about, or relating to, the matters in issue in that proceeding, and without prejudice to its position in that proceeding.

Fixed to Mobile Pass-through Safeguard

The other key element of the Undertaking is the fixed-to-mobile (F2M) Pass-through Safeguard ("F2M Safeguard"). In essence the F2M Safeguard aims to provide a "backstop" mechanism which ensures that reductions in prices for the Service do not simply result in a value transfer from providers of the Service to fixed originating operators, but rather a net increase in consumer welfare and economic efficiency through an associated reduction in retail prices for F2M calls.

Vodafone consistently submitted during the Commission's Mobile Services Review that declaration of the Service would not provide any meaningful benefits to end-users unless and until the issue of F2M pass-through (and high F2M prices) was addressed. Vodafone's view was based on evidence suggesting that average F2M prices had not reduced at anywhere near the same rate as the prices for the MTAS. This was particularly the case for residential customers. It was also based on the view that the market within which F2M services were provided was not sufficiently competitive, nor was there a reasonable prospect for this market to become competitive in the near term, so that F2M retail prices were unlikely to fall as

[2] ACCC, Mobile Services Review – Mobile Terminating Access Service: Final Decision on whether or not to the Commission should extend, vary or revoke its existing declaration of the mobile terminating access service. June 2004. page xviii and Appendix D.
[3] Vodafone Australia Limited & Vodafone Network Pty Limited v Australian Competition and Consumer Commission – No. 1151 of 2004.

quickly as prices for the MTAS. This was supported by the analysis the Commission had undertaken for the Mobile Services Review.[4]

Vodafone is therefore proposing a F2M Safeguard in the Undertaking which requires the access seeker to follow an average F2M retail price for the access seeker to gain access to lower Usage Charges for the Service. The objective of the F2M Safeguard is to provide an incentive for fixed carriers to gradually glide down their F2M retail prices to competitive levels to ensure the price reflects, by the end of the Undertaking, the underlying cost of production.

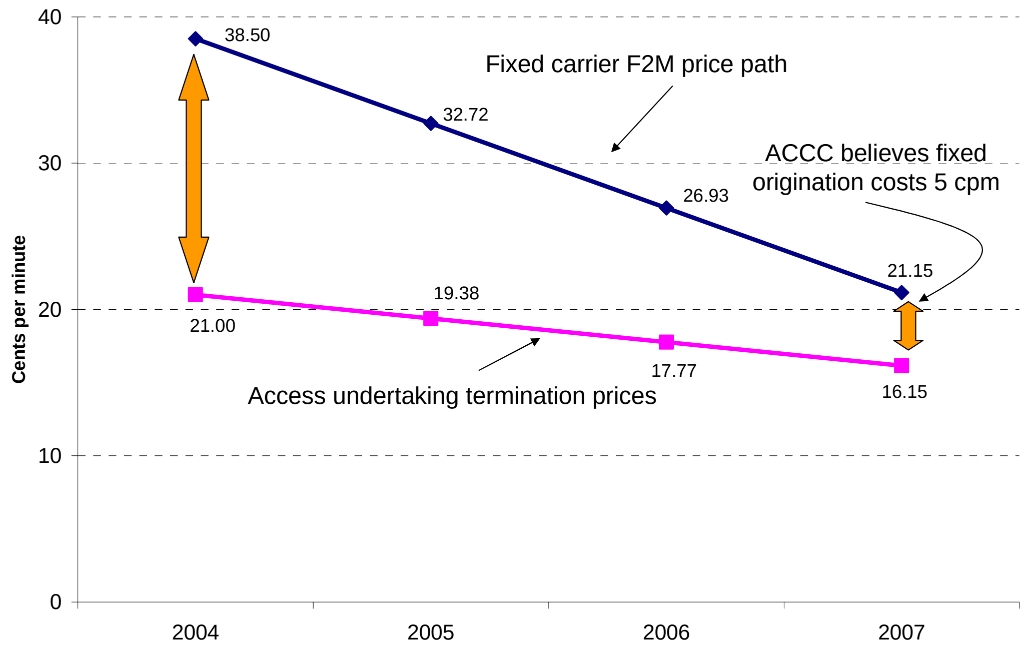
Competition itself may address the issue of pass-through and high F2M retail prices. If this is the case, the F2M Safeguard will be redundant. However, in the event that increased competition in the market within which F2M services does not eventuate or does not eventuate to the extent necessary to erode the substantial margins fixed operators appear to earn on F2M prices, then the F2M Safeguard will provide incentives for the fixed operators to glide their retail prices down to competitive levels. The F2M Safeguard will therefore provide greater benefits to end-users of telecommunication services.

The F2M Safeguard involves the following:

- setting out the glide path to the target Usage Charge for the Service price over the term of the Undertaking;
- a F2M retail price path calculated using an estimate of the current average F2M price in the market as the starting point and with a target price equal to the Service target Usage Charge for the Service plus a conservative estimate of the cost of fixed origination and transmission; and
- linking proposed reductions in Usage Charges for the Service to an Access Seeker gradually reducing its average retail F2M prices to competitive levels. If Access Seekers are offering F2M retail prices at competitive levels, they are likely to be pricing the F2M service well below the F2M Safeguard price path and thus the F2M Safeguard would have no effect.

The following chart outlines the proposed price paths for the Service and the F2M Safeguard price path.

[4] See ACCC, Final Decision, page 104.



The F2M Safeguard price path has therefore been designed in the following manner:

- a starting F2M price for 2004 of 38.5 cents per minute has been established. This is the Commission's estimate of Telstra's average F2M retail price for the second half of 2003;
- a target F2M price for calendar year 2007 has been established by summing Vodafone's target Usage Charge for the Service (16.15 cents per minute) and an estimate of the cost of fixed origination and transmission (5 cents per minute). The target F2M price for 1 January 2007 onwards is therefore 21.15 cents per minute. The estimate of the cost of fixed origination and transmission is also sourced from the Commission's Final Decision; and
- three equal annual decrements of 5.78 cents per minute from 2004 to 2007.

Vodafone provides more detail in relation to all of the issues outlined above in the following submission.

1. Introduction

On 26 November 2004, Vodafone Australia ("Vodafone") lodged an Access Undertaking ("the Undertaking") with the Australian Competition and Consumer Commission ("the Commission") pursuant to the Trade Practices Act 1974 ("the TPA").

Vodafone's Undertaking is in relation to the Mobile Terminating Access Service (MTAS) for voice calls supplied on Vodafone's 2G/2.5G network ("the Service") and comprises:

- the Undertaking to the Commission and Access Agreement; and
- this submission supporting the Undertaking (and its Appendices)

This structure of this submission in support of the Undertaking is as follows:

- Section 1 - Introduction
- Section 2 – Approach to pricing the Service;
- Section 3 – Consistency of the Undertaking with the Statutory Criteria;
- Appendix 1 – A paper by PricewaterhouseCoopers on cost modelling;
- Appendix 2 – Weighted Average Cost of Capital; and
- Appendix 3 – A paper by Frontier Economics on modelling welfare-maximising prices for the Service.

Two versions of each Appendix have been developed: a confidential version for the Commission and a non-confidential version. The non-confidential versions can be provided to parties interested in this Undertaking.

In this submission:

- the provisions of the Trade Practices Act 1974 (Cth) are referred to as "sections", "sub-section" and "paragraphs"; and
- the provisions of Vodafone's Undertaking are referred as "clauses".

Vodafone has not explicitly adopted the Model Terms and Conditions for the GSM Terminating Access Service contained in the Telecommunications Access Code developed by the Telecommunications Access Forum (Model Terms), since they were developed some years ago, and do not reflect current industry best practice. Although Vodafone considers that the non-price terms of this Undertaking are broadly consistent with the Model Terms, Vodafone submits this Undertaking pursuant to section 152BU of the TPA. Accordingly, the Commission must not accept the Undertaking unless it meets the criteria specified in sub-section 152BV(2). The Undertaking will apply for 3 years from the date on which it is accepted by the Commission.

As is demonstrated in this submission, Vodafone believes that the terms of its proposed Undertaking are fair and reasonable and consistent with the relevant statutory criteria. The Undertaking, if accepted, will provide Access Seekers and Vodafone significant commercial certainty in relation to the terms and conditions, including price, on which the Service will be provided over the term of the Undertaking. This certainty is important for future investment and business decisions for both Vodafone and Access Seekers.

The decision by Vodafone to submit the Undertaking does not in any way detract from its view that there is no justification for the MTAS to be declared under Part XIC of the TPA. It should be noted that Vodafone has applied for judicial review of the Commission's Final Decision regarding the MTAS[5] in relation to the "target price" contained in Annexure 2 to that decision.[6] The Undertaking, this submission and attachments are submitted on the basis that Vodafone makes no admissions about, or relating to, the matters in issue in that proceeding, and without prejudice to its position in that proceeding.

Vodafone believes that the basis and methodology underpinning the Commission's "target price" outlined in Annexure 2 (particularly the 12 cents per minute "target price") are substantially flawed. If the Commission's "target price" as outlined in the Final Decision were reflected in commercially negotiated rates for the MTAS in the market, Vodafone believes that it would significantly under-recover the efficient economic costs of providing the Service.

Vodafone's decision to submit the Undertaking has not been taken lightly. Vodafone strongly believes, on the basis of its own cost modelling and its stated concerns with the Commission's decision-making process during the Mobile Services Review, that the forward-looking efficient economic cost of providing the Service in Australia is substantially higher than the Commission's "target price" of 12 cents per minute. The Undertaking is therefore necessary to ensure consistency with the relevant statutory criteria set out in Part XIC of the Trade Practices Act including reasonableness, the LTIE and an Access Providers legitimate business interests in ensuring it is able to earn a fair and reasonable return on its investment.

Vodafone believes that its proposed Undertaking is fair and reasonable, is consistent with the relevant legislative criteria, and provides an appropriate balance between Vodafone's commercial interests and those of access seekers.

Vodafone has had regard to a substantial volume of information and data in developing the Undertaking and these submissions in support of the Undertaking. Much of that data is already in the Commission's possession since it was provided to the Commission in the context of the Mobile Services Review. Vodafone has noted throughout this submission where it refers to and specifically relies on such information in support of its submissions in

[5] ACCC, Mobile Services Review – Mobile Terminating Access Service: Final Decision on whether or not to the Commission should extend, vary or revoke its existing declaration of the mobile terminating access service. June 2004. page xviii and Appendix D.
[6] Vodafone Australia Limited & Vodafone Network Pty Limited v Australian Competition and Consumer Commission – No. 1151 of 2004.

respect of the Undertaking. Please advise if the Commission would like us to provide fresh copies of that information for your convenience.

2. Approach to pricing the Service

This section of the submission outlines the approach that Vodafone has adopted to pricing the Service in the Undertaking. The Appendices to this submission explain in more detail the basis of the target price for the Service.

Vodafone believes that, in the context of the current declaration of the MTAS and the Commission's pricing principle, the following approach to pricing the Service would be the approach most likely to be consistent with the relevant statutory criteria:

- developing a detailed bottom up total service long run incremental cost (TSLRIC+) model to identify the incremental costs of proving the various products and services and also those costs that are fixed and common across all products and services;
- reconciling the results of the bottom up modelling with top-down fully allocated cost data to ensure all costs have been captured;[7]
- those costs identified as fixed and common across the range of services would be allocated using Ramsey pricing principles;
- the Ramsey allocations would be based on own price and cross price elasticities calculated using data from the Australian mobile telephony market;
- an externality mark up would be applied to the price of the MTAS to recognise the external benefits that result from increased mobile subscription; and
- the glide path down towards these prices would be broadly consistent with the Commission's approach of equal annual decrements over a minimum of three years.

In practice, however, as the Commission acknowledged in its Final Decision, a detailed bottom-up modelling exercise would involve significant cost, time and complexity. Consequently, PricewaterhouseCoopers (for Vodafone) has not developed such a bottom up model. The proposed target Usage Charge is instead based on a Fully Allocated Cost (FAC) approach, which is underpinned by current cost asset valuation principles to ensure a closer approximation to forward-looking efficient economic costs.

In addition, Frontier Economics has conducted an analysis of the likely effects on the estimate of forward-looking efficient economic costs of providing the Service when adopting Ramsey pricing principles to allocate the fixed and common costs and also the likely size of the external benefits that arise in the Australian mobile telephony market. The analysis of Ramsey prices and externalities suggests substantially higher prices than the top-down modelling indicates by itself.

[7] Vodafone notes that the experience in the UK demonstrated that it is important to reconcile the results of bottom up modelling with the mobile operators' actual costs to ensure that the results are reasonable and that all costs have been accounted for.

However, Vodafone has chosen not to adopt these outputs in its target Usage Charge. This is because Vodafone wishes to ensure an orderly and timely assessment of the Undertaking by the Commission. In response to previous submissions on these issues, the Commission appears to be vigorously opposed to considering or including either markup to the point of having predetermined its position. Vodafone considers, for the reasons set out in this submission, previous submissions[8] and also the paper by Frontier Economics (contained in Appendix 3), that the Commission's prior views on these issues are flawed. Vodafone therefore reserves the right to review its position if given the opportunity to present its case on appeal.

This section of the submission and the Appendices outline in more detail the approach that has been adopted.

2.1 Background

During the Commission's Mobile Services Review, Vodafone submitted that declaration of the service was not justified and not in the LTIE and therefore believed that a Pricing Principle was not necessary.[9] The view expressed by Vodafone at that time was therefore in the context of the Commission's decision to re-declare (or not re-declare) the MTAS. Notwithstanding the lodgement of this Undertaking, Vodafone's view remains that the Commission's declaration of the MTAS and the Commission's "target price" are not in the LTIE.

In its Draft Decision, the Commission decided that "…it would be more appropriate [compared to the retail benchmarking approach] to determine a 'target' price for the mobile termination service based on benchmarking against a range of estimates of the cost of providing the mobile termination service". The Commission decided that "…a new pricing principle should be adopted that ensures the price of the mobile termination service gradually decreases towards a conservative benchmarked target of 12 cents per minute over a staged adjustment period commencing on 1 July 2004 and concluding on 1 January 2007."[10]

In response to the Commission's Draft Decision, Vodafone encouraged the Commission "…to consider not publishing a Pricing Principle and [to] release a Final Decision only in respect of whether the mobile termination service should be re-declared or varied."[11] This was due to what was, in Vodafone's view, the insufficient consideration that had been given to the development and appropriateness of the Commission's Pricing Principle and the unsubstantiated nature of the Commission's "target price".

[8] Frontier Economics, *Principles Governing the Regulation of Fixed-to-Mobile Termination: Report prepared for Vodafone Australia*. 2 September 2003.

[9] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to the Mobile Services Discussion Paper, 13 June 2003 at paragraphs 3.18-3.30, 3.70-3.75; and Vodafone's Submission to the Draft Decision, 30 April 2004 at sections 2.4, 6, 7, 8.

10 ACCC, Draft Decision, pages xvi and xvii.

11 Vodafone Supplementary Submission to the Commission in response to the Draft Decision. Page 5.

Vodafone also proposed a number of changes to the Commission's draft pricing principle including:

- that F2M pass-through being explicitly addressed in the Pricing Principle. To inform the market about the issue of pass-through, Vodafone suggested that the Commission establish a monitoring program involving all providers of F2M calls;
- an alternative approach involving the imposition of an interim price cap, in the form of CPI-X, to apply to the MTAS. This would be in place for a maximum of two years commencing on 1 January 2005 and ending 1 January 2007 – thereby involving three step change reductions in mobile termination prices. Vodafone suggested that the X factor should be set conservatively at 5 per cent per annum. This would have the effect of ensuring a downward pressure on prices during the period while acknowledging the significant uncertainty surrounding the appropriate price of the MTAS in Australia (including the appropriate mark ups using Ramsey adjustments and quantification of relevant externalities);
- the Pricing Principle should only apply to 2G mobile networks. This was due to the fact that the costs of terminating voice calls on 3G networks and the expected demand are not properly understood globally let alone in Australia. Also, Vodafone noted that the Commission had had no regard to 3G cost data or modelling to arrive at its target price of 12 cents per minute and that there was also likely to be little (if any) discernible benefit to be realised from any regulation of 3G networks in Australia. Given this, Vodafone proposed that any Pricing Principle (and in particular the 'target price') should only apply to 2G networks; and
- the Commission should include a longer glide path of five years than that proposed in the Draft Decision of three years.

Although the Commission chose not to adopt any of these suggested amendments in its Final Decision, Vodafone has decided to adopt some of these concepts within the framework of the Undertaking. The Commission did, however, in its Final Decision, provide some clarification around its suggested Pricing Principle to apply to the access service. According to the Commission's Final Decision:[12]

> "The price of the Domestic Mobile Terminating Access Service should follow an adjustment path such that there is a closer association of the price and underlying cost (i.e. TSLRIC+) of the service.
>
> This adjustment path should have the following characteristics:
>
> - the starting price should be set at the lowest price at which the service is being supplied;

[12] ACCC, Final Decision, Appendix D, page 244.

- the end price should be set at the upper end of the range of reasonable estimates of the TSLRIC+ of supplying the service that are currently available;
- the adjustment path should commence on 1 July 2004 and conclude on 1 January 2007;
- decrements should initially be made on a six monthly basis then, as prices become more proximate to TSLRIC+, be made on an annual basis; and,
- each decrement between the start price and end price should be of equal amount."

2.2 TSLRIC+

The Commission defines the concept of total service long run incremental cost (TSLRIC+) in its Final Decision:[13]

> "The concept of TSLRIC can be understood by breaking it up into its components:
>
> - 'Total service' refers to it being the cost of production of an entire service (or an entire production element) not to the cost of a particular unit. However, with respect to carriage services, it is usually expressed on a per-minute basis by dividing the annual total service cost by the number of minutes carried.
> - 'Long run' refers to it being a long-run cost concept in contrast to a short-run one. In the short run the amount of at least one factor of production (usually capital equipment) is fixed, while in the long run all factors of production can be varied.
> - 'Incremental cost' means that it is a form of 'marginal cost', although not the more familiar 'marginal cost' of the change in cost incurred through a change in the amount of output produced.
>
> It is also an attributable cost concept as it refers only to those costs that can be attributed to the production of the service. Costs common to more than one service cannot be attributed to a particular service and therefore do not form part of a 'pure' TSLRIC. However, in practice, it is sometimes defined to include a contribution to organisational-level costs ('TSLRIC+').
>
> Given these attributes, TSLRIC can be defined in the following alternative ways:
>
> - it is the incremental or additional cost – on an annual basis – the firm incurs in the long run in providing a particular service (or production element) as a whole, assuming the scale of all of its other production activities remain unchanged; or
> - it is the total cost (on an annual basis) the firm would avoid in the long run if it ceased to provide the service as a whole."

[13] ACCC, Final Decision, page 204.

Vodafone notes, however, that there are some differences between its view of what TSLRIC+ means and the Commission's view, namely:

- Vodafone believes that the '+' component of TSLRIC+ is the allocation of all fixed and common costs identified to all products and/or services provided by the access provider. The Commission however refers to the "+" as an allocation of "organisational-level costs". Vodafone believes that a significant portion of costs associated with operating and maintaining mobile telephony networks are fixed and common and that they are not just limited to "organisational level costs" as implied by the Commission;
- Vodafone also believes that the appropriate approach to allocating the level of fixed and common costs to individual products and services is to adopt Ramsey pricing principles. Although the Commission expresses a preference for the application of the equi-proportionate mark up approach (EPMU) to allocating fixed and common costs, Vodafone believes that the adoption of Ramsey pricing would be consistent with the statutory criteria relevant to the Commission's decision to accept or reject this Undertaking.

2.3 Cost modelling for calculating the forward-looking efficient costs of supplying the Service

As mentioned above, PwC (for Vodafone) has developed a top-down fully allocated cost model to estimate the forward-looking efficient economic costs of providing the Service. Appendix 1 outlines in more detail the cost modelling approach that has been developed (however, Vodafone-specific data has been submitted to the Commission on a commercial in confidence basis).

The modelling uses a Fully Allocated Cost (FAC) approach, which is underpinned by current cost valuation principles to ensure a closer approximation of forward-looking efficient economic costs. The approach:

- is forward-looking to the extent that network capital assets have been re-valued;
- is conservative in that the application of tilted annuity depreciation is likely to underestimate capital costs compared to cash-flow based economic depreciation and also due to a number of cost allocation assumptions (in particular customer care costs);
- is assumed to be efficient since there is no basis on which to presume – in the face of long-standing competitive pressure – that Vodafone's network architecture and operating expenditure are not efficient; and
- observes the general principles of robust cost modelling – cost causality, transparency and reconcilability.

The top-down fully allocated cost modelling that has been developed uses a mix of accounting and operations data for Vodafone Australia for the year ended 31 March 2003.[14] The model starts with Vodafone Australia's accounting data. However, for network capital costs (depreciation and return on capital), the accounting straight-line depreciation was replaced with a tilted annuity calculation. A tilted annuity calculation takes into account forward-looking changes in asset prices. Non-network capital costs were taken from Vodafone Australia's accounting data. The modelling only relates to Vodafone's 2G mobile network and takes into account no costs for a 3G network or any other mobile technology. As such, it is not appropriate to draw any conclusions regarding the likely economic costs of providing the MTAS over other mobile networks or technologies.

All costs are allocated to six services: incoming calls, outgoing calls, on-net calls, SMS messages, GPRS and the subscription "service" or event. The costs are allocated in two different ways: directly to services, and indirectly to services through secondary allocation. The direct costs are costs which can be directly allocated to a service, or a set of services, using service routing (usage) factors. Indirect costs have been allocated in proportion to the directly allocated costs.

As mentioned above, the tilted annuity uses a current cost valuation to Vodafone's network assets. This asset valuation has been conducted on the basis of Vodafone's current network architecture (a "scorched node" approach in the Commission's terminology[15]). Vodafone considers that this is appropriate for the Undertaking. Furthermore, Vodafone considers that this approach is most consistent with the statutory criteria (including the presumption that an Access Provider is entitled to the direct costs of providing access, the legitimate business interests of Access Providers and the economically efficient operation of the network).

In particular, the Commission should assume that Vodafone's current network architecture is efficient. Given the competitiveness of the Australian mobiles market, Vodafone has had and continues to have a substantial commercial imperative to ensure its network architecture is efficient. Moreover, Vodafone Australia is part of Vodafone Group, which is the largest group in the world specialising in mobile products and services and has access to expertise and global pricing which produces efficient results. Vodafone considers therefore that there is unlikely to be a material difference between the results of the modelling approach adopted for this Undertaking and the forward-looking efficient costs of a hypothetical mobile network operator with an efficient and optimised network architecture.

Vodafone also notes that the figure of 16.15 cents per minute is based on treating customer care costs as an incremental cost to the subscription service and therefore no customer care costs are allocated to other services Vodafone provides including the Service. However, Vodafone believes that there are robust arguments for customer care costs to be treated as

[14] Audited data for financial year ending 31 March 2004 was not available at the time the modelling exercise commenced.
[15] ACCC, Pricing Methodology for the GSM Termination Service, Draft Report, December 2000, page 47.

common to all services including the Service. This is because customer care costs are not incremental to the subscription service but rather a cost incurred in the ongoing maintenance and management of the subscriber base that supports all services provided (incoming, outgoing, SMS, etc). Furthermore, if a mobile carrier only provided an incoming service (and therefore customers could not make calls) the same costs would be incurred in relation to customer care. If customer care costs are treated as a common cost, the target Usage Charge would increase from 16.15 cents per minute to 17.06 cents per minute.

However, Vodafone has chosen to allocate customer care costs to the subscription service for the purposes of ensuring an orderly and timely assessment of the Undertaking by the Commission. This further demonstrates that the target Usage charge in the Undertaking of 16.15 cents per minute is very conservative in terms of what could be reasonably justified to be consistent with the statutory criteria. Again, Vodafone reserves the right to review its position on this issue if given the opportunity to present it case on appeal.

Given that the modelling involves a top-down approach, it does not by itself separately identify the incremental costs of providing each product or service that Vodafone provides and the costs that are fixed and common to all services. PwC has therefore conducted a separate high level analysis of Vodafone Australia's 2G mobile network to determine the proportion of costs that are likely to be fixed and common. This analysis concludes that between [c-i-c] and [c-i-c] per cent of Vodafone's annualised costs are fixed and common. This calculation of fixed and common costs is used in Frontier Economics' analysis of welfare-maximising prices for the Service discussed in section 2.5 of this submission and also Appendix 3.

2.3.1 Weighted average cost of capital

The cost modelling for the Service requires an assumption regarding the weighted average cost of capital (WACC). The WACC developed reflects investors' required rates of return for investments of similar risk to Vodafone investment in the infrastructure providing the Service in Australia. As outlined in Appendix 2, Vodafone has calculated the WACC based on established regulatory and financial market principles and practices.

Specific WACC parameter values have been developed from analysis of comparable Australian and overseas companies providing similar services to the MTAS. The WACC formulas applied reflect the Australian taxation regime, where required (post tax) returns on equity are able to be reduced by personal income tax savings associated with dividend franking credits (i.e. the dividend imputation scheme).

Vodafone has sought to adopt a straight-forward approach to developing the WACC values based on applying simple, transparent procedures and input data which is readily verifiable by the regulatory process. The WACC approach involves selecting some input parameter values from ranges of feasible values and selecting from alternative WACC methodologies. Such selection requires judgements to be made; for example in relation to relevant benchmarks and market conditions. In this regard Vodafone has sought to make reasonable choices within the range of possible choices and to arrive at WACC outcomes that are reasonable in terms of the criteria in section 152AH of the TPA, having regard to the objectives in section 152AB.

Vodafone's approach to calculating the WACC involves applying the post tax nominal WACC formula developed by RR Officer[16] as follows:

$$WACC = r_e * \frac{E}{V} * \left\{ \frac{(1-T)}{[1-T*(1-\gamma)]} \right\} + r_d * \frac{D}{V} * (1-T)$$

where:

r_e = post tax nominal cost of equity (pre imputation)

E = equity funding

T = corporate tax rate

r_d = pre tax nominal cost of debt

D = debt funding

γ = dividend imputation factor (gamma)

V = sum of debt and equity funding

Vodafone's approach to the calculating the WACC and the procedures used to derive the various parameter values are outlined in Appendix 2.

2.3.2 Results of cost modelling

The results of the cost modelling outlined above yields a figure of 16.15 cents per minute, which is used as the target Usage Charge for the Service in the Undertaking.

Vodafone considers that the target Usage Charge is consistent with the relevant statutory criteria since it:

- is forward-looking to the extent that network capital assets have been re-valued;
- is conservative in that the application of tilted annuity depreciation is likely to underestimate capital costs compared to cash-flow based economic depreciation and also due to a number of cost allocation assumptions (in particular customer care costs);
- is assumed to be efficient since there is no basis on which to presume – in the face of long-standing competitive pressure – that Vodafone's network architecture and operating expenditure are not efficient; and

[16] Officer R.R., The cost of capital of a company under an imputation tax system, Accounting and Finance, 34 1, May 1994.

- observes the general principles of robust cost modelling – cost causality, transparency and reconcilability.

Undoubtedly, the modelling approach and assumptions are substantially more robust than the modelling and analysis conducted by the Commission in deriving its target price of 12 cents per minute for the MTAS. This is discussed further in section 2.3.3 below.

2.3.3 Comments on Commission's methodology to determine 12 cent per minute

Vodafone does not consider that the process adopted by the Commission and the target price of 12 cents per minute determined as a result of that process by the Commission during the Mobile Services Review is likely to constitute a reasonable or robust derivation, estimate of range of reasonable estimates of TSLRIC+ or the forward-looking efficient economic cost of the providing the MTAS for Australia or on Vodafone's network.[17]

In developing a specific Pricing Principle for the MTAS the Commission indicated that:

> "…the Commission believes that total service long-run incremental cost (TSLRIC) – adjusted for a mark-up to include contributions to common organisational-level costs and set at a level that allows mobile operators a normal return on efficient investments (such mark-ups are sometimes referred to as TSLRIC+) – is the appropriate measure of costs towards which the price of the MTAS should trend. The Commission has not, however, modelled the TSLRIC+ of providing the MTAS in Australia. It believes such a modelling process would be time consuming and costly to implement. Rather, it has sought to estimate TSLRIC+ using reasonable cost estimates available to it."[18]

According to the Commission's Final Decision, the TSLRIC+ for the MTAS in Australia is likely to lie between 5 and 12 cents per minute. The Commission stated that its "target price" of 12 cents per minute for the MTAS in their Final Decision was therefore at the top of the Commission's "range of estimates of TSLRIC+" and is therefore considered to be a conservative approach.

The Commission used two sources to derive its "range of estimates of TSLRIC+" including the Regulatory Accounting Framework (RAFs) from Telstra, and to a lesser extent Optus, and also cost modelling benchmarks from international cost studies. The cost figure from the United Kingdom appears to establish the top end of the Commission's "range of estimates of TSLRIC+" although the Commission removed the externality mark up that the UK regulatory authorities had incorporated within its calculation. It is unclear from what data source or analysis the bottom end of the Commission's range is derived.

[17] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to the Draft Decision, 30 April 2004 at section 9; and Vodafone's Supplementary Submission to the Draft Decision, 1 June 2004 at sections 5-8.
[18] ACCC, Final Decision, page xviii.

Vodafone expressed a number of serious concerns with the Commission's approach to developing its "range of estimates of TSLRIC+" in its response to the Commission's Draft Decision.[19] While the Commission altered its analysis to a limited degree in its Final Decision, Vodafone remains concerned with the Commission's approach.

Vodafone considers that it is very important that overseas cost estimates or prices are not simply taken from their original context without accounting for any differences between the input costs or methodological approaches to regulatory costing. However, in its Final Decision, the Commission chose not to make any adjustments to overseas cost estimates as this was considered to be "…consistent with its broad approach".[20] Moreover, the Commission did not seek to understand in any detail why an overseas cost estimate may be different to the forward-looking efficient cost of providing the MTAS on an Australian mobile network.

Vodafone considers that it is self-evident that there are many reasons why the cost estimate for the MTAS may differ across countries. This is borne out by Vodafone's international experience of operating in 26 countries. Substantial variations will result from, for example, geographical coverage area (i.e. size of country), geographical terrain and urban/rural mix, traffic density, scale of operation (i.e. size of company), purchasing power, spectrum fees, mobile technology used, ratio of peak to off-peak traffic and grade of service. The Commission did not seek to understand any of these differences in any detail either to inform itself whether the overseas cost estimates were an appropriate cost estimate to be applied to Australia, or to appropriately adjust overseas cost estimates to ensure they more accurately reflected likely Australian costs. Without performing such an analysis, Vodafone does not believe that overseas benchmarking of termination rates can be used in any meaningful way in Australia.

Vodafone considers that the top-down fully allocated cost modelling PwC has developed for this Undertaking results in a substantially more robust calculation than the use of overseas benchmarks. Vodafone therefore has not used any overseas benchmarking to develop the proposed prices in this Undertaking.

The second component of the Commission's "range of estimates of TSLRIC+" was RAF data of Telstra, and to a lesser extent, Optus. According to the Commission, RAF data, and in particular the External Wholesale Account, can be used to derive a "TSLRIC+ proxy". [21] The Commission outlined in further detail, in a letter to Vodafone of 13 May 2004, the methodology it used to estimate a "TSLRIC+ proxy" from Telstra's RAF accounts.

Vodafone expressed significant concerns with using Telstra's (and Optus's) RAF data to develop a "TSLRIC+ proxy". These concerns remain. While a top-down modelling approach

[19] See Vodafone's Submission to the Draft Decision of 30 April 2004 and the Supplementary Submission dated 1 June 2004.
[20] ACCC, Final Decision, page 233.
[21] ACCC, Final Decision, page 237.

can be used to estimate the forward-looking efficient economic costs, the RAF data is considered inadequate for the following reasons:

- the RAF data is sourced from accounting statements. Further, the Commission made no adjustments to ensure asset values reflected forward-looking costs. Also, depreciation is based on accounting principles and no adjustments were made to the depreciation amounts to ensure they more closely reflected an economic approach to depreciation. In short, no adjustments were made to ensure these inputs approximated a forward-looking efficient economic cost approach;
- the allocation of costs is performed using Telstra's Regulatory Accounting Procedures Manual which involves allocating costs using activity based costing principles. Service routeing factors are considered a far superior and more widely accepted approach to allocating direct costs to the mobile products and services;
- neither Telstra nor Optus are mobiles only businesses, as Vodafone is, and they are therefore likely to enjoy greater economics of scale and scope. For example, mobile network costs, information technology costs, organisational costs, billing costs and customer care and support costs are all shared among the various services that are provided. It is unclear how these costs are treated in the formulation of the RAF and therefore whether the "TSLRIC+ proxy" calculation from the RAF is likely to be reflective of the forward-looking efficient economic cost of providing (or avoiding to provide) the MTAS by a mobile only business like Vodafone;
- the WACC used in the calculation is that estimated by Telstra. It is widely accepted that the cost of capital of a mobiles only business would be greater than that of business like Telstra; and
- top-down modelling of this kind is an average cost concept and does not seek to explicitly identify the long run incremental cost of providing the various services a mobile carrier provides or the level of fixed and common costs. While the likely amount of fixed and common costs can be reasonably estimated by understanding in further detail the configuration of the mobile network/s, without such an analysis it is not possible to apply Ramsey pricing principles in deriving the appropriate price for the MTAS in Australia; and
- it is overly simplistic and unrealistic to assume that the forward-looking efficient economic costs for mobile originating and terminating services are equivalent.

Finally, the Commission had no regard to any 3G cost data to derive its "range of estimates of TSLRIC+" for the MTAS in Australia, even though it sought to apply its "target price" to other mobile network technologies, including 3G. As noted in section 2.4 of this submission and also in Vodafone's submission to the Commission in response to the Draft Decision, these are different technologies with different cost structures.[22] Despite this, the Commission maintained that its approach to estimating the TSLRIC+ for the MTAS was valid in Australia irrespective of the mobile technology employed.

For these reasons (which have also been outlined in previous submissions to the Commission)[23], Vodafone considers PwC's calculation of forward-looking efficient economic costs for this Undertaking to be far more robust than the analysis conducted by the Commission for its Final Decision.

2.4 Third generation mobile networks

Vodafone is in the process of building a 3G mobile network. Vodafone anticipates that it will commercially launch a 3G service in Australia by October 2005. Given this, it is anticipated that voice and data traffic will commence terminating on the 3G network from that time. Vodafone will therefore be terminating voice traffic on its 3G network during the term of the proposed Undertaking.

However, Vodafone has decided not to include 3G voice termination in this Undertaking. Vodafone has taken this view in the context of some degree of uncertainty surrounding the nature, timing and scope of Vodafone's 3G investment and therefore the forward-looking efficient economic cost of providing the MTAS over a 3G network. In particular, cost and design issues like coverage, and also voice termination volumes are not yet resolved at this point in time. In any case, 3G terminating traffic is not expected to be significant over the term of the Undertaking. Vodafone's approach in this regard is consistent with its views previously expressed to the Commission in response to the Draft Decision.[24]

In relation to Vodafone's planned investment in a 3G mobile network, there are significant uncertainties which arise from the precise scope and other terms upon which Vodafone and Optus will co-locate and share certain aspects of the 3G network.[25] Although Vodafone and

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[22] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to the Mobile Services Review Discussion Paper, 13 June 2003 at paragraphs 3.31-3.41; and Vodafone's Submission to Draft Decision, 30 April 2004. section 2.

[23] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to the Draft Decision, 30 April 2004 at section 9.2; and Vodafone's Supplementary Submission to the Draft Decision, 1 June 2004 at section 6; and Frontier Economics, *International Benchmarking of Mobile Termination Charge Rates*, Report for Vodafone Australia, May 2004.

[24] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to Mobile Services Review Discussion Paper, 13 June 2003 at paragraph 3.37; Vodafone's Submission to Draft Decision, 30 April 2004 at section 2; Vodafone's Supplementary Submission to Draft Decision, 1 June 2004 at page 8.

[25] Under the proposed sharing arrangement, the parties will share a common radio access network consisting of:

- common masts/an common mast/antenna sites;
- common site support cabinets, site environmentals and transmission links; and
- jointly owned antennae, feeders, Node Bs and RNCs.

Optus and Vodafone intend to use a multi-operator radio access network which will facilitate the sharing arrangement without compromising the competitive integrity of the mobiles market in Australia.

Optus signed a binding agreement on 19 November 2004, the Agreement is subject to informal clearance from the Commission, and in any case, it is too early to produce precise costing which arise from this arrangement. Once the arrangements become clearer and further information is available in relation to costs, demand and traffic patterns for 3G services, Vodafone may submit a revised Undertaking in relation to both the MTAS for Vodafone's 2G/2.5G and its 3G network.

Vodafone will be seeking to negotiate a 'blended' terminating rate with Access Seekers once traffic starts terminating on its 3G network. This 'blended' rate will take into account the forecast terminating traffic split between the 3G and 2G/2.5G networks and the additional cost, in Vodafone's view, of terminating voice traffic on 3G networks.[26]

2.5 Welfare-maximising price for the Service

It is commonly agreed by economists, and the Commission[27], that in the presence of externalities and high fixed and common costs, setting prices that equate to marginal cost for individual (or a suite of) products and services will not be welfare-maximising. The presence of high fixed and common costs means that setting prices at marginal cost may result in prices being insufficient to cover average costs. This means that a business providing these services will make economic losses, deterring future investment in the infrastructure required to support the provision of these products and services. The pricing therefore must recognise and allocate to the various products and services the identified fixed and common costs.

Allocating the fixed and common costs to the various products and services using Ramsey pricing principles will yield welfare-maximising prices, while also ensuring that prices, in an overall sense recover all costs including incremental costs and fixed and common costs. Ramsey pricing involves establishing a structure of prices for the various products and services that would involve allocating higher proportionate mark ups above incremental cost (or marginal cost) to those products and services with relatively inelastic demands.

Further, the presence of externalities will also mean that setting prices at marginal cost will not yield welfare-maximising prices. While regulators around the world have typically accepted the positive economic efficiency properties of Ramsey pricing and recognising externalities when considering the appropriate price for the MTAS, they have generally decided not to explicitly incorporate them (and more so Ramsey pricing) into calculating a regulated price for the MTAS predominately on the basis of complexity and the lack of robust data. Vodafone considers that this position of regulators is not justifiable and that welfare-

[26] Vodafone notes the Commission's comments in its Final Decision regarding potential pricing for 3G voice termination. The Commission noted that "… there should be no presumption that the Commission would set a different price for termination of voice calls on 3G networks as it would set for termination of voice calls on any other digital mobile technology." Vodafone disagrees with the Commission's view on this matter. Vodafone considers the TSLRIC+ for the MTAS on a 3G mobile technologies is likely to be significantly higher than for 2G. see page 211 of ACCC Final Decision.

[27] See, for example, ACCC, Final Decision, June 2004 and ACCC, Access Pricing Principles – Telecommunications.

maximising prices should be applied, or at least taken into account, where a regulator decides to regulate the price for the MTAS.

The price of the MTAS should be established so that it is welfare-maximising. Vodafone has previously expressed its views to the Commission that this is the appropriate approach.[28] This would be achieved by allocating fixed and common costs to the different products and services that a mobile carrier provides using Ramsey pricing principles and taking into account the different own and cross price elasticities of demand for each product or service a mobile carrier provides. Adopting such an approach will yield a result that minimises the allocative inefficiencies associated with pricing the product/s and service/s above their respective incremental cost figures.[29] Any analysis of the cost of mobile termination should also account for the external benefits (externalities) which arise from the mobile services market. This approach would not appear to be inconsistent with the Commission's Pricing Principle.

2.5.1 Commission's comments on Ramsey pricing

Given that Ramsey pricing analysis is being used to provide further support to the Undertaking prices for the Service, Vodafone believes it is important to respond to the Commission's comments on the use of Ramsey pricing principles.

The Commission listed a number of issues with regard to the relevance of Ramsey pricing in its Final Decision on the declaration of the MTAS.[30] Vodafone believes that many of the Commission's concerns outlined in the Final Decision, irrespective whether they are correct or not, are relevant only to its decision whether or not to declare the MTAS. That is, given that the Commission has decided to re-declare the MTAS, for the most part these arguments are not relevant in the context of the Undertaking.

The only issue raised by the Commission that requires comment is its view that a pre-condition for Ramsey pricing is the existence of market power in the retail mobile market. Vodafone maintains that, while it is true that a monopolist may seek to apply Ramsey pricing, it is not necessarily the case that the application of Ramsey pricing implies that a firm has market power. The Commission's view seems to be based on the assumption that any deviation of price from marginal cost is indicative of market power. According to this definition of market power, the Commission's statement is, of course, correct. The Ramsey rules are designed to mark up prices on marginal costs so as to recover fixed and common costs in an economically efficient manner.

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[28] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Frontier Economics, *Principles Governing the Regulation of Fixed-to-Mobile Termination*, Report Prepared for Vodafone Australia, 2 September 2003.

[29] Ramsey pricing mark ups in theory should be applied to marginal cost figures of individual product and services. However, in practice Ramsey mark ups are applied to TSLRIC or LRIC figures.

[30] ACCC, Final Decision, page 170-1.

However, this definition of market power is not useful in the context of trade practices litigation or regulation. Indeed, it was roundly rejected by the Federal Court in the AGL Loy Yang merger proceedings. Market power is more usefully defined as the ability to sustain the earning of supernormal profit.[31] Ramsey pricing is perfectly consistent with this definition of market power. Indeed, one element of Ramsey optimal prices is that the enterprise or industry (depending on which definition one adopts) is only earning a normal rate of return.

One of the key elements in the contestability research program of the late 1970s and early 1980s was to show the links between a contestable market and Ramsey optimal pricing. This literature showed that, subject to certain conditions, a contestable market would produce a set of Ramsey optimal prices.[32]

As stated by Baumol[33], the crucial feature of a contestable market is free (i.e. costless) entry and exit, which mean that supernormal profits will be zero. In other words, contestability will ensure that prices will only just recover the long-run costs of supply. Consequently, the Commission cannot say, as it does in its Final Decision, that the application of Ramsey pricing requires that a firm has market power or indicates that a firm is likely to have market power.

The Commission also expressed views in chapter 6 of its Final Decision on the potential adoption of Ramsey pricing within the Pricing Principle for the MTAS. The Commission believes that an equi-proportionate mark up (EPMU) approach to allocating fixed and common costs to the various products and services is the appropriate approach:

> "The Commission believes, however, that mark-ups based on Ramsey pricing principles are difficult to estimate as they require intimate knowledge of own-price and cross-price demand elasticities across a range of telecommunications services. Given such elasticity estimates as are available are subject to disagreement across a broad range of values, that cross-price elasticity estimates are virtually non-existent, and that their misapplication could generate inferior efficiency-in-use consequences than they try to correct for, the Commission believes at this stage that it would not promote the LTIE to base markups to account for common organisational-level costs on a Ramsey-Boiteux framework."[34]

Given that it is generally accepted that the own price elasticities of the different products and services offered by a mobile carrier are different, the EPMU approach will deliver sub optimal outcomes in terms of economic efficiency and welfare. Adoption of Ramsey pricing therefore is likely to be more consistent with the legislative criteria of promoting the LTIE than the EPMU approach. The Commission's primary concern with the adoption of Ramsey pricing for

[31] See the High Court's decision in *Boral Besser Masonry Limited (Now Boral Masonry Ltd) v ACCC* (per Gleeson CJ and Callinan J), para 136 referring to the decision of Mason CJ and Wilson J in *Queensland Wire.*

[32] Baumol, W.J., "Contestable Markets: An Uprising in the Theory of Industry Structure", American Economic Review, Vol 72, no 1 (March 1982), pp 1-15, at p4

[33] Ibid, page 4.

[34] ACCC, Final Decision, page 210.

MTAS is the lack of data on own price and cross price elasticities. While Vodafone agrees that there are data limitations which make it difficult to implement Ramsey pricing with absolute precision, these are neither insurmountable nor sufficient to rule out the consideration of Ramsey pricing concepts within the setting of prices for MTAS in an undertaking.

In summary therefore, Vodafone believes that the Commission's concerns with Ramsey pricing are either not relevant in the context of pricing the MTAS for the purposes of an undertaking, or are ill-founded. The Commission's only legitimate concern regarding data accuracy is insufficient to rule out Ramsey pricing concepts altogether. Rather, this concern means that an analysis of Ramsey prices should be used in a measured way in the context of establishing prices for the MTAS in Australia.

2.5.2 Commission's comments on externalities

In the Commission's Final Decision, it discusses two types of externalities: fixed-line externalities, and mobile network externalities. The Commission concludes that at present it is not convinced that either externality should be taken into account when determining efficient prices for the MTAS. The Commission's views on fixed-line externalities and mobile network externalities are discussed below.

- Fixed line externalities

The term fixed line externality refers to the benefits (or costs) for fixed line users generated by an increase (or decrease) in the number of mobile subscribers.

In its response to the Discussion Paper and the Draft Decision, Optus argued that if the MTAS price reductions result in increased subscription costs (because of the need to break even overall), this will reduce subscription numbers and, because of the fixed-line externality, reduce the benefits to F2M customers. Optus argued that welfare loss resulting from fixed-line externalities are greater than the efficiency gain derived from the reduction in MTAS prices.

In its Final Report the Commission stated that it does not consider it appropriate to incorporate the effect of fixed-line externalities in considering the optimal price for F2M calls.[35] The Commission cites a number of concerns with the conceptual arguments and the empirical evidence presented by Optus regarding fixed-line externalities. Conceptual concerns include the following:

- The Commission considers that unless all externalities are taken into account, there should not be a focus on the effects of one particular externality. The Commission identifies an additional "call externality" where subscribers benefit from having additional F2M callers willing to call, and notes that it is arguable that F2M prices

[35] Ibid. page 172-173.

should be subsidised to capture this externality[36] This subsidy is in the opposite direction to the arguments for subsidising mobile subscribers; and

- The Commission states that "…whilst it is possible there may be a fixed line network externality generated by greater subscription to mobile telephony networks" there is a lack of evidence that mobile operators would have incentives to set prices to properly internalise these fixed line externalities, particularly for those who do not have a direct billing relationship with fixed line customers.[37]

While this latter point may be used to argue that the mobile carriers may not necessarily set the MTAS price at the welfare-maximising level (without regulation), it does not mean that the Commission can dismiss the relevance of the externality argument in considering the appropriate level of prices for the MTAS in the context of an undertaking. At the very least, the Commission should make efforts to identify and consider all externalities that might apply in any decision regarding the appropriate price of the MTAS in the context of an undertaking.

The fact that other externalities are likely to exist does not undermine the importance of reflecting mobile network externalities in the pricing of the MTAS to ensure that pricing is consistent with the LTIE. The Commission is able to measure and recognise other externalities in the pricing of other declared services if it chooses to do so. The fact that one set of prices may be acknowledged to be at an inefficient level (and therefore not welfare-maximising) does not relieve the Commission of the obligation while considering this Undertaking to ensure that the price terms of this Undertaking are consistent with the relevant statutory criteria. As outlined below and also in section 3, Vodafone considers that the inclusion of an externality surcharge would be more consistent with the statutory criteria.

The Commission also had concerns with Optus' empirical analysis:

- there is no zero economic profit constraint (contrary to Optus' assertion), which reduces the need for lower MTAS prices to be reflected in higher subscription rates.[38] The Commission argues that in any event, revenue losses will be recovered across all mobile services and not just subscriptions;
- the own price elasticity of –1.0 is considered to be much too high by the Commission, which refers to international studies that range down to –0.3;[39]
- a lower own price elasticity of demand will decrease the welfare loss from a price increase in subscriptions; and
- the F2M consumer surplus loss from the fixed line externality will be much smaller than expected given that the marginal subscribers (who are lost) will not be less valued than the average subscriber by FTM customers.[40]

[36] Ibid. page 158.
[37] Ibid. page 158-159.
[38] Ibid. page 160.
[39] Ibid. page 161.

Vodafone considers that the Commission's first concern is not well founded. The Australian mobile telephony market is effectively competitive and therefore, over the long run, super normal profits will not exist across the market. The Commission's analysis in its Final Decision regarding the economic profitability of the mobile telephony market relied heavily on anecdotal evidence and accounting profitability data and failed to take into account Vodafone's views at the time that there was likely to be an increase in competitive intensity in the market. This increased competitive intensity has eventuated and is expected to continue to increase. Further, the Commission failed to recognise economic theory which allows individual firms within a market to earn economic profits. Existing and new players will slowly compete these profits away. Vodafone considers that the other concerns of the Commission are not a justification for ignoring the effects of fixed-line externalities in establishing a price of the Service in this Undertaking.

- Mobile network externalities

The term 'mobile network externality' refers to the social benefits generated for other mobile consumers as a result of having additional subscribers. To the extent that there are marginal social benefits above the private benefit associated with the take up of mobile phones, this would support a subsidy for subscriptions.

The Commission does not consider that the mobile network externalities justify a surcharge on the price of the MTAS at present. It argues that:

- the marginal social benefit of incremental subscriptions falls, and converges with the private benefit at some point where the market is mature;[41]
- the Australian market is sufficiently mature (with penetration of 78 per cent) to mean that any marginal social benefit is extremely low if not zero; and
- the optimum subsidy is found by equating the marginal gain from the subsidy (which it considers low) with the marginal deadweight loss from the MTAS surcharge (which it considers high)[42.]

Finally, the Commission argues that it is not clear that a cross subsidy is the most efficient means of funding any subsidy, relative to a direct payment from the Government.

In the UK, where mobile penetration levels are only slightly lower than in Australia,[43] the Competition Commission considered that it was appropriate to take into account mobile

[40] Ibid. page 162.
[41] Ibid. page 165.
[42] Ibid. page 168.
[43] The ACCC notes that Australian penetration levels on a population basis are around 78 per cent whereas penetration levels in the UK are around 75 per cent. See Final Decision, page 166.

network externalities in establishing the appropriate price for the MTAS. The Competition Commission concluded that:[44]

> *"…there should be a small mark-up for the network externality, a justified addition to the fair charge because the caller benefits from having a large, accessible pool of people to call and be called by, and should make a contribution to the recruitment and retention of marginal consumers."*

It is not apparent from the Final Report that the Commission has done the appropriate empirical and welfare analysis necessary to conclude that mobile network externalities should not be taken into account in determining the appropriate price for the MTAS.

Vodafone acknowledges that it is difficult to determine the size of any mobile network externality, and the optimal level of prices for the MTAS to incorporate these externality effects. However, these difficulties are not a reason to ignore altogether the externality effects in determining the appropriate MTAS price. Rather, these difficulties justify adopting a measured approach to incorporating externality effects into establishing the appropriate price for the MTAS by ascertaining the range of likely outcomes given the uncertainties which result from the available data.

2.5.3 Summary of modelling of welfare-maximising prices for the Service

Vodafone engaged Frontier Economics (Australia) to undertake an analysis of the welfare-maximising prices for the Service taking into account both Ramsey pricing principles and also externalities. The modelling approach adopted is based on the approach used to model welfare-maximising prices in the United Kingdom.

As outlined in more detail in Appendix 3, the results of the modelling indicate that given the assumptions above, the welfare-maximising price for the Service is between 22.32 and 32.73 cents per minute. The range exists due to an acknowledgement of a degree of uncertainty surrounding various input values, in particular elasticities and also market wide fixed and common costs. Frontier Economics therefore performed a sensitivity analysis using a range of elasticity values and two scenarios for the level of market wide fixed and common costs. The estimate of the externality mark up ranged between 4.23 and 8.29 cents per minute whereas the Ramsey mark up on incremental costs for the Service ranged between 6.40 and 14.58 cents per minute.

In light of the analysis conducted by Frontier Economics and the conclusions reached in the United Kingdom on the merits of including an externality mark up[45], Vodafone believes that it

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[44] Competition Commission, *Vodafone, O2, Orange and T-Mobile: Reports on references under section 13 of the Telecommunications Act 1984 on the charges made by Vodafone, O2, Orange and T-Mobile for terminating calls from fixed and mobile networks*. December 2002. page 4.

[45] See the following document for further discussion of the approach in the United Kingdom regarding the justification of including an externality mark up in the price for MTAS. Competition Commission, *Op cit*. December 2002. Also see OFTEL, *Review of the Charge Control on Calls to Mobiles*, 26 September 2001.

could robustly defend including an externality mark up in its Usage Charges for the Service. However, Vodafone has decided not to explicitly include the analysis of Ramsey pricing, or externalities, within the Undertaking prices in order to improve the prospects of an orderly and timely assessment of the Undertaking by the Commission.

If the Commission's decision to accept or reject the undertaking is the subject of an appeal, Vodafone reserves the right to review this position. While the Ramsey analysis has not been used to establish the Undertaking prices *per se*, given that adopting Ramsey pricing is the theoretically correct methodology to apply, Vodafone believes that the analysis that has been conducted provides further justification of the proposed Undertaking prices. Furthermore, Vodafone considers that this demonstrates that the proposed prices for the Service in the Undertaking are at the low end of a reasonable range of possible estimates that would be consistent with the statutory criteria.

2.6 Undertaking prices for the Service

Vodafone has adopted a "glide path" to implementing the forward-looking efficient cost estimates of the Service. Although it is not required to be, the approach adopted is broadly consistent with the Commission's Pricing Principle in Annexure 1 of its Final Decision. The glide path in the Undertaking involves gliding from the current price in market of approximately 21 cents per minute down to the target Usage Charge of 16.15 cents per minute using annual decrements of equal absolute value over the 3 year Undertaking period. The price path for the Service is therefore as follows:

Validity Period	Usage Charge (cents per minute)
6. 1 July 2004 – 31 December 2004	21
7. 1 January 2005 to 31 December 2005	19.38
8. 1 January 2006 to 31 December 2006	17.77
9. 1 January 2007 to 30 June 2007	16.15
10. Any subsequent Validity Periods	16.15

Vodafone implicitly adopts Ramsey pricing concepts to allocate and recover fixed and common costs across the various products and services it supplies. As the Commission is aware, the elasticities of demand for outgoing calls and subscription services are higher than the elasticities of the MTAS. Consequently, the Service is currently priced (implicitly) on a basis that it recovers a higher proportion of fixed and common costs than will be the case under Vodafone's undertaking. In order to move to the target Usage Charge for the Service, Vodafone must therefore rebalance its prices to move from an implicit Ramsey allocation to an EPMU which requires substantial price changes for not only the Service, but also outgoing calls and subscription services.

There are substantial constraints on this exercise, not least of which is the fact that Vodafone must re-allocate [c-i-c] in present value terms from the Service to other services Vodafone provides including outgoing calls and subscription prices. To require such substantial prices changes over a short period of time would not be possible, and would certainly not be consistent with the statutory criteria. The LTIE would not be served by sudden price rises for subscription and outgoing calls. Vodafone's legitimate business interests require a sufficient time period to perform such a fundamental re-allocation of costs and re-pricing of a range of services. Price changes impact on a wide range of long-term business planning, commercial and marketing projects, many of which have committed resources on the basis of the current pricing structures. These processes, as well as customers and shareholders rely upon predictability and certainty in the regulatory regime.

The Commission is currently considering an Undertaking from one firm – Vodafone – in a competitive market of 4 major infrastructure operators. The markets within which subscription and outgoing calls are provided are highly competitive. In the short term, therefore, it is possible that Vodafone's legitimate business interests would be harmed by sudden price movements which would reduce relative market share. Over the longer term, however, the Commission's declaration is more likely to require all firms which provide the MTAS to perform such a re-allocation to the extent that they also currently implicitly price on a Ramsey basis.

Vodafone has also made significant investments in the infrastructure required to provide the Service on the basis of the Commission's previous light-handed approach to regulating the Service. To immediately implement an alternative approach to pricing the Service will impact investment incentives moving forward. Any immediate implementation of the target Usage Charge would therefore cause substantial disruption to Vodafone and its subscribers which Vodafone does not consider to be in the long term interests of end-users or Vodafone's legitimate business interests.

Vodafone therefore considers that the statutory criteria require the Commission to ensure a glide path is implemented which is appropriate to address these considerations. Vodafone therefore considers that the minimum time period in which it would be able to perform the re-allocation without substantial detrimental impacts is 3 years.

Since Vodafone is proposing a glide path to the target Usage Charge, it may be considered appropriate to adjust these costs for both forecast inflation and any efficiency gains that might be expected to be achieved in providing the Service. At a general level, Vodafone concluded that adjusting for forecast CPI was unlikely to be sufficient to fully reflect likely cost inflators given that factors specific to the telecommunications industry are likely to have a significant effect. For example, the historic trend demonstrates that substantial costs such as wages in the telecommunications industry have exceeded the experience of factor inflation in the general economy.

Further, to the extent future efficiency gains may or may not offset an increased inflation adjustment, the analysis would involve a degree of complexity and require significant data and time. Vodafone therefore elected to make no adjustments to take account of potential forecast cost efficiencies or cost inflators. Vodafone therefore concluded that:

- there is no basis on which it can be presumed that any forward-looking efficiency gains are likely to exceed or even match inflation forecasts; and
- the available time and the complexity of the task involved in both forecasting factors which would inflate and deflate current costs did not allow it to fully and robustly calculate such significantly complex adjustments.

2.7 F2M Pass-Through Safeguard

Vodafone has submitted a F2M Safeguard outlined in Part C of the Service Schedule to the Agreement. The F2M Safeguard forms an integral component of the Undertaking (and the Price term of the MTAS in the Agreement) since it would form a pre-condition to the Access Seeker receiving the glide path of prices for the MTAS over the term of the Undertaking.

In essence the F2M Safeguard aims to provide a "backstop" mechanism to ensure that reductions in rates for the Service do not simply result in a value transfer from terminating to originating operators. Furthermore, the F2M Safeguard has been designed to provide an incentive to suppliers of a F2M retail service to gradually reduce their retail F2M prices to competitive levels. This will result in a net increase in welfare and economic efficiency through an associated reduction in retail prices for F2M calls. This is in the interests of consumers as well as originating and terminating operators since it would result in an efficient volume of calls to mobiles that originate on fixed networks.

During the course of the Commission's Mobile Services Review, Vodafone consistently submitted that declaration of the MTAS would not provide any meaningful benefits to end-users unless the issue of F2M pass-through was addressed.[46] That is, if mobile terminating rates were to be regulated downwards, the Commission must ensure that those reductions end up benefiting consumers in the form of lower prices for making F2M calls. Vodafone argued that the issue of 'pass-through' could be addressed through the declaration decision itself.

Vodafone's view was based on evidence that suggested that F2M prices had not reduced at anywhere near the same rate as those for the MTAS; a fact that was acknowledged by some

[46] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to the Mobile Services Review Discussion Paper, 13 June 2003 at paragraphs 3.58-3.69; Vodafone's Submission to the Draft Decision, 30 April 2004 at section 10; and Vodafone's Supplementary Submission to the Draft Decision at page 6.

fixed carriers. This was particularly the case for residential customers. It was also based on the view that the market within which F2M services were provided was not sufficiently competitive, nor was there a reasonable prospect of this market to becoming competitive in the near future, for F2M retail prices to fall as quickly as mobile termination prices. This was supported by the analysis the Commission had undertaken for the Mobile Services Review which indicated that the market within which F2M services were provided was not sufficiently competitive and that there had only been partial pass-through. This is also confirmed by the Commission's draft recommendations for Telstra's Price Controls.[47]

In its Final Decision, the Commission decided not to propose a 'pass-through' mechanism in the declaration. Rather, it believed that "…the level of FTM 'pass-through' would be improved by the introduction of a Pricing Principle that generated a closer association of prices and TSLRIC+ for the MTAS, as this would be expected to generate a greater level of competition in the downstream in the FTM services market."

The Commission, however, did note that it only expected partial pass-through of reduced mobile terminating prices (without an explicit pass-through mechanism) in the short term. According to the Commission, "…over the longer term, reducing MTAS prices should improve competition in the market within which FTM services are provided, leading to a closer association of FTM prices with their underlying cost of provision. Given the price of FTM services appears to be further above cost in absolute terms than the price of the MTAS, this would mean the price of FTM calls may fall by more than the cost over [sic] the MTAS in the long term."[48] In other words, according to the Commission the price of F2M calls may fall more in absolute terms than the price of the MTAS over the longer term.

Vodafone does not accept the Commission's view in this regard and believes that the declaration of the MTAS and the application of a Pricing Principle will not promote competition in the market within which F2M services are provided. Promoting competition is more to do with the structure of the market, the barriers to entry and exit, product differentiation, and the number of buyers and sellers. The Commission's Final Decision did not alter the structure of the market so as to create the conditions for improved competition within this market. Vodafone has also previously expressed these views to the Commission.[49]

While Vodafone notes that the Commission is in the process of finalising its review of Telstra's Price Controls which may lead to a sub cap on Telstra's F2M retail prices and therefore possibly addressing (at least partially) the issue of 'pass-through' and high F2M prices[50]; Vodafone believes that the issue of 'pass-through' and the high F2M prices can be

[47] ACCC, Review of Telstra Price Controls: An ACCC Draft Report. 9 November 2004. page 23.
[48] ACCC, Final Decision, page 123.
[49] As noted in section 1, Vodafone has had regard to the following information and data submitted to the Commission in the context of the Mobile Services Review. We refer to and adopt as part of this submission Vodafone's Submission to the Mobile Services Review Discussion Paper, 13 June 2003 at paragraphs 3.62-3.63; Vodafone's Submission to the Draft Decision, 30 April 2004 at section 10.
[50] Vodafone however notes that the Commission has not recommended a specific F2M sub cap in its Draft Decision regarding Telstra's Price Controls released on 9 November 2004.

accommodated within the framework of an Access Undertaking. Vodafone is therefore proposing a F2M Safeguard in the Undertaking which requires the access seeker to follow an average F2M retail price in order to gain access to lower prices for the MTAS. Vodafone believes that this is necessary to ensure that end-users benefit from the reduced prices for the MTAS.

The objective of the F2M Safeguard is to provide an incentive to suppliers of a F2M service to gradually glide their F2M prices down to competitive levels ensuring that, by the end of the Undertaking, they reflect their underlying cost of production. Competition itself may address the issue of pass-through and high F2M prices. If this is the case, the F2M Safeguard will, in practice, become redundant. However, in the event that any increased competition in the provision of fixed to mobile services does not erode the substantial margins fixed operators appear to be currently making, then the F2M Safeguard will provide incentives for the fixed operators to glide their retail prices down to competitive levels thus providing greater benefits to end-users of telecommunication services.

A full description of the F2M Safeguard is contained in Part C of the Service Schedule to the Agreement. The F2M Safeguard involves the following:

- setting out the glide path to the target Usage Charge for the Service price over the term of the Undertaking;
- a F2M retail price path calculated using an estimate of the current average F2M price in the market as the starting point and with a target price equal to the Service target Usage Charge for the Service plus a conservative estimate of the cost of fixed origination and transmission; and
- linking proposed reductions in Usage Charges for the Service to an Access Seeker gradually reducing its average retail F2M prices to competitive levels. If Access Seekers are offering F2M retail prices at competitive levels, they are likely to be pricing the F2M service well below the F2M Safeguard price path and thus the F2M Safeguard would have no effect.

The F2M Safeguard price path has been designed in the following manner:

- a starting F2M price for 2004 of 38.5 cents per minute has been established. This is sourced from the Commission's Final Decision and is an estimate of Telstra's average F2M price during 2003;[51]
- a target F2M price for calendar year 2007 has been established by conservatively approximating the cost of providing a F2M call. This has been done by summing Vodafone's target Usage Charge for the Service of 16.15 cents per minute and the Commission's conservative estimate of the cost of fixed origination and transmission

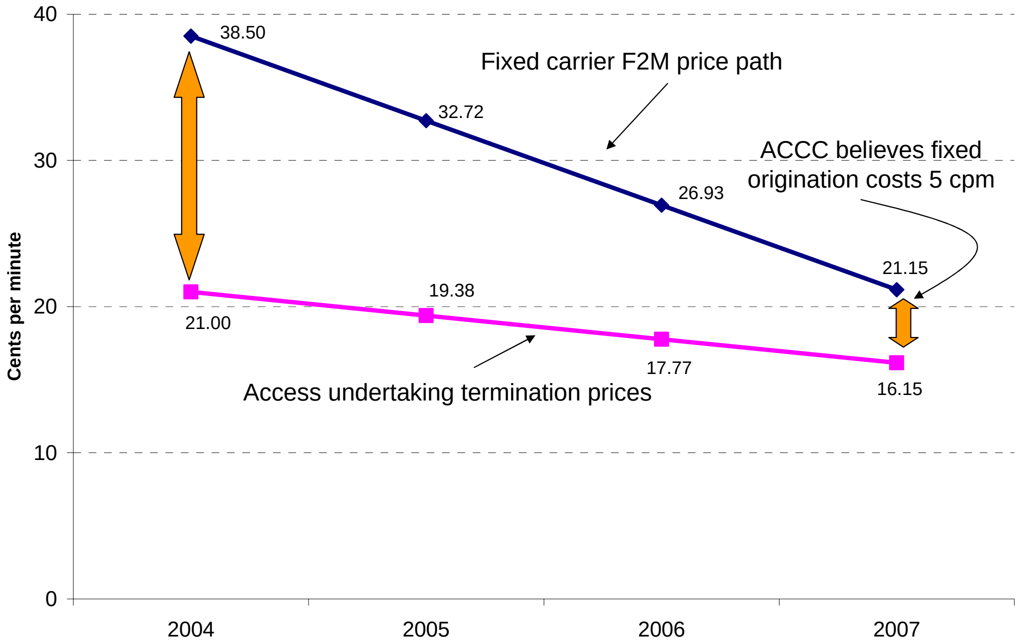
[51] ACCC, Final Decision, page 101. "Data available from Telstra's 'Financial Results for the half year ended 31 December 2003' indicate that the average revenue it receives for FTM calls is around 38.5 cents per minute (cpm)."

of 5 cents per minute. The target F2M price is therefore 21.15 cents per minute;[52] and

- three equal annual decrements of 5.78 cents per minute from 2004 to 2007 are made.

Consistent with Vodafone's approach to the glide path for the Usage charges for the Service as outlined in section 2.6, Vodafone is not proposing to make any adjustments to the F2M Safeguard price path for either forecast inflation or expected efficiency improvements.

The following chart outlines the proposed Usage Charges for the Service and the F2M Safeguard price path.



If Vodafone reasonably considers that an Access Seeker's retail prices are above competitive levels, Vodafone may require an independent expert to verify compliance under the Expert Determination Rules of the Australian Commercial Disputes Centre (ACDC). If the expert verifies that the Access Seeker has not complied, a retrospective adjustment would be made to Usage Charges for the Service for the relevant Date Period to ensure that the Usage Charge was appropriate given the prevailing F2M retail price. Further details of the F2M Safeguard are outlined in Part C of the Agreement.

[52] ACCC, Final Decision, page 101.

3. Consistency of the Undertaking with the Statutory Criteria

This section of the submission specifically demonstrates that the proposed price and non-price terms of the Undertaking for the MTAS are consistent with the relevant statutory criteria that the Commission is required to consider under the *Trade Practices Act 1974 (Cth)*.

3.1 Outline of Statutory Criteria

Sub-section 152BV(2) provides that the Commission "must not accept" an Access Undertaking lodged pursuant to section 152BU unless the following criteria are met:

- the Commission has published the Undertaking, invited and considered submissions;
- that the Undertaking is "consistent with" the SAOs which apply to the service;
- that the Undertaking is consistent with any relevant Ministerial pricing determination;
- that the terms and conditions of the Undertaking are "reasonable"; and
- that the Undertaking expires within 3 years of the date on which it comes into operation.

The SAOs are set out in section 152AR, and require an Access Provider, if requested by an Access Seeker, to:

- supply an active declared service to the service provider in order that the service provider can provide carriage services and/or content services; and
- take all reasonable steps to ensure that the technical and operational quality of the active declared service supplied to the service provider is equivalent to that which the access provider provides to itself; and
- take all reasonable steps to ensure that the service provider receives, in relation to the active declared service supplied to the service provider, fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself.

Section 152AR(4) provides a series of limitations on the obligations of Access Providers.

Section 152AH sets out a number of non-exhaustive criteria that the Commission must have regard to in determining whether the terms and conditions are "reasonable", namely:

- whether the Undertaking promotes the Long Term Interests of End-users (LTIE);
- the legitimate business interests of the carrier or carriage service provider concerned and their investment in facilities used to supply the service;
- the interests of persons who have rights to use the declared service;
- the direct costs of providing access to the service;

- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility; and
- the economically efficient operation of a carriage service, a telecommunications network or facility.

Section 152AB sets out an exhaustive list of matters to which regard must be had when determining whether a particular thing promotes the LTIE, namely:

- the objective of promoting competition in markets for listed services, in relation to which regard must be had to the extent to which the thing will remove obstacles to end-users of listed services gaining access to listed services;
- the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end-users. The objective of any-to-any connectivity is deemed to be achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, with each other end-user who is supplied with the same service or a similar service, whether or not the end-users are connected to the same telecommunications network; the objective of encouraging the economically efficient use of, and
- the objective of encouraging the economically efficient use of, and investment in, the infrastructure by which listed services are supplied, in relation to which, regard must be had to:
    - o whether it is technically feasible for the services to be supplied and charged for, having regard to:
        - the technology that is in use or available; and
        - whether the costs that would be involved in supplying, and charging for, the services are reasonable; and
    - o the effects, or likely effects, that supplying, and charging for, the services would have on the operation or performance of telecommunications networks;
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope; and
- the incentives for investment in the infrastructure by which the services are supplied.

In this section of the submission, Vodafone outlines its view of the consistency of its Undertaking with these statutory criteria. Several of these criteria can be dealt with summarily since:

- the Commission's process is not within Vodafone's control (paragraph 152BV(2)(a));
- there is no relevant Ministerial Pricing Determination (paragraph 152BV(2)(c)); and
- the expiry date of the Undertaking as specified in clause 2 is within 3 years of the date on which the Undertaking comes into operation (paragraph 152BV(2)(c)).

Accordingly, this section of the submission focuses on the remaining criteria set out in paragraphs 152BV(2)(b) and 152BV(2)(d), namely whether the Commission can be satisfied that the Undertaking is consistent with the SAOs and whether the terms and conditions of the Undertaking are reasonable when regard is had to those matters set out in section 152AH.

The following sections give separate consideration to each of these remaining criteria, in relation to the price terms, F2M Safeguard, and non-price terms as appropriate and relevant.

3.2 Standard Access Obligations

Vodafone considers that the non-price terms of the Undertaking specifically ensures consistency with the SAOs and therefore paragraph 152BV(2)(b), since:

- Clauses 4.1 and 5 specifically provide that Vodafone must supply the Service in accordance with the Undertaking and consistent with the SAOs. Vodafone considers that this ensures the consistency of the Undertaking with paragraph 152AR(3)(a);
- Clause 5(a)(i) provides that Vodafone must ensure the equivalence of technical and operational quality of the service. Vodafone considers that this ensures the consistency of the Undertaking with paragraph 152AR(3)(b); and
- Clause 5(a)(ii) provides that Vodafone must ensure the equivalence of fault detection, handling and rectification. Vodafone considers that this ensures the consistency of the Undertaking with (paragraph 152AR(3)(c)).

In relation to the non-price terms of the Undertaking, the remaining question before the Commission and interested parties is therefore whether the Undertaking is reasonable by reference to (but not limited to) the criteria specified in section 152AH. This is considered in detail below.

3.3 Reasonableness

Vodafone considers that the price, F2M safeguard and non-price terms are reasonable. Each of the matters to which regard must be had in assessing the reasonableness of the Undertaking are considered separately below.

3.3.1 Long Term Interests of End-users

As outlined in section 2 of this submission, the price terms of the Undertaking are the Usage charges which are based on:

- a target Usage Charge of 16.15 cents per minute determined on the basis of cost modelling; and
- a "glide path" from the current price of 21 cents per minute to the target Usage Charge of 16.15 cents per minute in annual decrements of equal absolute value. Section 2.6 outlines Vodafone's price path for the Service in the Undertaking.

As outlined in section 2 of this submission, the target Usage Charge of 16.15 cents per minute is likely to be the closest approximation of the forward-looking efficient economic costs of providing the Service available during the term of the Undertaking. Vodafone considers that this calculation is robust and conservative for the reasons outlined elsewhere in this submission and also in Appendix 1.

The Commission has previously provided guidance on its approach to assessing whether an access price is likely to be consistent with the full range of relevant statutory criteria, stating, for example, that:[53]

> *"An access price based on TSLRIC is consistent with the price that would prevail if the access provider faced effective competition, and usually best promotes the long-term interests of end-users."*

As noted above, Vodafone considers that while a price determined according to the requirements of TSLRIC+ is likely to be consistent with the statutory criteria, it is not the only approach which would be consistent. Vodafone considers that the Commission's statements on TSLRIC+ in relation to the statutory criteria apply equally not just to prices determined on the basis of a TSLRIC+ methodology, but to any robust calculation of the forward-looking efficient economic cost of providing the Service. The Commission has said as much:[54]

> *"The price of a service should not exceed the minimum costs an efficient firm will incur in the long run in providing the service. The relevant costs are the economic costs of providing the service. These are the on-going (or forward-looking) costs of providing the service, including a normal commercial return on efficient investment."*
>
> *"TSLRIC is based on forward looking costs. These are the on-going costs of providing the service in the future using the most efficient means possible and commercially available."*

The Commission has indicated that it considers that access prices based on TSLRIC+ will best serve the LTIE, including encouraging competition in telecommunications markets by promoting efficient entry and exit in dependent markets, and encouraging economically efficient use of and investment in infrastructure. Vodafone therefore considers that the target Usage Charge developed by Vodafone for the purposes of the Undertaking is consistent with the LTIE since it:

[53] ACCC, Access Pricing Principles – Telecommunications, July 1997. page 22.
[54] Ibid. page 11.

- is forward-looking to the extent that network capital assets have been re-valued;
- is conservative in that the application of tilted annuity depreciation is likely to underestimate capital costs compared to cash-flow based economic depreciation and also due to a number of cost allocation assumptions (in particular customer care costs);
- is assumed to be efficient since there is no basis on which to presume – in the face of long-standing competitive pressure – that Vodafone's network architecture and operating expenditure are not efficient; and
- observes the general principles of robust cost modelling – cost causality, transparency and reconcilability.

Furthermore, the assumed WACC value has been calculated to ensure that it is reasonable in terms of the criteria in section 152AH of the Trade Practices Act 1974 (TPA) having regard to the objectives in section 152AB. Given that the WACC value reflects Vodafone's opportunity cost of funds, it will provide Vodafone with an incentive to undertake efficient investment in the infrastructure used to provide the Service. Such efficient investment in network facilities can be regarded to be consistent with promoting the LTIE. By reflecting the market-based cost of funds of investments with similar market risk, the WACC value can also be considered to be consistent with the concept of economic efficiency and with the outcomes expected of a competitive market.

Vodafone considers that pricing the Service in a manner so that it is welfare-maximising (that is, incorporating Ramsey pricing principles and externalities) would be most consistent with the LTIE. A failure to explicitly recognise the existence of externalities in the mobile telephony market through the pricing of the Service will lead to lower aggregate consumer welfare. As Ofcom noted in its consideration of externalities:

> *"The surcharge effectively promotes behaviour (subsidisation of marginal subscribers) intended to promote overall consumer welfare."* [55]

As mentioned in section 2.5.2, the Commission's concerns with the inclusion of an externality in MTAS prices rest largely on the notion that one externality (mobile network externalities) should not be reflected unless all externalities are measured and offset. However, it is open to the Commission to measure and include externalities in the pricing of all declared services. However, in relation to this Undertaking the Commission is required only to consider whether its terms are consistent with the statutory criteria including the LTIE. If an externality mark up is not included in the pricing of the MTAS, this will lead to sub-optimal outcomes and a lower level of overall welfare than would otherwise be the case. In the present case, the level of mobile subscription will be sub-optimal. Vodafone therefore considers that the inclusion of an externality mark up is consistent with the LTIE. Vodafone has chosen, however, for the

[55] Ofcom, Wholesale Mobile Voice Call Termination, Statement, 1 June 2004, page 165.

reasons outlined above, not to include an externality mark up in the Undertaking Usage prices.

In relation to the F2M Safeguard, Vodafone considers that it is in the LTIE as it will, in the absence of sufficient competitive pressures, provide incentives to suppliers of a F2M service to gradually reduce their F2M prices to competitive levels and therefore reflects their underlying cost of production over the term of the Undertaking. This will also ensure that the reductions in Usage Charges for the Service are passed through in the form of lower prices for F2M services.

As outlined in section 2.7 of this submission and also various Vodafone submissions to the Commission during the Mobile Services Review, Vodafone does not consider that the market within which F2M services are provided is sufficiently competitive to ensure that F2M call prices will gradually reduce to their underlying cost of production. However, if, on the other hand, there is sufficient competition in that market to drive F2M retail prices to their underlying cost, the F2M Safeguard will do no harm and will become redundant, since prices would be expected to fall as quickly as those outlined in the F2M Safeguard. The F2M Safeguard will only play a role in the event that the market is insufficiently competitive to reduce F2M retail prices as quickly as the F2M Safeguard requires.

The F2M Safeguard has been designed to provide incentives for the suppliers of the F2M service to reduce their F2M prices should competitive forces not provide the necessary commercial pressures. This approach therefore provides a safeguard to consumers to ensure that they will benefit from lower prices for the Service. Vodafone therefore considers that the F2M Safeguard is unquestionably in the LTIE.

In relation to the non-price terms, Vodafone considers that the LTIE is best served by the provision of clear, balanced non-price terms which would allow more efficient negotiation of interconnection agreements with Access Seekers.

3.3.2 Legitimate business interests

In relation to price, the Commission has indicated on numerous occasions that it considers that an access price set at TSLRIC+ is consistent with the legitimate business interests of the Access Provider:[56]

> *"TSLRIC, by allowing efficient access providers to fully recover the costs of producing the service, promotes the legitimate business interests of the carrier or carriage service provider providing access."*

Vodafone considers that the target Usage Charge ensures Vodafone's legitimate business interests for the same reasons.

[56] ACCC, Access Pricing Principles – Telecommunications, July 1997. page 23.

The WACC assumption adopted in the modelling reflects Vodafone's opportunity cost of funds, and thus its application to determine the capital costs in the cost model is consistent with the legitimate business interests of Vodafone.

In relation to the glide path, the Commission has noted previously that the investment decisions of Access Providers are long-term decisions, often made by necessity several years in advance of requirements. These decisions are made by reference to anticipated revenue and profit, both of which would be substantially affected by an immediate move from current prices. The Commission noted in its Final Decision:[57]

> *"This would have the effect of compromising the legitimate business interests of access providers that have made business decisions on the basis of the Commission's previous approach to pricing of the MTAS for regulatory purposes. As a result of these concerns, the Commission believes it would be inappropriate to immediately set a price for the MTAS equal to TSLRIC+ at this time."*

Furthermore, Vodafone currently implicitly adopts Ramsey pricing concepts to allocate and recover fixed and common costs across the various products and services it supplies. As the Commission is aware, the elasticities of demand for outgoing calls and subscription services are higher than the elasticities of the MTAS. Consequently, the Service is currently priced (implicitly) on a basis that recovers a higher proportion of fixed and common costs than will be the case under Vodafone's Undertaking. In order to move to the Usage Charges for the Service, Vodafone must therefore rebalance its prices to move from an implicit Ramsey allocation which requires substantial price changes for not only the Service, but also outgoing calls and subscription services.

There is a series of substantial constraints on this exercise. To do this would require Vodafone to transfer approximately [c-i-c] in present value terms from the Service to outgoing calls and subscription prices over the term of the Undertaking. To require such substantial price changes over a shorter period of time would not be possible and would not be consistent with the statutory criteria. The LTIE would not be served by sudden price rises for subscription and outgoing calls. Vodafone's legitimate business interests require a sufficient time period to perform such a fundamental re-allocation of pricing of the range of services it provides. Price changes impact on a wide range of long-term business planning, commercial and marketing projects, many of which have committed resources on the basis of current pricing structures. These processes, as well as customers and shareholders rely upon predictability and certainty in the regulatory regime.

The Commission is currently considering an Undertaking from one business - Vodafone - in a competitive market of 4 major infrastructure operators. The outbound mobiles market, as defined by the Commission, is highly competitive and the market overall does not earn economic profits. Given this Vodafone expects a degree of rebalancing in prices in the

[57] ACCC, Final Decision, page 206.

mobiles market is probable although we do believe it is very difficult to predict with certainty and precision what might occur. In the short term, however, Vodafone may be the only business undertaking such price rebalancing. Vodafone's legitimate business interests would be harmed by sudden price movements which may reduce relative market share. Over the longer term, however, the effect of the Commission's declaration is likely to necessitate all businesses that provide the MTAS to perform a similar rebalancing of prices.

Vodafone therefore considers that the statutory criteria require the Commission to ensure a glide path is implemented which is appropriate to address all these considerations. Vodafone therefore considers that the minimum time period in which it would be able to perform the rebalancing of prices without substantial detrimental impacts is 3 years – the term of the Undertaking.

Vodafone shares the interest of end-users in ensuring that an economically efficient and welfare-maximising level of subscription to mobile services is achieved. Allocating fixed and common costs on the basis of Ramsey pricing and including an externality mark up in the pricing of the MTAS will deliver superior outcomes, in terms of welfare, to end-users. Conversely, failing to do so would ensure a sub-optimal level of mobile subscriptions in Australia which would in turn suppress demand for F2M services and other mobile services including termination services. Vodafone therefore considers that the adoption of Ramsey pricing and the inclusion of an externality mark up is consistent with Vodafone's legitimate business interest, although it has not chosen to include these for reasons outlined above.

Therefore, for the price terms, Vodafone considers that the Undertaking ensures the legitimate business interests of Vodafone as a provider of access to the Service.

In relation to the F2M Safeguard, Vodafone also considers that the F2M Safeguard serves the legitimate business interests of Access Providers and their substantial investment in the mobile networks on which calls are terminated. Reductions of retail prices for F2M calls to competitive levels will provide a benefit to the Access Provider due to the greater number of incoming calls to mobiles that would result.

In relation to the non-price terms, Vodafone is satisfied that the non-price terms and conditions reasonably protect its legitimate commercial interests.

3.3.3 Interests of those who have rights to use the declared service

In relation to price, the Commission has indicated previously that it considers that: [58]

"TSLRIC protects the interests of persons who have rights to use the declared service. As TSLRIC is the long-run cost the access provider incurs in providing the service to its own vertically-integrated operations, it inhibits the access providers discriminating in favour of one access seekers over another (unless based on different costs). As a result, the ability of an

[58] ACCC, Access Pricing Principles – Telecommunications, July 1997, page 23.

access seeker to compete in dependent markets will be based on the quality and cost of its operations relative to its competitors."

Vodafone considers that the target Usage Charge protects the interests of those who have rights to use the Service for similar reasons.

Vodafone considers that the non price terms of the proposed Undertaking represent current best practice in the telecommunications industry. They have been specifically designed to ensure a fair balance between the interests of Access Providers and Access Seekers. They provide clear and concise terms covering all relevant issues and potential concerns. Vodafone therefore considers that they ensure that the interests of Access Seekers are protected.

In relation to the F2M Safeguard, Access Seekers are likely to have an incentive and the ability to establish prices for F2M services at, or close to, monopoly levels if competition in the market within which F2M services are provided does not intensify significantly. Vodafone considers that the Commission should not allow this to occur since it would not be consistent with the other section 152AH criteria the Commission is required to take into account, especially the LTIE. The F2M Safeguard ensures that it will not.

Vodafone considers that the interests of Access Seekers are protected through the mechanisms set out in the F2M Safeguard, since:

- if retail prices are set at competitive levels, the F2M Safeguard is likely to have no effect. Vodafone anticipates that most Access Seekers already price their retail service well below the target retail price path and are likely to continue to do so in the future;
- compliance is to be ascertained through determination by independent experts under the Expert Determination rules of the Australian Commercial Disputes Centre (ACDC); and
- at no stage will confidential information be required to demonstrate compliance with the F2M Safeguard be divulged to Vodafone; only to the expert.

Vodafone considers that the interests of Access Seekers are protected by the non-price terms of the agreement, for example:

- clause 7 ensures low barriers to entry with no up front security requirement;
- clause 9 ensures that Vodafone may only implement upgrades and alterations to its networks and services provided that they do not have a material adverse effect on the Access Seeker;
- clause 15 provides that Vodafone may only suspend the supply of services under the agreement in a few exceptional circumstances and only to the extent necessary; and

- clauses 17.5 provides that either party may terminate the agreement on 30 days' notice in the case of breaches, or 6 months' notice for no fault termination.

3.3.4 *Direct costs*

In relation to price, the Commission has stated in relation to direct costs that:[59]

> *"This requires that an access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependent market as a result of the provision of access. In particular the Efficient Components Pricing Rule (ECPR) may be inconsistent with this criteria. ECPR bases price on the incremental cost of providing the access service plus the opportunity cost of losing business in related markets. This criterion also implies that, at a minimum, an access price should cover the direct incremental costs incurred in providing access."*

In contrast to the Commission's "target price" contained in Annexure 1 of its Final Decision, Vodafone's target Usage Charge is based on the direct costs of providing the Service on Vodafone's 2G/2.5G network. It does not include profits lost in dependent markets, and therefore ensures that the price is consistent with the direct costs of providing the Service.

In relation to the F2M Safeguard, the glide path to the calculation of forward-looking efficient economic costs of supplying the Service is established by reference to the direct costs of providing the Service. Under the F2M Safeguard, retrospective adjustments may be made to the Usage Charge in cases where an independent expert has verified that the Access Seeker has failed to comply with the F2M Safeguard. At no stage, however, would an Access Seeker be required to compensate Vodafone for lost profits in dependent markets as a result of access. Any variation from the direct forward-looking efficient economic cost of the Service is directly correlated to variations from the direct costs of providing the retail service.

3.3.5 *Operational and Technical Requirements for Safety And Reliability*

Clause 8 of the non-price terms specifically ensures that both Access Seekers and Vodafone are subject to explicit obligations to not endanger the health or safety of persons or network integrity.

3.3.6 *Economically efficient operation of a carriage services, telecommunications network or facility*

The Commission has noted that:

> *"This criteria is similar to productive and allocative efficiency…. An access price should encourage access providers to select the least-cost method of providing the service and provide those services most highly valued by access seekers."* ;[60] and

[59] Ibid. page 8.
[60] Ibid. page 8.

"TSLRIC represents the costs the firm necessarily incurs in providing the service and captures the value of society's resources used in its production… TSLRIC encourages economically efficient investment in infrastructure the long term… TSLRIC provides for the efficient use of existing infrastructure… TSLRIC provides incentives for access providers to minimise the costs of providing access."[61]

Vodafone considers that the Usage Charges similarly ensure the economically efficient operation of the relevant services, networks and facilities. The failure to adopt Ramsey pricing principles in allocating fixed and common costs and also an externality mark up would result in inefficient pricing and therefore reduce demand for subscription and other mobile services. This specific consideration was taken into account by Ofcom in relation to externalities, who noted that:

"…the purpose of the network externality surcharge is to correct for potential economic inefficiencies that may be created if the subscription charge levied by MNOs only reflected the costs of supply. Consumer welfare could be potentially improved if some consumers who would not otherwise join a mobile network had their subscription subsidised, because these consumers. joining decisions increase the welfare of existing subscribers. To the extent that any such subsidies need to be funded by MNOs, Ofcom believes it would be appropriate for wholesale mobile termination charges to include a contribution towards the recovery of these subsidies."[62]

Again, however, Vodafone notes that it has not adopted Ramsey pricing principles in allocating fixed and common costs or included an externality mark up in its Usage Charges for the reasons outlined elsewhere in this submission.

In relation to the non-price terms, Vodafone considers that the non price terms and conditions encourage productive and allocative efficiency in the operation of the facilities, networks and carriage services, since they do not impose any unnecessary costs on Access Providers or distort the allocation of resources.

[61] Ibid. page 22-23.
[62] Ofcom, Wholesale Mobile Voice Call Termination, Statement, 1 June 2004.

Appendices

A1. Cost Model Report (PricewaterhouseCooopers)

A2. Weighted Average Cost of Capital

A3. Modelling Welfare-maximising Mobile Termination Rates (Frontier Economics)