

# **INGENIθUS** CONSULTING NETWORK

**Commentary on**

***The use of international benchmarking in  
setting interconnection rates***

**A report from the Ingenious Consulting Network**

**December 2008**

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## 1. About the authors

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### *Kip Meek, Chairman, Ingenious Consulting Network*

Kip is a board member of Ingenious Media and Chair of the Ingenious Consulting Network. Ingenious Media is based in London and is a provider of investment and advisory services to the communications industry. Kip is also Chair of the Broadband Stakeholder Group, a group set up to advise the UK government on broadband issues. In addition to the above, Kip is also director of the RadioCentre, the body representing commercial radio in the UK.

Prior to joining Ingenious he was at Ofcom where he held a variety of responsibilities, including chairing the European Regulators Group (ERG). While at Ofcom he led the team negotiating the undertakings which resulted in the 'functional separation' of Openreach from BT. Before joining Ofcom, he was Managing Director of Spectrum Strategy Consultants.

From his time at Ofcom, and in particular his work with the ERG, Kip has extensive cross-border experience in telecoms regulation and understanding of the national market, geographical and regulatory issues that can drive different cost estimates.

### *Rob Kenny, Managing Director, Human Capital*

Robert is the Managing Director of telecoms, media and technology consultancy Human Capital, part of the Ingenious Consulting Network. He has significant telecoms experience and previously co-led the M&A team at Level 3. Rob also worked at Reach in Hong Kong as Commercial Director and led M&A and strategy at Hongkong Telecom.

Rob began his career in consultancy with the LEK partnership, and holds an honours degree in Mathematics and Management Studies from Cambridge.

Rob has lived and worked in the UK, Hong Kong, the US and Sweden, in each case in telecoms related roles. He has undertaken projects in many other countries. His experience in international benchmarking goes as far back as 1992, when he undertook a project for Cable & Wireless to compare the efficiency of their telecoms operations around the world.

Full CVs for Kip and Rob are available at page 41

## 2. Introduction

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Ingenious has been briefed by Mallesons Stephen Jaques (“**Mallesons**”) on behalf of Telstra Corporation Limited (“**Telstra**”), to provide expert opinion on the use of international benchmarking in the determination of interconnection prices. Letters of instructions are enclosed in Appendix 4.

Our report is written in reference to the use of benchmarking in two draft decisions made by the Australian Competition & Consumer Commission (ACCC) being:

- Draft MTAS Pricing Principles Determination and indicative prices for the period 1 January 2009 to 31 December 2011 (“the MTAS determination”)
- Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking (“the ULL determination”)

Specifically, we have been asked to express our opinion as to whether or not the benchmarking relied upon by the ACCC in these draft decisions is appropriate; and if not, why it is not appropriate.

In this paper (based entirely on third party data in the public domain) we consider what adjustments might be necessary to a simple side-by-side benchmarking exercise to truly compare apples-to-apples, and comment on whether such adjustments are likely to have a material impact on the comparison.

Such adjustments fall into three categories – those relevant to both ULL and mobile termination rates, those relevant to mobile only, and those relevant to ULL only. We consider each category in turn. However, we have not been exhaustive in assessing *all* issues that could have an impact on tariffs in different countries. We have focussed on those that appeared to have the greatest likelihood of material impact.

Our conclusion is that there are a significant number of adjustments that would be necessary for a valid comparison; that several of these adjustments are individually material; and that in aggregate these adjustments are even more so.

Our opinion therefore is that the simple benchmarking relied upon by the ACCC is not an appropriate basis for setting ULL or MTAS tariffs, since it includes arbitrary choices (such as that of comparator set) and does not make allowance for differences in national circumstances that would legitimately lead to materially different tariffs in different markets.

Please note that although commissioned by Mallesons on behalf of Telstra, the views contained in this report are entirely those of the Ingenious Consulting Network.

### 3. Issues relevant to the benchmarking of both ULL and MTAS pricing

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In this section we consider issues that will affect both ULL and MTAS benchmarking, though the materiality may be different for the two services. Note that the benchmark figures used by the ACCC are included in Appendix 2 for reference.

#### ***Viability of benchmarking***

While benchmarking can be helpful in certain circumstances, it is not always appropriate. For instance, to benchmark the right price for Vegemite in Australia by looking at what it costs in Europe would clearly not be meaningful. The less similar the circumstances in the comparator countries, the less useful the benchmarking (or, alternatively, the more adjustments that are necessary to the comparator figures to make them truly comparable). Thus it is not a safe presumption that benchmarking has value in a particular circumstance, and in any circumstance it should be treated as subordinate to an appropriately structured local calculation of costs.

Ofcom, in its 2004 *Review of the Wholesale Local Access Market*, commented:

“International comparisons provide a useful benchmark against which to judge the development of LLU in the UK... However, it is important to recognise that charges can differ across countries for a number of reasons including ... differences between the service elements included within the charges. This will limit the inferences for the UK that can be drawn from any simple international price or take-up comparisons.

“It is not therefore possible to look at the charges themselves and reach any definitive conclusions about the reasonableness of a charge in one country in comparison to another.”<sup>1</sup>

If benchmarking is to be used, adjustments should be made in order to adjust for any material country-specific differences. The ACCC itself took this view in a 2006 decision regarding Optus’ undertaking with respect to termination services. In that decision the ACCC criticised a benchmarking report prepared by Charles River Associates (CRA), stating that CRA “only make adjustments for ‘exchange rates/PPP’, ‘cost of capital’ and ‘geographic terrain and network coverage’”<sup>2</sup>. The ACCC regarded this as insufficient, having previously identified a wider set of issues that might require adjustment:

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<sup>1</sup> Ofcom, *Review of the wholesale local access market*, August 2004, para A52

<sup>2</sup> ACCC, *Optus’s undertaking with respect to the supply of its Domestic GSM Terminating Access Service (DGTAS)*, February 2006, p.25

“In the MTAS Final Report, the Commission identified nine factors that may give rise to differences in the cost of supplying the MTAS between countries, including geographic terrain, population density, network usage and scale, land and labour costs, spectrum allocations, the extent to which MNO’s are integrated fixed-mobile operators, network purchasing power, cost of capital and technology employed.”<sup>3</sup>

However, it appears that both the 2008 MTAS determination and the 2008 ULL determination draw directly on benchmarking reports prepared by the European Regulators Group (ERG) and Ovum without making any adjustments whatsoever other than exchange rates.

### ***Comparator set***

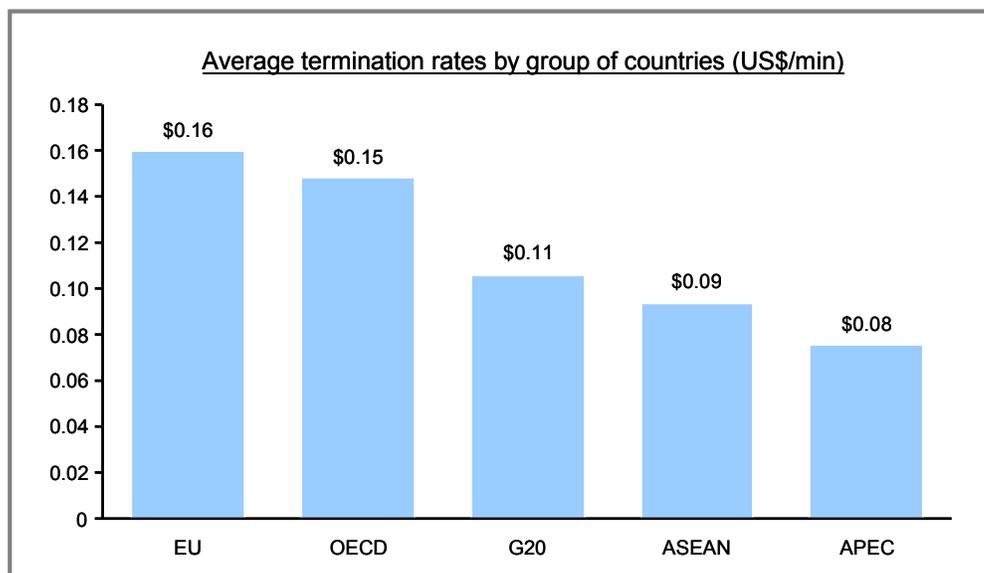
Any benchmarking exercise inevitably hinges on the choice of comparator countries used. Clearly issues of data availability may make an exhaustive benchmarking exercise impractical, so generally a subset of countries will be chosen. However, this choice of countries includes a judgment as to which are the most relevant comparators. In each of the ACCC determinations, this judgment is not made explicit. For instance, the MTAS determination considers first 30 European countries (with an average termination rate of 15.6 cpm), and then focuses on the ‘Big Five European Countries’ (14.6 cpm), but no explanation is offered as to why either of these sets are the appropriate comparators.

This is an important issue, since using a different set would give a materially different answer:

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<sup>3</sup> Ibid., p.25 footnote 63

Figure 1: Average termination rates by group of countries<sup>4</sup>



The choice of European Union (EU) countries as the ACCC's comparator set is particularly striking since it is widely acknowledged that EU mobile termination rates are considerably higher than non-EU equivalents. As recognised in the ACCC's own draft MTAS determination, there is also considerable pressure by the European Commission to "bring termination rates down to costs of an efficient operator as soon as possible".<sup>5</sup>

For its ULL benchmarking, the ACCC has used a different comparator set – a group of 14 EU countries that include the 'Big Five' considered in the MTAS determination, but that is obviously smaller than the 30 EU country set also considered there. The reason for choosing these 14 is not given.

We believe this issue is in its own right material to the outcome of a benchmarking exercise.

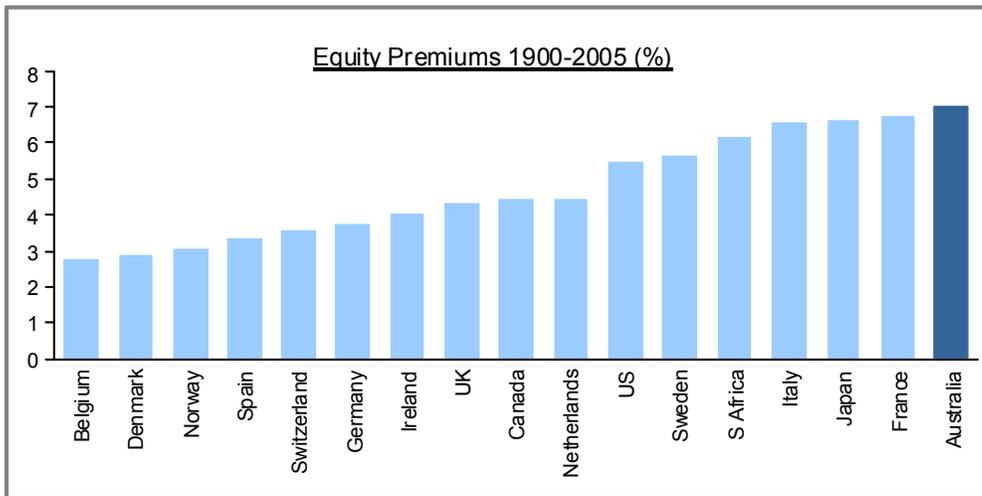
### **WACC**

A critical input into prices determined by regulators is the appropriate weighted average cost of capital (WACC). However WACCs vary appreciably by country. For instance, a comparison of equity premiums in different countries shows a range of 2.8% to 7.1%, with Australia at the top end of this scale.

<sup>4</sup> Ingenious analysis of 2005 data, Emin Gabrielyan & Switzernet Sarl, *Wholesale Market Mobile Termination Rates*, April 2005. Excludes USA and Canada

<sup>5</sup> ACCC draft MTAS determination (2008), p16

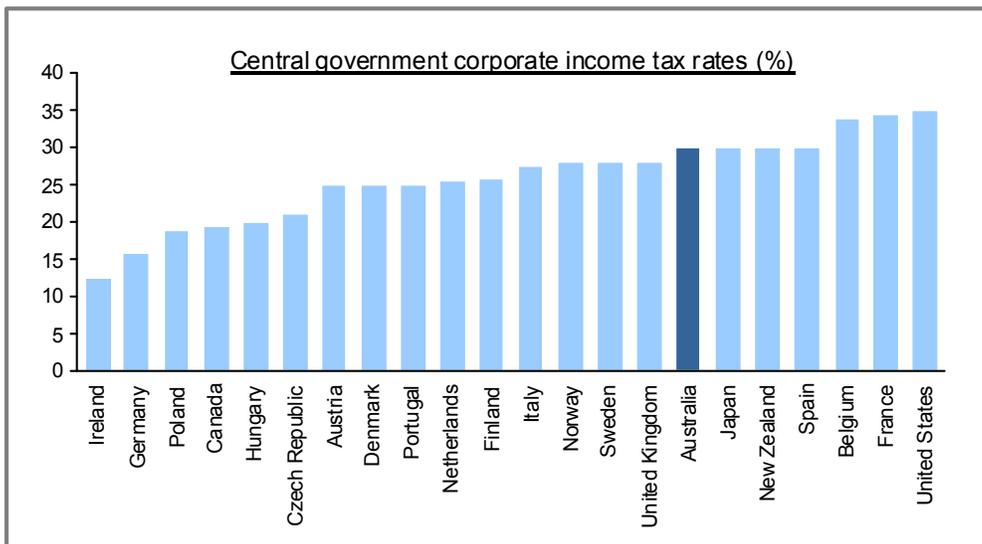
Figure 2: Equity premiums, by country, 1900-2005 (%)<sup>6</sup>



All things being equal, this would suggest prices would be higher in Australia, particularly for asset-intense services.

Taxation is also an important consideration as it directly affects the pre-tax WACC calculation (it is used to adjust the post-tax cost of equity). However, corporation tax varies significantly from country to country. This is illustrated in Figure 3 below. As such, variances in corporation tax rates will result in different values of pre-tax WACC.

Figure 3: Corporate income tax rates by country, 2008<sup>7</sup>



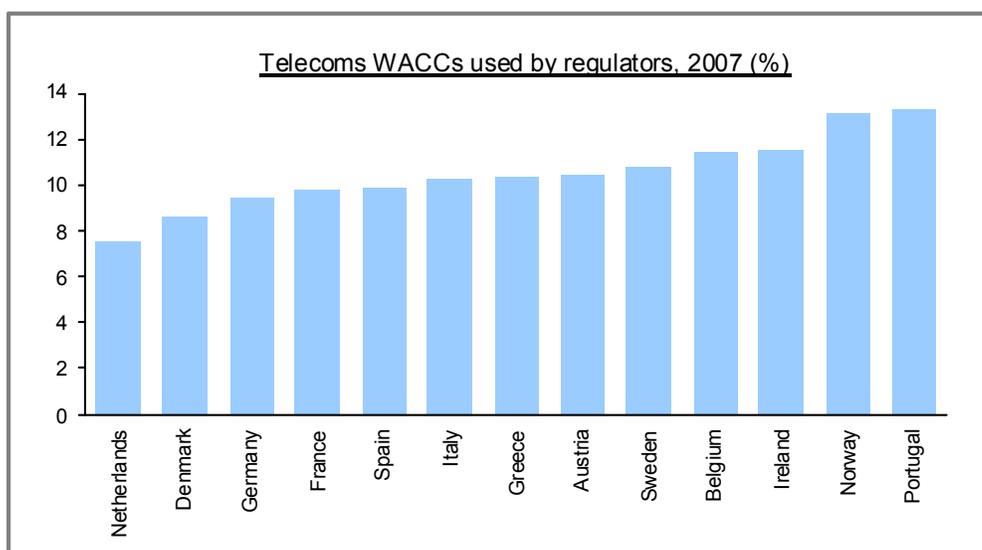
<sup>6</sup> Elroy Dimson, Paul Marsh, and Mike Staunton, *The Worldwide Equity Premium: A Smaller Puzzle*, London Business School, Revised 7 April 2006, p.17

<sup>7</sup> OECD Tax Database

To illustrate the impact of differential tax rates on the WACC calculation, if Australian corporation tax were to increase by 10% (from 30% to 33%) the point estimate pre-tax WACC would increase by 3.8% (from 16.46% to 17.08%).

Regulators have recognised that factors such as these will drive different WACCs, in that rates used by regulators across Europe vary significantly, from 7.6% to 13.3% (see Figure 4). Any like-for-like comparison would need to adjust for the differences in different jurisdictions.

Figure 4: Selected WACC by country<sup>8</sup>



Moreover WACCs may vary over time. For instance, in its latest consultation on Openreach's ULL pricing (and proposing an increase), the UK Telecoms regulator Ofcom commented:

“The period since May, when we published the first consultation, has also been characterised by significant volatility in the financial markets. This is pertinent to our consideration of the appropriate cost of capital and is, therefore, a factor we have analysed further in this second consultation.”<sup>9</sup>

We believe WACC variance is in its own right material to the outcome of a benchmarking exercise.

<sup>8</sup> Commission for Communications Regulation, *Review of Eircom's Cost of Capital*, November 2007, pp.32-33. In the UK a WACC of 10% has been used for BT's copper access network, and 11.4% for the rest of BT

<sup>9</sup> Ofcom, *A New Pricing Framework for Openreach*, December 2008, para 1.20

### **Timing considerations**

The international benchmarking in the ACCC determinations compares current calculations of appropriate rates in Australia (to apply 2009-2011) to current rates in force in other countries. However, the rates from other countries, while currently in force, may have been calculated some time ago (some date from 2004).

*Table 1: Comparison of determination dates between selected jurisdictions*

	<b>MTAS</b>	<b>ULL</b>
Australia (draft)	November 2008	November 2008
Belgium	April 2008 <sup>10</sup>	June 2006 <sup>11</sup>
France	October 2007 <sup>12</sup>	October 2005 <sup>13</sup>
Germany	November 2008 <sup>14</sup>	January 2007 <sup>15</sup>
Ireland	October 2005 <sup>16</sup>	August 2004 <sup>17</sup>
Italy	November 2008 <sup>18</sup>	January 2006 <sup>19</sup>
Netherlands	July 2007 <sup>20</sup>	December 2005 <sup>21</sup>
Norway (ULL currently being updated)	November 2008 <sup>22</sup>	February 2006 <sup>23</sup>
Portugal	October 2007 <sup>24</sup>	April 2006 <sup>25</sup>
Sweden (currently being updated) <sup>26</sup>	July 2004	November 2004
UK	March 2007 <sup>27</sup>	October 2005 <sup>28</sup>

<sup>10</sup> <http://www.bipt.be/ShowDoc.aspx?objectID=2790&lang=nl>

<sup>11</sup> <http://www.ibpt.be/ShowDoc.aspx?objectID=2383&lang=en>

<sup>12</sup> [http://www.arcep.fr/index.php?id=8571&L=1&tx\\_gsactualite\\_pi1\[uid\]=1060&tx\\_gsactualite\\_pi1\[annee\]=&tx\\_gsactualite\\_pi1\[theme\]=&tx\\_gsactualite\\_pi1\[motscle\]=&tx\\_gsactualite\\_pi1\[backID\]=26&cHash=2e8cb033b2](http://www.arcep.fr/index.php?id=8571&L=1&tx_gsactualite_pi1[uid]=1060&tx_gsactualite_pi1[annee]=&tx_gsactualite_pi1[theme]=&tx_gsactualite_pi1[motscle]=&tx_gsactualite_pi1[backID]=26&cHash=2e8cb033b2)

<sup>13</sup> <http://www.arcep.fr/index.php?id=6989&L=1#5764>

<sup>14</sup> <http://www.bundesnetzagentur.de/export/292.html>

<sup>15</sup> correspondence with the German regulator, the Bundesnetzagentur

<sup>16</sup> <http://www.comreg.ie/fileupload/publications/ComReg0578.pdf>

<sup>17</sup> <http://www.comreg.ie/fileupload/publications/ComReg0491.pdf>

<sup>18</sup> <http://www2.agcom.it/default.aspx?message=viewdocument&DocID=2668>

<sup>19</sup> <http://www2.agcom.it/Default.aspx?message=contenuto&DCId=%20222>

<sup>20</sup> <http://www.opta.nl/asp/publicaties/document.asp?id=2362>

<sup>21</sup> <http://www.opta.nl/asp/publicaties/document.asp?id=1907>

<sup>22</sup> [http://www.npt.no/iKnowBase/Content/108168/Draft\\_decisions-Market16-public.pdf](http://www.npt.no/iKnowBase/Content/108168/Draft_decisions-Market16-public.pdf)

<sup>23</sup> [http://www.npt.no/iKnowBase/Content/Decision\\_market\\_11\\_20\\_February\\_2006.pdf?documentID=50958](http://www.npt.no/iKnowBase/Content/Decision_market_11_20_February_2006.pdf?documentID=50958)

<sup>24</sup> [http://www.anacom.pt/streaming/regulation\\_report2007.pdf?contentId=752259&field=ATTACHED\\_FILE](http://www.anacom.pt/streaming/regulation_report2007.pdf?contentId=752259&field=ATTACHED_FILE)

<sup>25</sup> <http://www.anacom.pt/template31.jsp?categoryId=190122>

<sup>26</sup> <http://www.pts.se/sv/Bransch/Telefoni/Konkurrensreglering-SMP/SMP-beslut-2003-2006/>

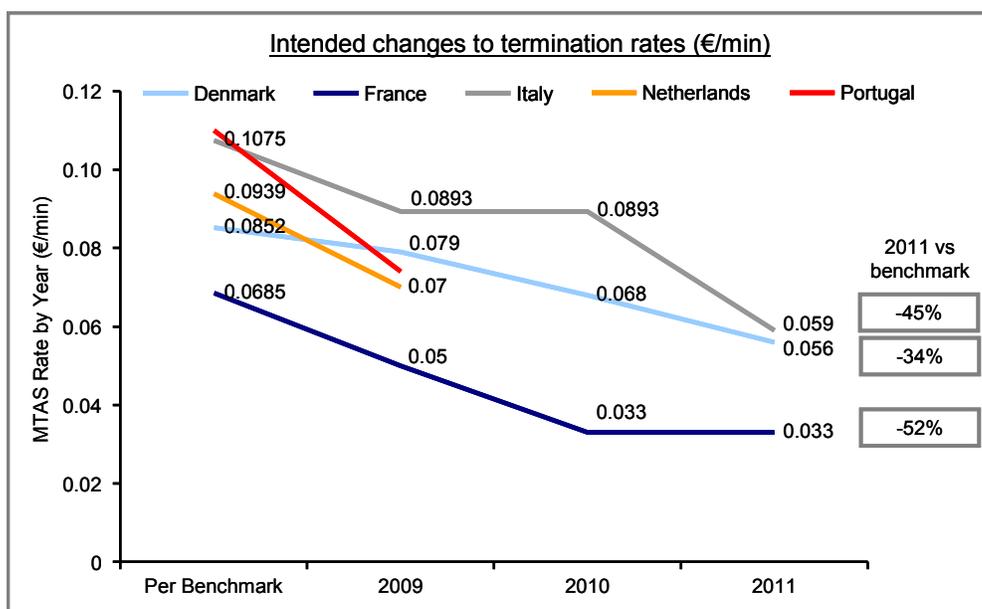
<sup>27</sup> [http://www.ofcom.org.uk/media/news/2007/03/nr\\_20070327](http://www.ofcom.org.uk/media/news/2007/03/nr_20070327)

<sup>28</sup> <http://www.ofcom.org.uk/consult/condocs/llu/>

A 2008 calculation would likely give a different answer. Clearly it is not practical to do such a calculation for each comparator, but these material timing differences do suggest caution in making a simple side-by-side comparison. This is particularly so given that input costs may vary materially over time. For instance, mobile switches fall steadily in price, suggesting that, all things being equal, a determined MTAS price for a prior year will be higher than a currently appropriate price. These issues are discussed in more detail below, against specific input costs.

In a small number of cases, regulators have in fact announced expected changes in MTAS rates:

Figure 5: Intended changes to mobile termination rates in selected European countries<sup>29</sup>



These reductions relative to the historic benchmark rates are consistent with a view that MTAS costs are falling, and that any appropriate current price is likely to be materially lower than any benchmarking against figures calculated one or more years ago. Merrill Lynch forecast substantial falls in MTAS costs across Europe, giving a European average reduction between 2007 and 2010 of 38%.<sup>30</sup>

Movements in ULL pricing have been less dramatic, though the consensus suggests a moderate downward trend<sup>31</sup>:

<sup>29</sup> Denmark – ITST Press Release, 19<sup>th</sup> June 2008. France – ARCEP Press Release, 23<sup>rd</sup> October 2008. Italy – AGCOM, *Annual Report 2008*, p. 16. Portugal – ANACOM, *Mercados Grossistas de Terminacao de Chamadas Vocais em Redes Moveis Individuais*, October 2007. Netherlands – OPTA Press Release, 15<sup>th</sup> May 2007.

<sup>30</sup> Merrill Lynch, *European Wireless Matrix Q4 2008*, p.14

<sup>31</sup> Europe Economics, *Pricing Methodologies for Unbundled Access to the Local Loop*, p14

“While the trend in price for ULL appears to be decreasing on average, there is considerable variation in prices across EU Member States”

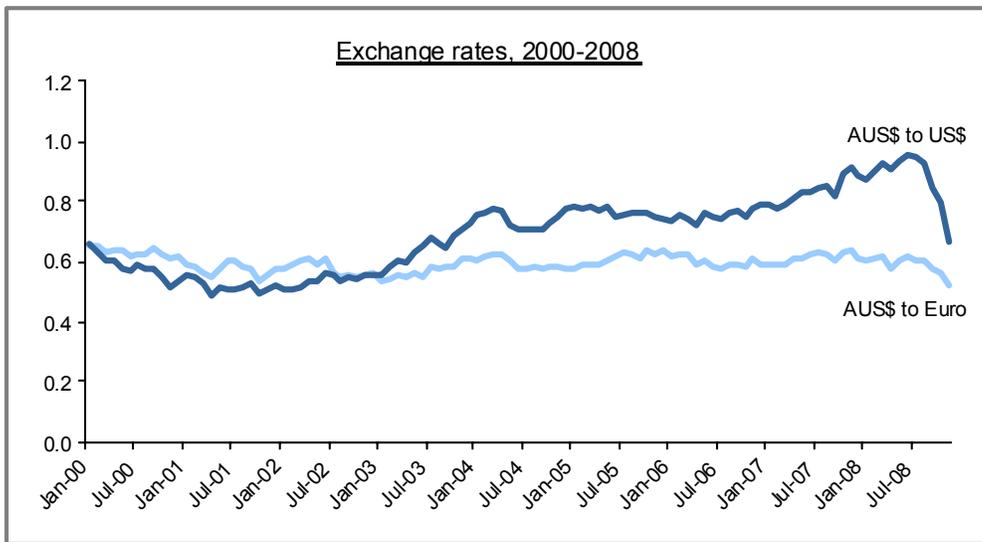
However, as noted above, Ofcom’s latest consultation<sup>32</sup> proposes increasing them by 4–11%.

We believe that timing issues are in their own right material to the outcome of an MTAS benchmarking exercise, and may have impact on ULL benchmarking.

**Exchange rate movements**

Any international benchmarking exercise depends on exchange rates. In the ULL determination the ACCC makes use of both PPP and standard exchange rates, while the MTAS determination uses standard only. In both cases, it appears that Euro / Australian dollar exchange rates were applied to Euro-denominated rates gathered by consultants. However, in a number of cases the original currency will not have been Euros. For instance, UK prices will have been in sterling, and Norwegian prices will have been in Norwegian krone. The rate of conversion to Euros is not clear. Thus all prices will have been subjected to at least one and in some cases two arbitrary exchange rates. This is particularly important given recent exchange rate volatility:

Figure 6: Australian \$ to Euro / US\$ exchange rate over time<sup>33</sup>



Consequently the choice of date of exchange rate used can have a material impact, as illustrated in Table 2 below.

<sup>32</sup> Ofcom, *A New Pricing Framework*, para 1.29

<sup>33</sup> Rates from xe.com

Table 2: Impact of exchange rate movement on ULL benchmarks since June 2008<sup>34</sup>

AUS\$	At June 2008 exchange used in the ACCC ULL determination (AUS\$/month)	At 1 <sup>st</sup> December 2008 exchange rate (AUS\$/month)
Italy	13.60	15.08
Netherlands	14.24	15.79
Sweden	15.4	15.50
UK	15.45	16.19
Portugal	16.01	17.74
Belgium	16.54	18.34
France	16.54	18.34
Austria	16.61	18.42
Denmark	17.31	19.20
Spain	17.31	19.19
Germany	18.69	20.72
Finland	19.96	22.13
Norway	21.19	21.01
Ireland	29.25	32.43
<b>Average rate</b>	<b>17.72</b>	<b>19.29</b>

Based on the exchange rate used by the ACCC in the ULL determination, the average monthly ULL rate of the chosen comparator countries was AUS\$17.72/month. By the first week of December 2008 this had moved to AUS\$19.29/month, representing a 9% increase on the benchmarked average. (This does not factor in a potential further impact from the 'double exchange rate conversion' for countries like the UK).

Purchasing Power Parity (PPP) rates are inherently less volatile. However even these can move materially over time. For instance, the Sweden/Australia rate moved 5% between 2004 (when the Swedish benchmark MTAS and ULL tariffs were both determined) and 2007<sup>35</sup>.

There is not an inherently superior method for appropriate exchange rates to use in international benchmarking – various approaches may have an equal claim for legitimacy. However, the degree of variance in the results from these different approaches points to a need to treat benchmarking comparisons with a degree of caution.

<sup>34</sup> Ovum, *Europe & Americas additional benchmarks tables and charts Q2 2008*, July 2008

<sup>35</sup> Ingenious calculation based on OECD PPP rates

We believe that exchange rate issues are in their own right material to the outcome of a benchmarking exercise.

### ***Negotiation element of regulation***

In some countries and at particular times, regulators and incumbents look more widely than individual, stand-alone decisions when looking at the pricing regulation applied to a specific service. For example, regulators will often consider the pricing of carrier pre-select, wholesale line rental and unbundled local loops as connected decisions. The whole concept of the ladder of investment which has become popular in Europe suggests that price regulation should encourage competition to move progressively towards the provision of infrastructure competition. As a consequence, benchmarking of individual services will inevitably fail to capture the broader market and regulatory environment – for example, the other forms of competition and the powers of the regulator to take account of these.

As Ewan Sutherland of the Wits University Graduate School of Public and Development Management, has commented:<sup>36</sup>

“While some of these differences [in ULL prices] may arise from underlying costs, much is due to the national approaches to accounting practices, cost models **and the differing negotiating powers of the various parties.**” [emphasis added]

This phenomenon is relevant to a benchmarking exercise since, for example, comparing a cost-based tariff for a ULL to a tariff agreed by an incumbent as part of a wider package of regulatory issues would not be appropriate.

It is inherently harder to determine the magnitude of this issue in benchmarking, and we are unable to determine its materiality.

### ***Costing methodology***

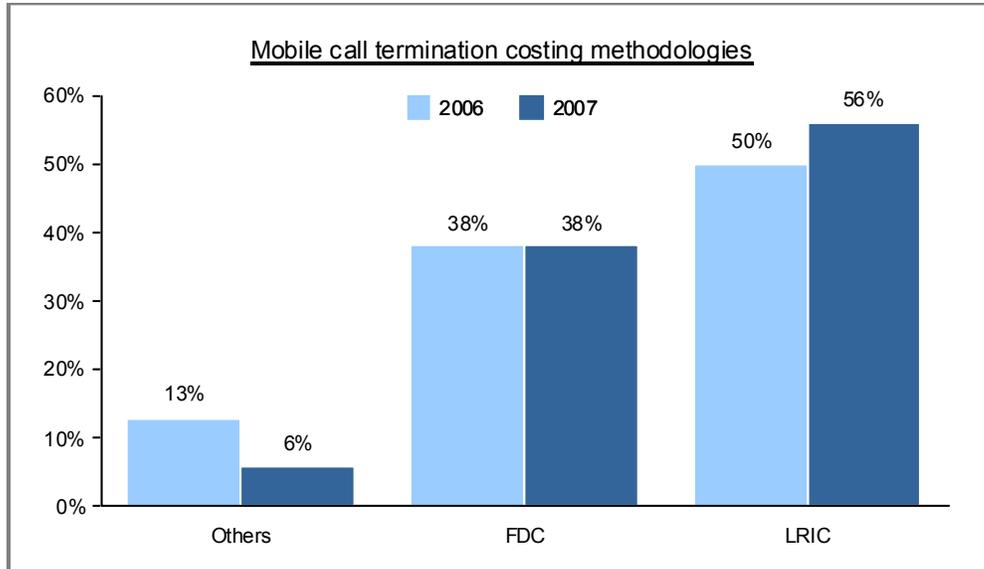
For many reasons different national regulators choose different methodologies when determining appropriate tariffs for their countries. Variations in methodology include fully distributed costs (FDC) vs. long-run incremental cost (LRIC), current cost accounting (CCA) vs. historic cost accounting (HCA), scorched node vs. scorched earth, straight line vs. economic depreciation, Ramsey vs. equal proportionate mark-up (EPMU) pricing and so on.

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<sup>36</sup> Ewan Sutherland, *Unbundling local loops : global experiences*, p11

Just looking at FDC vs. LRIC and using MTAS as an example, we can see that there is no consistent view in Europe, and moreover that countries are changing their methodologies, making any like-for-like benchmarking even more challenging.

Figure 7: Distribution of costing methodologies in Europe for mobile call termination<sup>37</sup>



This issue of methodology choice is not just an academic one, since different methods can lead to material differences in outcomes.

For instance in Hong Kong the incumbent operator's charge for voice interconnect with mobile operators (the FMIC charge, in Hong Kong paid by mobile operators to the fixed network) was calculated on a FDC basis. Conversely the voice interconnect charge for fixed operators (the Type I interconnect charge), was calculated on an LRAIC basis, but was essentially the same service. The FMIC tariff was 4.8 cents per minute.<sup>38</sup> The Type I interconnect charge was approximately 2.9 cents on a blended basis (2002 figures in each case).<sup>39</sup> Thus LRAIC was 59% of the FDC figure.

<sup>37</sup> ERG (07) 21, *Regulatory Accounting in Practice*, April 2007, p17

<sup>38</sup> OFTA, *Charge for Interconnection between Public Mobile Radiotelephone Services (PMRS), Personal Communications Services (PCS) and Value Added Services (VAS) and the Public Switched Telephone Network (PSTN) Operated by PCCW-HKT Telephone Limited*, 29 September 2001

<sup>39</sup> OFTA, *Determination under Section 36A of the Telecommunications Ordinance of the Terms and Conditions of Interconnection between PCCW-HKT Telephone Limited and Wharf T&T Limited*, 27 February 2003. Blended rates based on 2 minute local call holding time

This magnitude of difference broadly tallies with Ofcom's view, who, in a recent interconnection dispute, estimated BT's LRIC "based on a LRIC:FAC ratio of 0.5".<sup>40</sup>

We believe differences in costing methodology are in their own right material to the outcome of a benchmarking methodology.

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<sup>40</sup> Ofcom, *Draft determinations to resolve mobile call termination rate disputes between T-Mobile and BT, O2 and BT, Hutchison 3G and BT and BT and each of Hutchison 3G, Orange and Vodafone*, May 2007, para 4.76

## 4. International benchmarking and the draft MTAS determination

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In this section we consider certain issues that may have a particular impact on comparing MTAS prices.

### **Mobile traffic density**

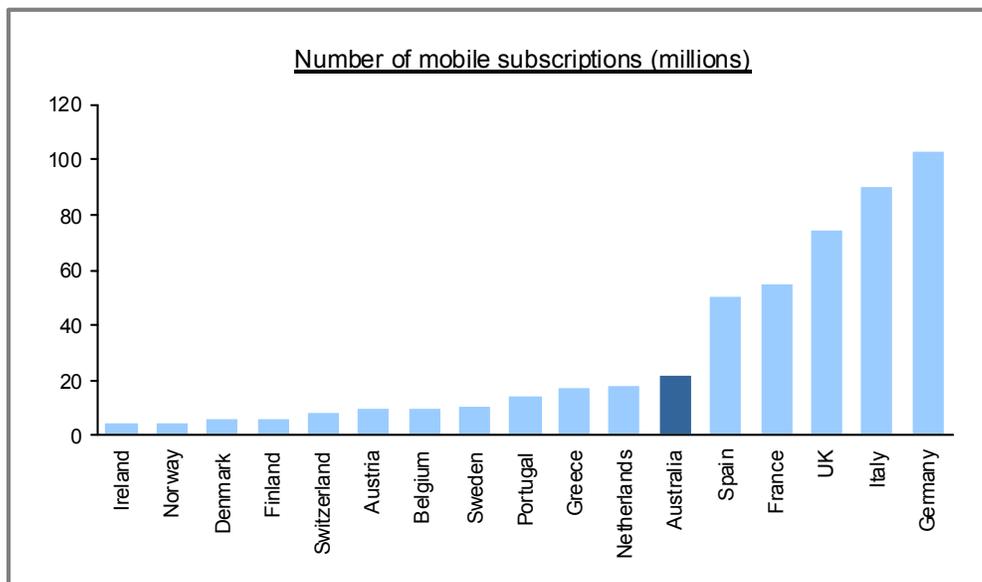
The density of telecommunications traffic will vary significantly by operator and by country. It will depend on a range of factors including

- Market size;
- Market share;
- Mobile minutes per user; and
- Mobile penetration.

The number of mobile users varies significantly by country. The number of people using mobile telephones and the volume of mobile use will drive the volume of terminating calls. This in turn will be dependent on a range of issues such as population, relative affluence and bundling by mobile network operators. The volume of calls will directly affect the MTAS rate in each country - generally more mobile calls will result in a lower MTAS rate (though at high volumes in-fill capacity can become necessary).

Figure 8 shows the volume of mobile subscriptions in EU countries and in Australia:

Figure 8: Number of mobile subscriptions by country<sup>41</sup>

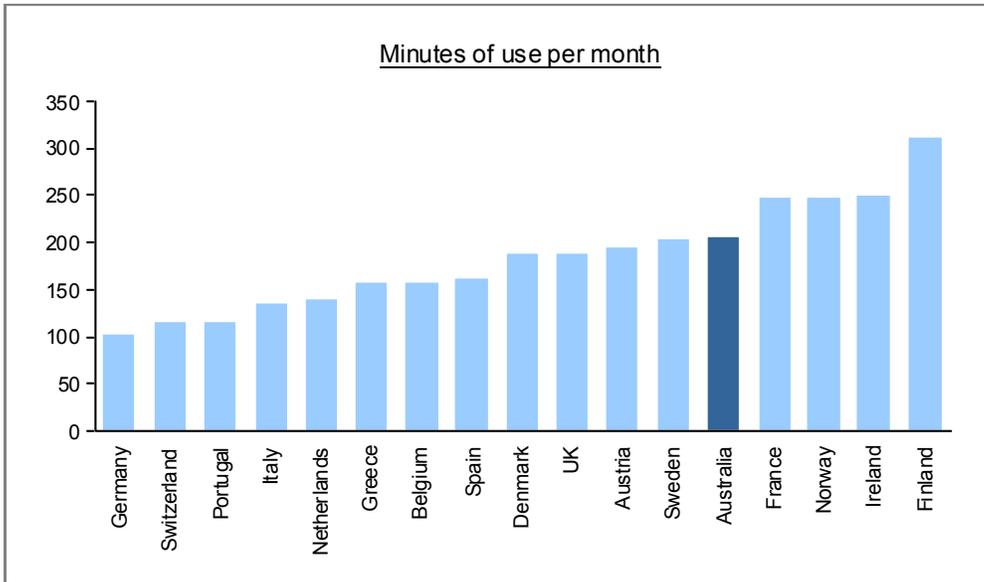


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<sup>41</sup> Merrill Lynch, *Global Wireless Matrix 2Q08*, p.2

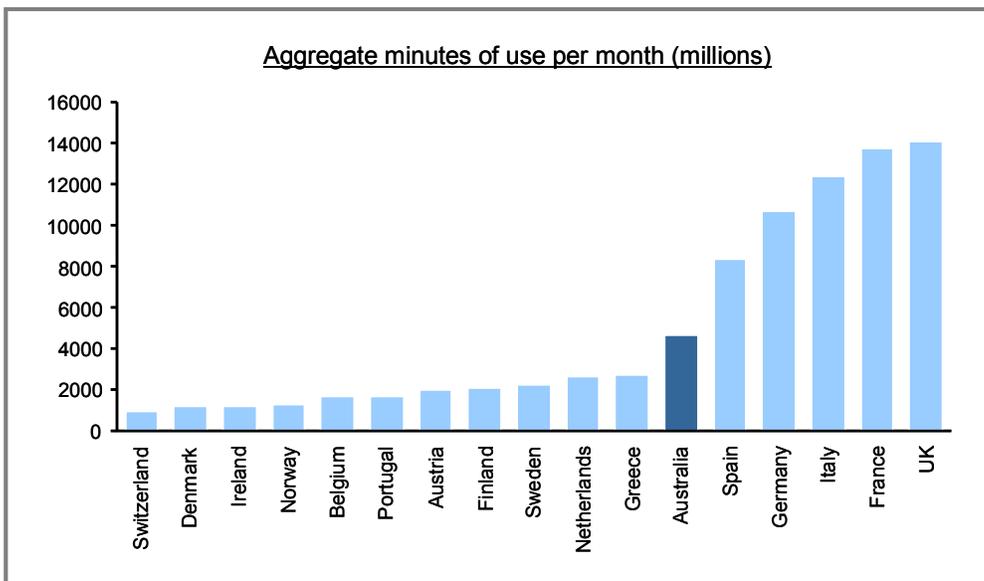
The monthly minutes per user also varies dramatically, as shown in Figure 9. Such variation will clearly have a significant impact on the traffic density in each country, and therefore on mobile termination rates.

Figure 9: Monthly minutes of use per user, by country<sup>42</sup>



By multiplying these minutes of use by subscribers, we can obtain a measure of aggregate mobile traffic for different countries:

Figure 10: Aggregate mobile minutes per month (millions), by country<sup>43</sup>



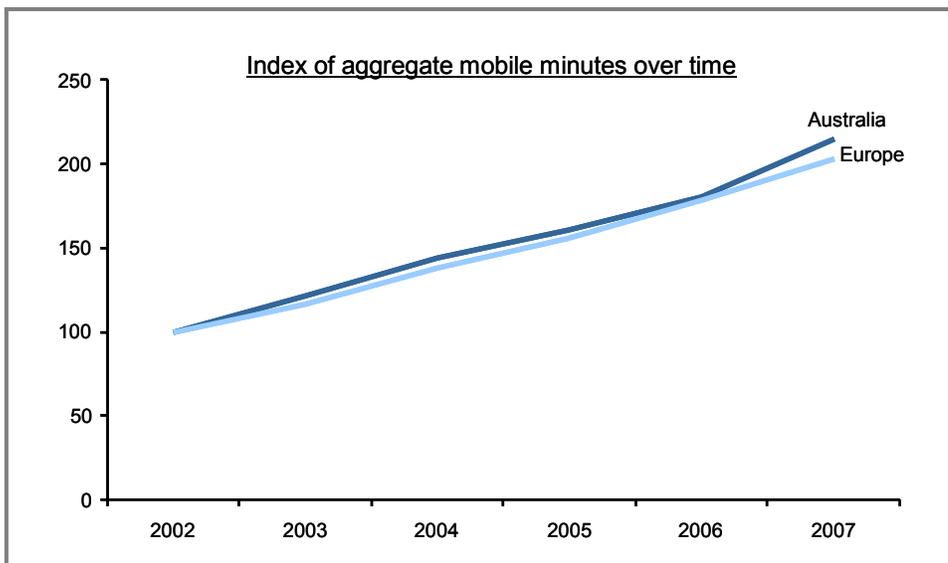
<sup>42</sup> Ibid.

<sup>43</sup> Ingenious Analysis of Merrill Lynch, *Global Wireless Matrix 2Q08*, p.2

Clearly there are substantial differences of scale of operations in different countries, and this would likely lead to material differences in per-minute costs, making a meaningful benchmarking exercise challenging.

Furthermore, the volume of mobile calls is increasing over time. This is illustrated in Figure 11 below. As such, the number of mobile terminating calls will vary significantly based on not only the country, but also the date of determination. Given the appreciable upward trend in volumes of mobile telephone calls, it is likely that the unit cost of mobile termination rates will therefore fall, all things being equal, over time.

Figure 11: Index of aggregate mobile minutes, Europe and Australia 2002-07<sup>44</sup>



We believe issues of timing and of national volume of mobile traffic are both material in their own right to the outcome of a benchmarking methodology.

#### **Mix of voice and data traffic**

In many countries voice and data traffic share the same telecommunications infrastructure. When considering the allocation of costs to mobile termination rates, even though the service declaration in Australia is limited to termination rates for voice calls, it is important also to consider the volume of data traffic.

Figure 12 and Figure 13 below demonstrate that, in the UK (as in other countries) the volume of data traffic has been increasing significantly over a relatively short period of time.

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<sup>44</sup> Ingenious analysis of Merrill Lynch, *Global Wireless Matrix 2Q08*, p.50 and 62. Data used for 16 European countries

Figure 12: Mix between monthly data and voice traffic on H3G network over time (UK)<sup>45</sup>

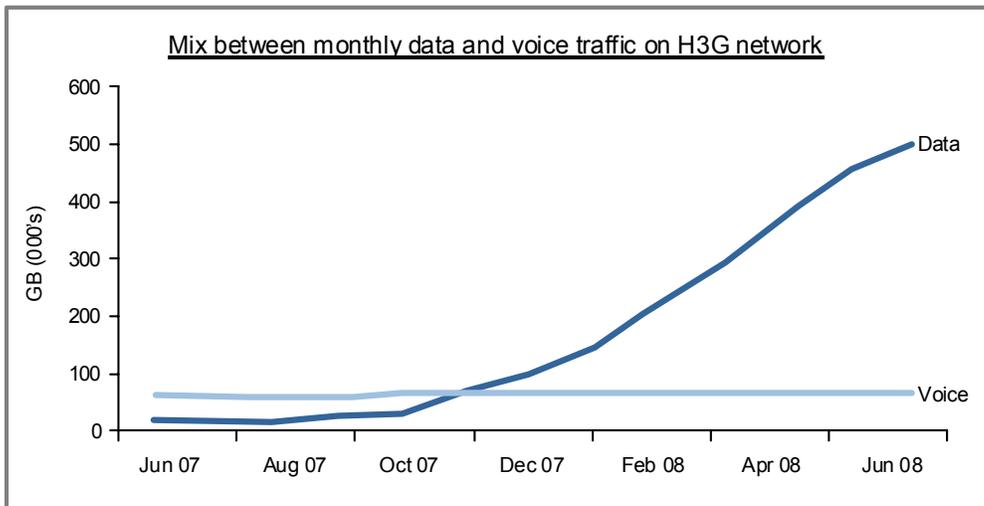
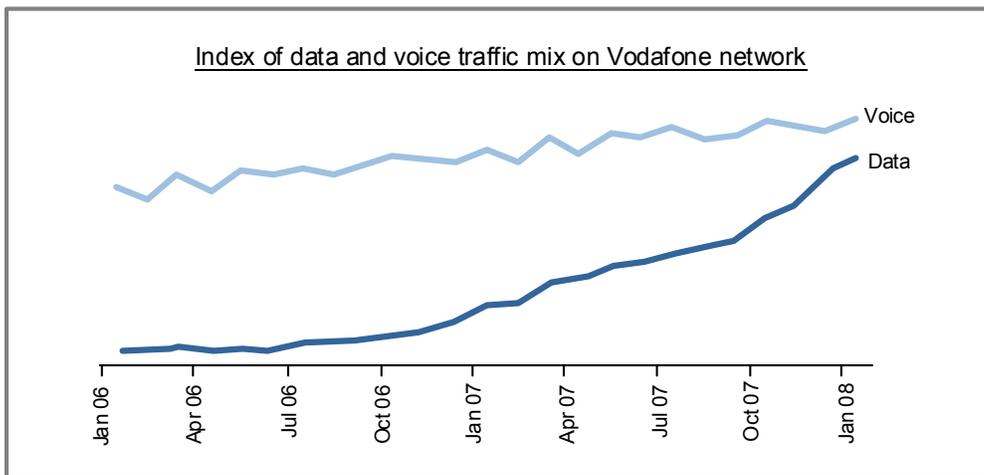


Figure 13: Index of mix between data and voice traffic on Vodafone network over time (UK)<sup>46</sup>

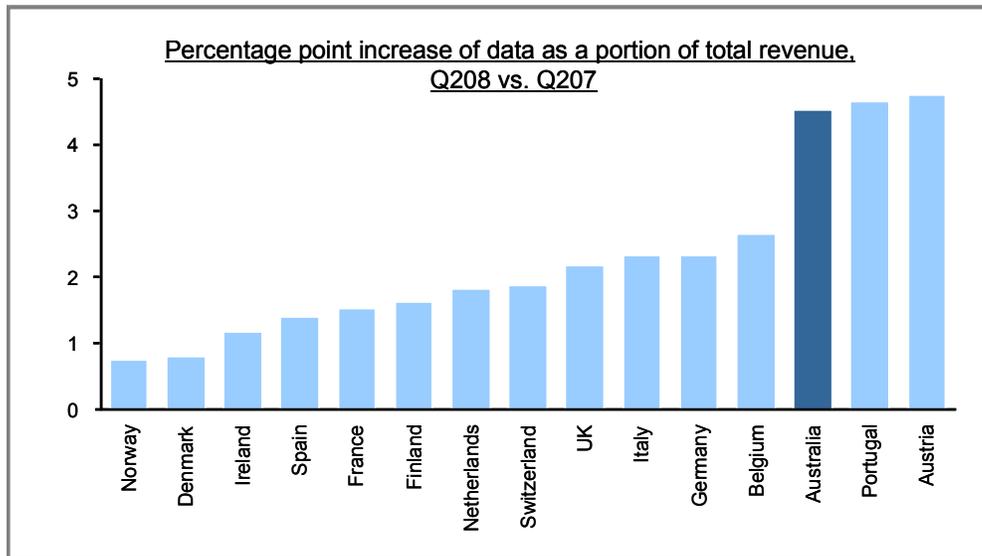


Data use has increased particularly rapidly in Australia over the last year (and data revenues as a percentage of total are relatively high in Australia):

<sup>45</sup> Ofcom, *Mobile citizens, mobile consumers*, August 2008, p.43

<sup>46</sup> Analysys Mason, *Assessment of the UK mobile sector*, p.35

Figure 14: YoY change in percentage of revenue from data services, Q2 2008<sup>47</sup>



A number of network elements, for instance spectrum, mast costs and backhaul, are shared between voice and data. As the portion of traffic that is data rises, the allocation of costs to voice will fall, and thus MTAS rates will fall also. Thus any comparison of currently calculated rates to historic rates (as in the ACCC benchmarking) is likely to show current rates to be lower than those calculated on historic levels of data.

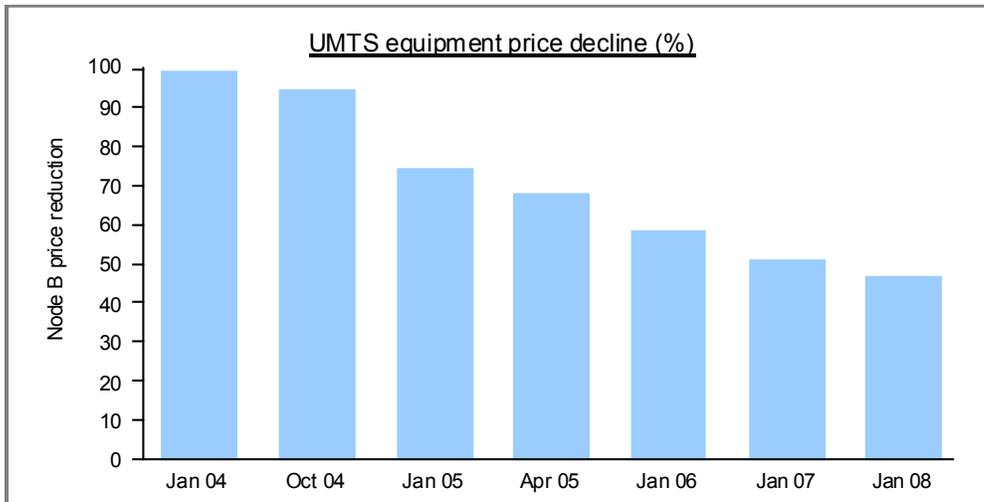
We believe differences in mobile data volumes are in their own right material to the outcome of a benchmarking methodology.

### **Costs of telecommunications transmission equipment**

Over time the general trend in telecommunications transmission equipment is downwards. This is illustrated in the UK in Figure 15 below.

<sup>47</sup> Merrill Lynch, *Global Wireless Matrix 2Q08*, p.41

Figure 15: UMTS macro-cell equipment price decline<sup>48</sup>



Cell site equipment and mobile switches are key elements of a MTAS costs calculation. The above data suggests these equipment costs are falling at a rate of 16% per year. Thus once again any comparison of currently calculated rates to historic rates (as in the ACCC benchmarking) is likely to show current rates to be lower than those calculated on historic levels of data.

We believe this issue is in its own right material to the outcome of a benchmarking methodology.

### ***Spectrum auction process***

The allocation of the spectrum required for mobile communications transmissions will vary between countries. In some it may be subject to an auction, in others it may be sold at a fixed price and in others it may be gifted.

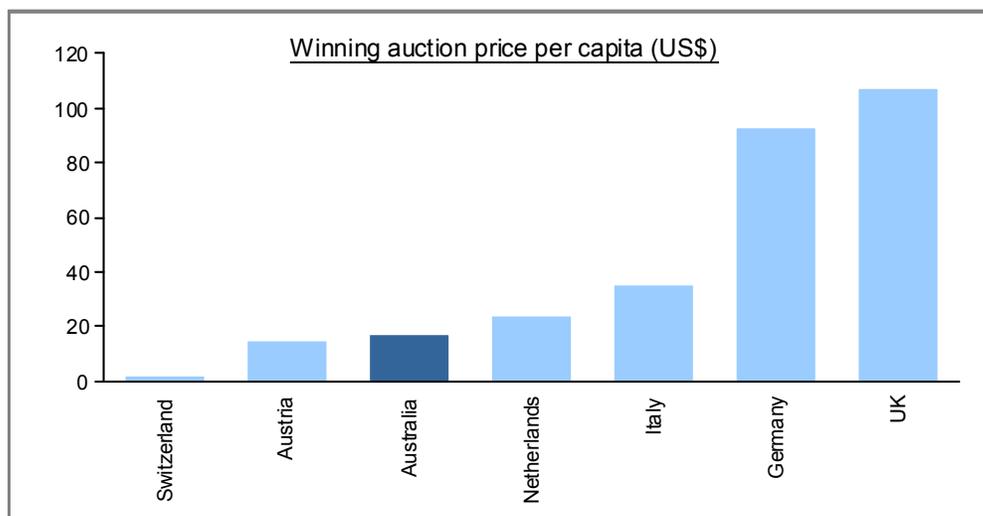
Any costs associated with the use of spectrum may or may not be included in the mobile termination rates applied. This is likely to lead to inconsistency and incomparability between some international MTAS rates.

Figure 16 below illustrates the significant variance in the cost of spectrum (measured in terms of the winning auction price per capita):

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<sup>48</sup> Analysys Mason, *Assessment of the UK mobile sector*, p.40

Figure 16: Winning auction price per capita (for equivalent of 2x10Mhz + 5Mhz block)<sup>49</sup>



As can be seen, the price paid in Australia was materially lower than that paid in several of the key European countries used as comparators. This would tend to support the view that Australian MTAS rates should be lower than those benchmarked from countries such as Germany and the UK.

We believe differences in spectrum cost are in their own right material to the outcome of a benchmarking methodology.

### **Mobile communication frequency range**

GSM networks operate in different frequency ranges. The ACCC's draft MTAS determination contrasted Australia with Western Europe, both of which use the 900 MHz / 1800 MHz bands.

As a general rule, the higher the frequency, the shorter the usable range. As a result, generally more 1800 MHz towers are required to cover a given area than 900 MHz towers. Furthermore, higher frequency towers typically cost more to operate.

Within a jurisdiction, the frequency range adopted by mobile network operators may vary, resulting in different cost bases and, often, different termination rates.

For example, in Germany, the MTAS approval decision of November 2006 allowed different rates of the 900MHz operators (T-Mobile and Vodafone, 8.78 €-cents) and the 1800 MHz operators (e-plus and O2-Telefónica Germany, 9.94 €-cents) reflecting the differences in costs due to different spectrum endowment. There is similar differentiation in other countries, such as the UK.

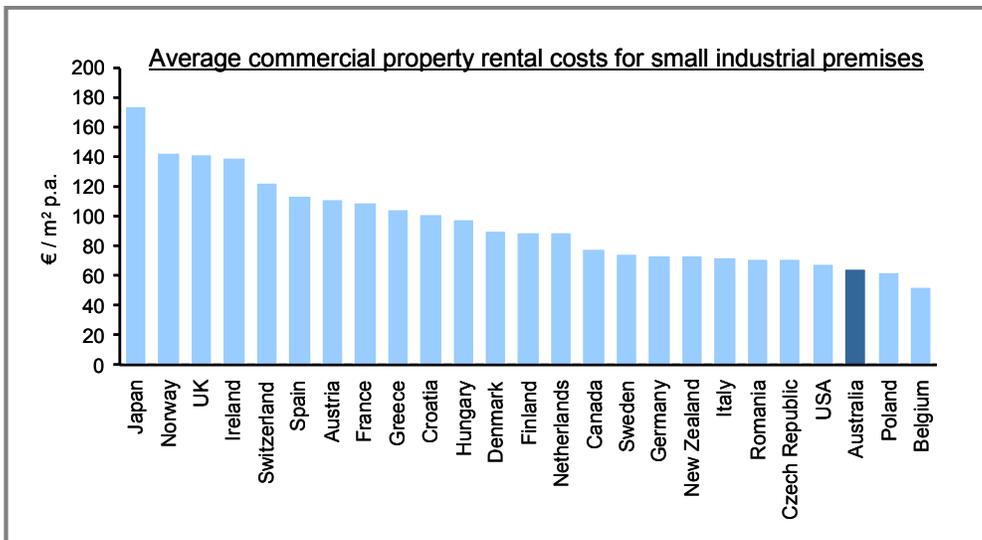
<sup>49</sup> Ingenious analysis based on Dr Charles M. Rush, *Approaches to Frequency Management*, June 2006, p.9 and Peter Cramton, *Spectrum Auctions*, February 2001, p.24

However, this issue is unlikely to be material in its own right.

### Costs of masts

The cost of a mast will depend on a number of factors, but key amongst them will be the cost of site rental and whether the site is shared. Information on the cost of site rental by country is not available, but the cost of commercial property may be an indicative proxy. Such rates are very low in Australia, suggesting that – all things being equal – a true MTAS rate for Australia would be lower than those benchmarked from other countries:

Figure 17: Average commercial property rental costs for small industrial premises in selected countries<sup>50</sup>



Moreover, in Australia, unlike many other countries, masts are shared where possible.

“Clause 38 of Part 5 requires that a carrier, in planning the provision of future carriage services, must co-operate with other carriers to share tower sites and underground facilities. The ACA considers that before establishing a new telecommunications tower, tower site or underground facility a carrier should make reasonable attempts to notify all other carriers that may wish to share the tower, site or facility for the purpose of co-operating with other carriers in planning the provision of future carriage services”<sup>51</sup>

<sup>50</sup> King Sturge, *Global Industrial and Office Rents Survey Q2 2008*, pp.4-5

<sup>51</sup> Australian Communications Authority, *Accessing and Installing Telecommunications Facilities – A Guide*, p9

Again, this will suggest that Australian costs are likely to be lower than in other countries, and hence appropriate MTAS rates would be lower than those benchmarked in other countries.

However, this issue is unlikely to be material in its own right.

***Costs of leased lines***

Leased lines are typically used to provide the link between transmission mast / tower and the mobile exchange, and as such are an important component of MTAS costs. However, the cost of leased lines varies significantly by country. For instance, the OECD reports that the annual cost of a 2Mbps leased line in the Czech Republic is 16 times that in Denmark<sup>52</sup>. A true side-by-side comparison of MTAS rates would need to take into account variations in wholesale charges for leased lines.

Absent data on differences in wholesale rates, it is not possible to determine the magnitude of this issue in benchmarking, and we are unable to determine its materiality.

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<sup>52</sup> OECD, *Communications Outlook 2007*, p. 248. Retail charges converted at PPP rates

## **5. International benchmarking and the draft ULL determination**

In this section we consider certain issues that may have a particular impact on comparing ULL prices.

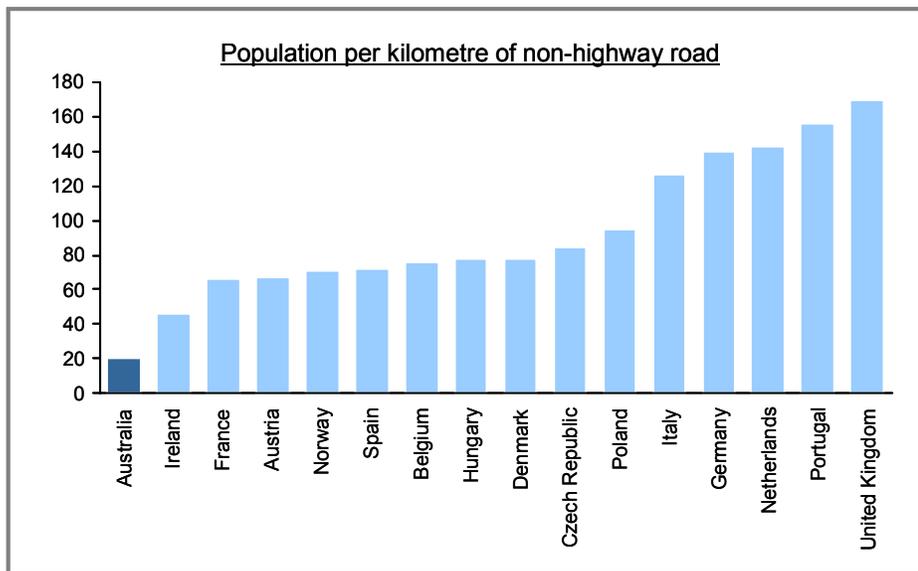
### ***Population density***

Population distribution is an important driver of ULL costs. If population is more dispersed, then all things being equal, loop lengths will be longer and duct density (the number of copper pairs per duct) will be lower, both of which will drive up costs per loop. The ACCC implicitly acknowledges this by including 'Population per square km' figures in its table of benchmark ULL prices. However, these figures appear to be national averages, and as such can be misleading. The driver for ULL costs is population density *in served areas*, not in the country as a whole. Clearly large unpopulated areas have no impact on ULL costs, but may have a material impact on national average population density.

To take an example, the least dense country on the ACCC's list is Norway, with a population of 12 per square kilometre. However, 78% of Norway's population lives in urban areas, and these have an average population density of 1,595 per square kilometre, considerably *higher* than the 968 per square km in Band 2 Australia. While the remaining 22% of the Norwegian population will bring down the average (to the extent to which ULL is available to them), it seems likely that the population density in served areas will be far higher than the national figure of 12 per square km. Note also that remote areas in Norway and other countries will likely be served by aerial cable, which is significantly cheaper than the ducted copper used in urban areas (such as Band 2 Australia).

As a proxy for population density in served areas we can look at population per kilometer of roadway other than highways. Highways aside, roads (and telecoms ducts) will primarily travel through populated areas. Thus population per kilometer of road will give a rough proxy for population density in areas covered by a fixed network. Figure 18 shows this measure for a selection of countries, and gives a starkly different picture than simple national population density. For instance Norway is roughly equivalent to Belgium, one of the countries in the ACCC's sample with the highest figures for simple national population density.

Figure 18: Population per kilometre of non-highway road<sup>53</sup>



Note: Figures for Band 2 Australia not available

Any true comparison of ULL charges would need to take account of population density *in served areas*, rather than just national population density, and as discussed above, these are quite different things.

We believe that population density *in served areas* is in its own right material to the outcome of a benchmarking exercise.

### **Mix of housing types**

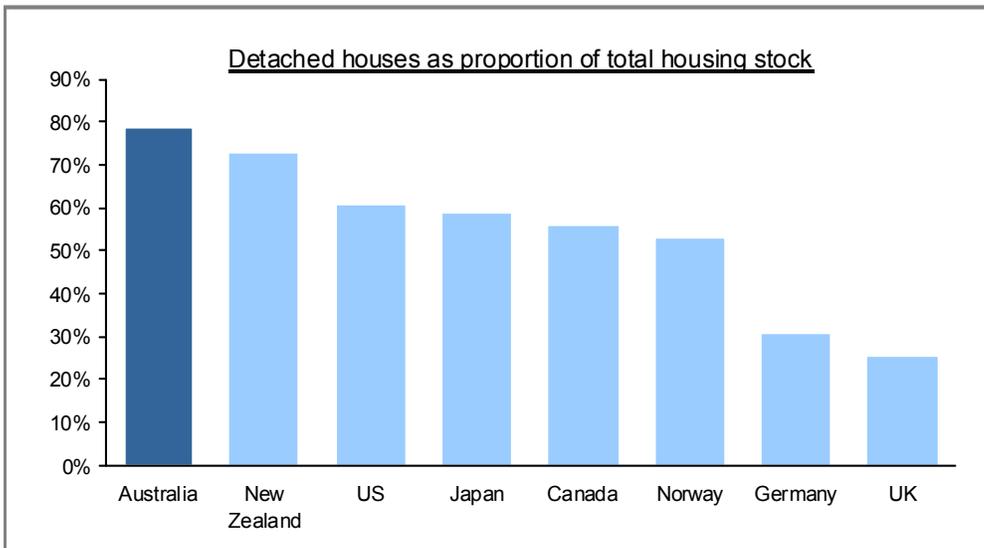
Related to population density is the issue of housing stock mix. All things being equal, it is generally less expensive to service a number of households in a shared building (an apartment block) than the same number of households in individual households. A single duct is required rather than multiple tap-outs, and a single building entry is required rather than multiple.

Therefore the mix of housing types will affect the total ULL cost and, therefore, the ULL rates. This is particularly relevant since Australia has amongst the highest proportion of detached housing of any country in the world:

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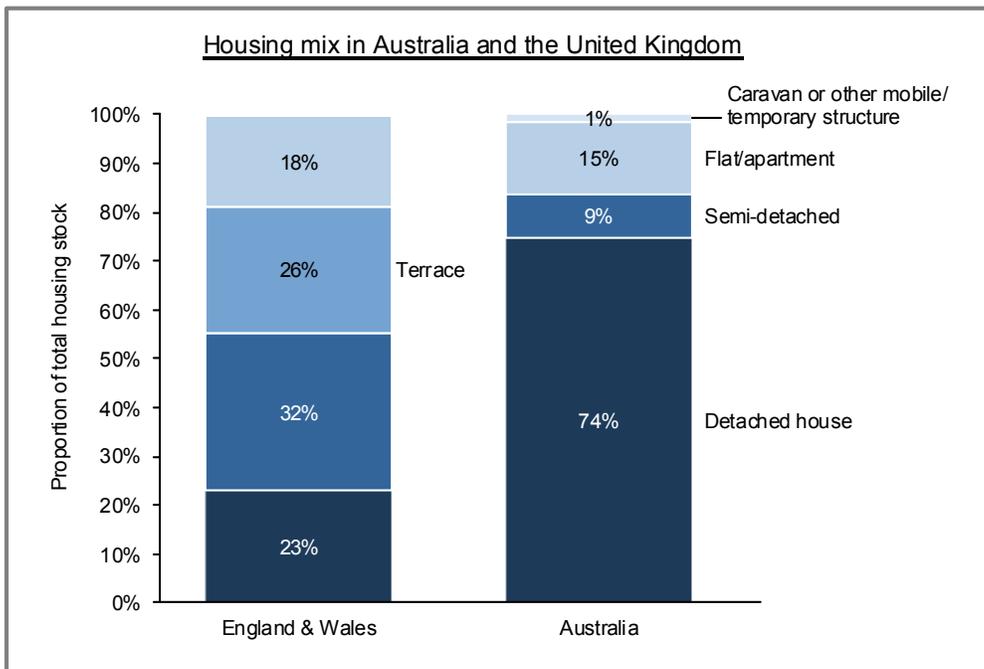
<sup>53</sup> European Union Road Federation, *European Road Statistics 2008*, pp. 15-16; Australian data provided by Telstra in a letter enclosed in Appendix 4; CIA World Factbook; Ingenious calculations. Note that due to the likelihood of road classifications varying from country to country, the data may not be absolutely comparable between countries

Figure 19: Detached houses as a proportion of total housing stock by country<sup>54</sup>



If we compare Australia to the UK, the variation in housing mix is clear.

Figure 20: Comparison between UK and Australian housing mix<sup>55</sup>

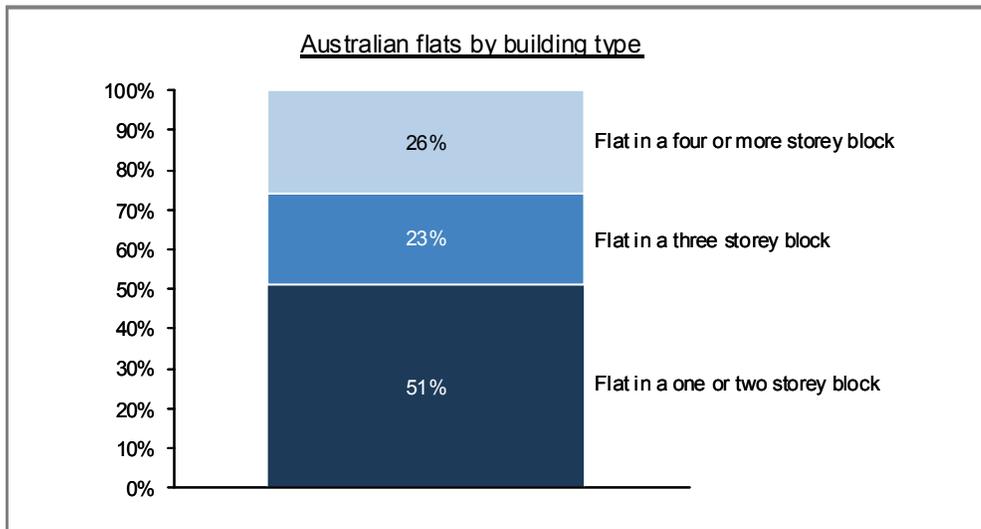


It is also interesting to note that, even within Australia's comparatively small proportion of flats, the majority are in small one or two storey buildings.

<sup>54</sup> Luci Ellis & Dan Andrews, *City Sizes, Housing Costs, and Wealth*, October 2001, p9

<sup>55</sup> UK 2001 Census; Australian 2006 Census

Figure 21: Mix of Australian flats by building type<sup>56</sup>



Housing type is also important because it is a major factor in duct density – that is, the number of copper pairs per duct. Given two areas with the same average local loop length, but one with multiple dwelling units and one with single dwelling units, the duct density will be much higher for the former. This matters because both construction and repair cost are primarily driven by duct length, not loop length. In other words, the construction and repair costs per loop will be higher in countries with low duct density (as we believe Australia to be given its housing mix).

We believe that housing mix is in its own right material to the outcome of a benchmarking exercise, though it clearly overlaps with the issue of population density in served areas.

### **Copper prices**

ULL rates based on forward-looking costs require detailed estimates of the equipment and installation prices of the numerous components that are used in the telecommunications network. However, when there is uncertainty about how these prices will change over the period for which costs and prices are required, the resulting cost estimates used for setting the regulated prices of unbundled network elements can be inaccurate.

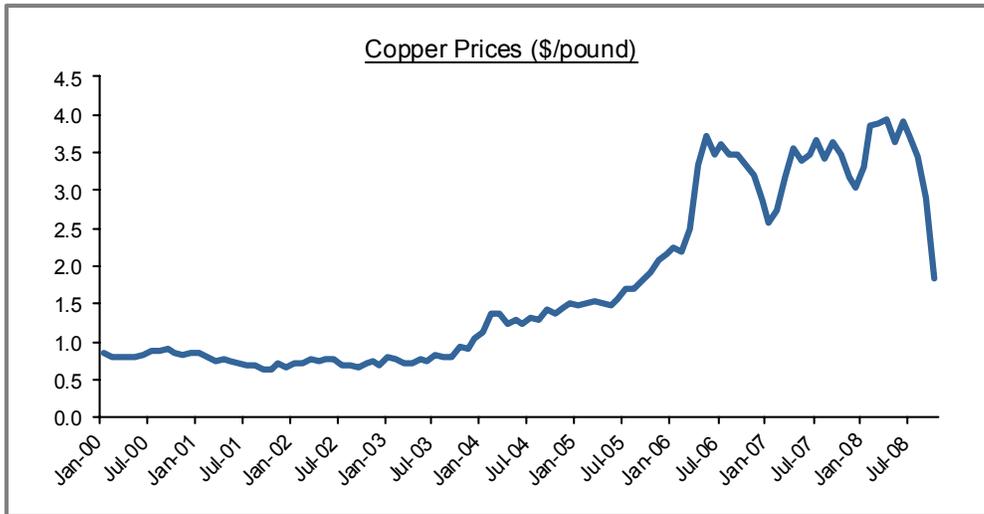
Copper prices are a significant cost element of ULL, and the real price of copper has varied significantly over recent years, suggesting both that historical determinations are likely to reflect differing views of copper prices, and suggesting that a forward-looking rate should take into account a forward-looking view of copper prices. This has been recognised by a number of commentators, for example:

<sup>56</sup> Ellis & Andrews, *City Sizes*, p9

“Contrary to the suggestion that copper prices were on a constant downward trend, which would justify lower local loop prices in future years, copper price almost immediately began to increase in the 2003 time frame and by late 2007 were more than four times their 2003 level. Such an increase would have a noticeable impact on the regulated rate for an unbundled local loop.”<sup>57</sup>

Figure 22 illustrates the significant variability in the price of copper over time.

Figure 22: Copper price changes over time (US\$)<sup>58</sup>



We believe differences in copper prices over time are in their own right material to the outcome of a benchmarking methodology.

**Loop length**

The ULL monthly cost will, in part, be a function of the length of the local loops. Again, however, there is variation in local loop length between countries, as illustrated in Figure 23 and Figure 24 below.

<sup>57</sup> Jerry A. Hausman, J. Gregory Sidak and Timothy J. Tariff, “Are Regulators Forward-Looking? Copper Prices and Telecommunications Networks, November 2007, p.7

<sup>58</sup> New York Mercantile Exchange

Figure 23: Comparison of local loop lengths between selected countries<sup>59</sup>

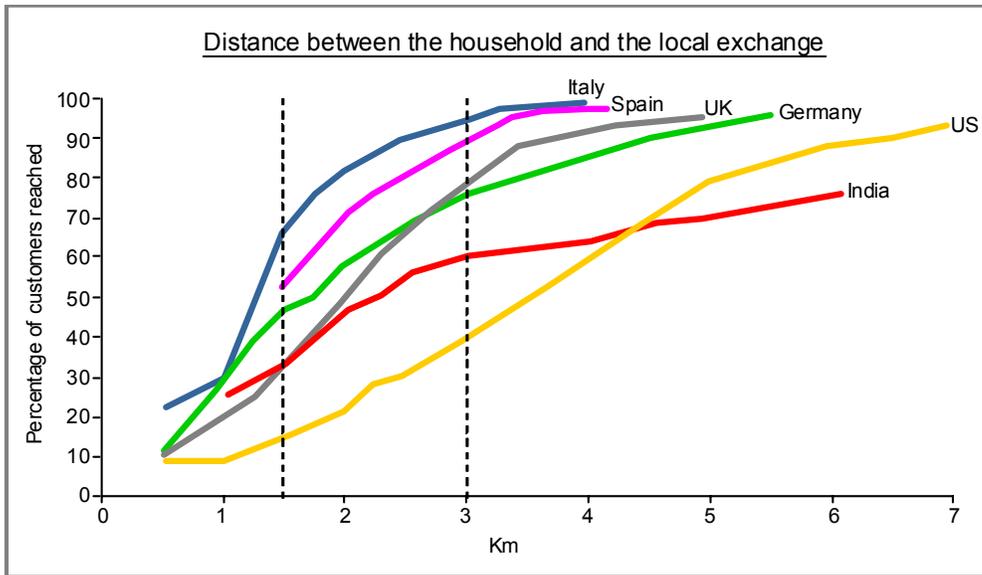
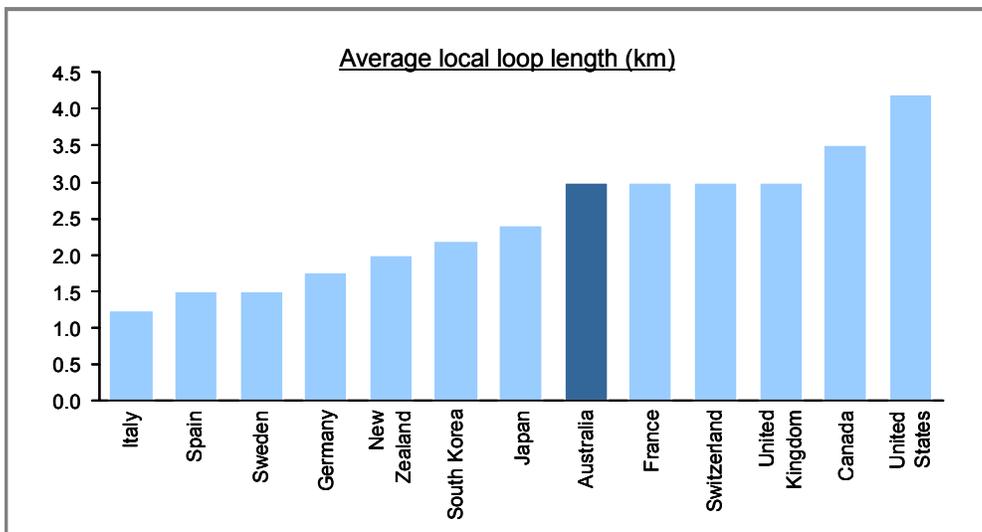


Figure 24: Average local loop length (km)<sup>60</sup>



As can be seen above, Australia has an average local loop length as long as any of the European countries shown, and double or more that of Spain and Italy. Clearly this is likely to lead to per-loop costs in Australia being materially higher than the European average. Note also that average loop length is not necessarily correlated with population density. The UK has far higher population density than Sweden, and

<sup>59</sup> Roland Montagne, *Business Opportunities for Hybrid/Wireless Broadband*, December 2005, p.14

<sup>60</sup> The Information Technology and Innovation Foundation, *Explaining International Broadband Leadership*, May 2008, p. 11

yet has a longer loop length. (The above figure for Australia is a national average, since Band 2 figures are not available).

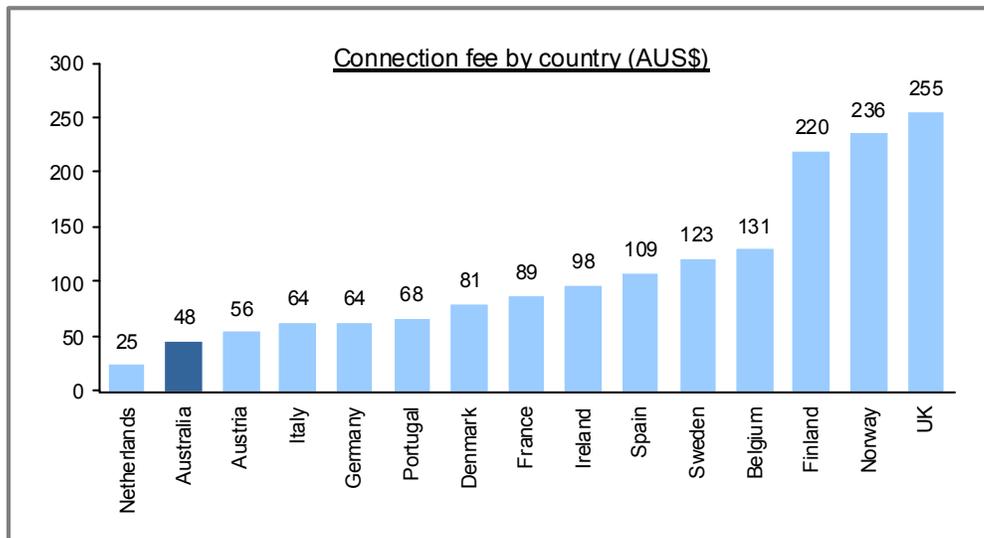
We believe that loop length is in its own right material to the outcome of a benchmarking exercise, though again it clearly overlaps with the issue of population density in served areas.

### **Pricing structure**

Benchmarking monthly ULL charges excludes other elements of ULL charging – in particular the upfront connection charge. Different countries may use different mixes of monthly and connection charges to recover the total cost of ULL service. For this reason, benchmarking of ULL tariffs is often done on a ‘whole of life’ basis, considering both an initial connection charge and (say) three years of rental charges<sup>61</sup>.

This issue is significant in the Australian context, since the Australian connection fee is materially lower than all but one of those of the European comparators used by the ACCC (see Figure 25). In other words a benchmarking exercise done on a ‘whole of life’ basis would show an appreciably smaller gap between the proposed Telstra charge and those of comparator countries.

Figure 25: ULL connection fee by country<sup>62</sup>



<sup>61</sup> See for instance p104 of Commission of the European Communities, *Progress Report on the Single European Electronic Communications Market 2007 (13th Report)*, March 2008

<sup>62</sup> Commission of the European Communities, *Progress Report on the Single European Electronic Communications Market 2007*, p.106

We believe that the mix of charges between rental and connection is in its own right material to the outcome of a benchmarking exercise.

## 6. Conclusions

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The benchmarking exercises undertaken by the ACCC for MTAS and ULL tariffs were simple. They converted the national currency figures into Australian dollars, but otherwise made no adjustments.

However, as discussed above, we believe there are numerous national differences, of accounting methodology, of market maturity, of geography and so on, that can have significant impact on the appropriate tariffs for different countries. Moreover artefacts of the benchmarking process, such as comparing figures from different dates and using arbitrary comparator sets, can also have impact.

A number of these differences are material in their own right, and in aggregate they undoubtedly have the potential to make a dramatic difference to the picture painted by the benchmarking in the two draft decisions.

Our opinion therefore is that the simple benchmarking relied upon by the ACCC is not an appropriate basis for setting ULL or MTAS tariffs, since it includes arbitrary choices (such as that of comparator set) and does not make allowance for material differences in national circumstances that would legitimately lead to different tariffs in different markets.

In reaching this conclusion we have made all the inquiries that we believe are desirable and appropriate and no matters of significance that we regard as relevant have, to our knowledge, been withheld from the ACCC.



Kip Meek, Chairman, Ingenious Consulting Network



Rob Kenny, Managing Director, Human Capital

## 7. Appendix 1 : References

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ACCC, *Optus's undertaking with respect to the supply of its Domestic GSM Terminating Access Service (DGTAS)*, February 2006,

(<http://www.accc.gov.au/content/item.phtml?itemId=723461&nodeId=b46350d5e60c1801332a4667063ae070&fn=Final%20decision%20on%20Optus%20MTAS%20undertaking%20%E2%80%94%20February%202006.pdf>)

ACCC, *Resolution of telecommunications access disputes*, March 2004

([http://www.accc.gov.au/content/item.phtml?itemId=753592&nodeId=47967618ef4cf2ddcd3c1a529979f805&fn=Guide%20\(revised\)%E2%80%94resolution%20of%20telecommunications%20access%20disputes%E2%80%94March%202004.pdf](http://www.accc.gov.au/content/item.phtml?itemId=753592&nodeId=47967618ef4cf2ddcd3c1a529979f805&fn=Guide%20(revised)%E2%80%94resolution%20of%20telecommunications%20access%20disputes%E2%80%94March%202004.pdf))

ACCC, *Unconditioned Local Loop Service Pricing Principles and Indicative Prices*, June 2008,

(<http://www.accc.gov.au/content/item.phtml?itemId=830403&nodeId=29d9593257bf0c30365af049f90b4a87&fn=Final%20indicative%20prices%20and%20pricing%20principles%20for%20ULLS.pdf>)

AGCOM, *Annual Report 2008*,

(<http://www2.agcom.it/Default.aspx?message=viewrelazioneannuale&idRelazione=16>)

Analysys Mason, *Assessment of the UK mobile sector* (report for Ofcom), August 08,

(<http://www.ofcom.org.uk/consult/condocs/msa08/msaanalysys.pdf>)

ANACOM, *Mercados Grossistas de Terminacao de Chamadas Vocais em Redes Moveis Individuais*, October 2007,

([http://www.anacom.pt/streaming/obrigcontroloprecos\\_merc16.pdf?contentId=530659&field=ATTACHED\\_FILE](http://www.anacom.pt/streaming/obrigcontroloprecos_merc16.pdf?contentId=530659&field=ATTACHED_FILE))

ARCEP Press Release, 23<sup>rd</sup> October 2008,

([http://www.arcep.fr/index.php?id=8571&L=1&tx\\_gsactualite\\_pi1\[uid\]=1060&tx\\_gsactualite\\_pi1\[annee\]=&tx\\_gsactualite\\_pi1\[theme\]=&tx\\_gsactualite\\_pi1\[motscle\]=&tx\\_gsactualite\\_pi1\[backID\]=26&cHash=2e8cb033b2](http://www.arcep.fr/index.php?id=8571&L=1&tx_gsactualite_pi1[uid]=1060&tx_gsactualite_pi1[annee]=&tx_gsactualite_pi1[theme]=&tx_gsactualite_pi1[motscle]=&tx_gsactualite_pi1[backID]=26&cHash=2e8cb033b2))

Australian Census, 2006 (<http://www.abs.gov.au/CDataOnline>)

Australian Communications Authority, *Accessing and Installing Telecommunications Facilities – A Guide*,

([http://www.acma.gov.au/webwr/aca\\_home/licensing/telcomm/app\\_form/guideaccess9a.pdf](http://www.acma.gov.au/webwr/aca_home/licensing/telcomm/app_form/guideaccess9a.pdf))

Sandra Cohen, *Cost Modeling and Price Regulation in Telecommunications: Methods and Experiences*, July 2004

Commission for Communications Regulation, *Review of Eircom's Cost of Capital*, November 2007 (<http://www.comreg.ie/fileupload/publications/ComReg0788.pdf>)

Commission of the European Communities, *Progress Report on the Single European Electronic Communications Market 2007 (13th Report)*, March 2008

([http://ec.europa.eu/information\\_society/policy/ecomm/doc/library/annualreports/13th/SEC\(2008\)356DTSVol2final.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/library/annualreports/13th/SEC(2008)356DTSVol2final.pdf))

Peter Cramton, *Spectrum Auctions*, February 2001 (<http://www.cramton.umd.edu/papers2000-2004/01hte-spectrum-auctions.pdf>)

Cullen International, *CEE Local Loop Unbundling Charges*, August 2008

(<http://www.cullen-international.com/documents/cullen/telecom/ceeurope/tables/lluce.pdf>)

Elroy Dimson, Paul Marsh, and Mike Staunton, *The Worldwide Equity Premium: A Smaller Puzzle*, London Business School, Revised 7 April 2006,

([http://www.fma.org/Stockholm/Papers/TheWorldwideEquityPremium\\_1Dec05.pdf](http://www.fma.org/Stockholm/Papers/TheWorldwideEquityPremium_1Dec05.pdf))

EC Harris, *Global Building Costs*, Summer 2008

([http://www.echarris.com/uploadeddocuments/Publications/6870\\_Global\\_Building\\_Costs\\_Summer\\_08.pdf](http://www.echarris.com/uploadeddocuments/Publications/6870_Global_Building_Costs_Summer_08.pdf))

Luci Ellis & Dan Andrews, *City Sizes, Housing Costs, and Wealth*, October 2001,

(<http://www.rba.gov.au/rdp/RDP2001-08.pdf>)

ENST, Department of Economics, *Local loop unbundling: the French case*, 2003

([http://www.idate.fr/fic/revue\\_telech/342/C&S49\\_BOURREAU.pdf](http://www.idate.fr/fic/revue_telech/342/C&S49_BOURREAU.pdf))

ERG (07) 22, *Regulatory Accounting in Practice*,

([http://www.erg.eu.int/doc/whatsnew/erg\\_07\\_22\\_regulat\\_account\\_practice\\_rep.pdf](http://www.erg.eu.int/doc/whatsnew/erg_07_22_regulat_account_practice_rep.pdf))

ERG (07) 83, *Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates*,

([http://www.erg.eu.int/doc/publications/erg\\_07\\_83\\_mtr\\_ftr\\_cp\\_12\\_03\\_08.pdf](http://www.erg.eu.int/doc/publications/erg_07_83_mtr_ftr_cp_12_03_08.pdf))

ERG (08) 41, *Final MTR Snapshot*,

([http://www.erg.eu.int/doc/publications/erg\\_08\\_41\\_mtr\\_update\\_snapshot\\_081020.pdf](http://www.erg.eu.int/doc/publications/erg_08_41_mtr_update_snapshot_081020.pdf))

Europe Economics, *Pricing Methodologies for Unbundled Access to the Local Loop*, May 2004 ([http://ec.europa.eu/competition/liberalization/pricing\\_open\\_loop.pdf](http://ec.europa.eu/competition/liberalization/pricing_open_loop.pdf))

European Union Road Federation, *European Road Statistics 2008*,

([http://www.irfnet.eu/media/press\\_release/statistics/erfeuropean\\_road\\_statistics\\_2008\\_booklet\\_150x210mm\\_v08\\_press\\_road\\_network.pdf](http://www.irfnet.eu/media/press_release/statistics/erfeuropean_road_statistics_2008_booklet_150x210mm_v08_press_road_network.pdf))

Emin Gabrielyan & Switzernet Sarl, *Wholesale Market Mobile Termination Rates*, April 2005 ([http://caravan5.webcrossing.com/People/emin-gabrielyan/public/050416-world-mobile-rates/050416-all-countries.htm#\\_Toc101350934](http://caravan5.webcrossing.com/People/emin-gabrielyan/public/050416-world-mobile-rates/050416-all-countries.htm#_Toc101350934))

ITST Press Release, 19<sup>th</sup> June 2008, (<http://www.itst.dk/nyheder/nyhedsarkiv/2008/pressemeddelelse-lavere-engrospriser-for-opkald-til-mobiltelefoner/>)

Jerry A. Hausman, J. Gregory Sidak and Timothy J. Tariff, "Are Regulators Forward-Looking? Copper Prices and Telecommunications Networks", November 2007, ([http://www.london.edu/assets/documents/PDF/Jerry\\_Hausman.pdf](http://www.london.edu/assets/documents/PDF/Jerry_Hausman.pdf))

King Sturge, *Global Industrial and Office Rents Survey Q2 2008*, ([http://resources.kingsturge.com/contentresources/library/0/research/2008/01Sep/080920084948\\_pdf.pdf](http://resources.kingsturge.com/contentresources/library/0/research/2008/01Sep/080920084948_pdf.pdf))

The Information Technology and Innovation Foundation, *Explaining International Broadband Leadership*, May 2008, (<http://www.itif.org/files/ExplainingBBLeadership.pdf>)

LINK Centre, *Unbundling local loops: global experiences*, December 2007 (<http://link.wits.ac.za/papers/LINK.pdf>)

Merrill Lynch, *European Wireless Matrix Q4 2008*

Merrill Lynch, *Global Wireless Matrix 2Q08*

Roland Montagne, *Business Opportunities for Hybrid/Wireless Broadband*, December 2005 ([http://www.telenor.no/broadwan/BROADWAN\\_CD/Presentations/Montagne\\_ISTconcertationSep2005.pdf](http://www.telenor.no/broadwan/BROADWAN_CD/Presentations/Montagne_ISTconcertationSep2005.pdf))

Network Strategies, *Draft determination on the application for pricing review for designated interconnection services*, June 2005 (<http://www.comcom.govt.nz/IndustryRegulation/Telecommunications/InterconnectionDeterminations/InterconnectionPricingReviews/ContentFiles/Documents/NSL%20final%20report%20PSTN%20price%20review%20cross%20submission%20-%20public%201006051.pdf>)

New America Foundation, *Homes with Tails: What If You Could Own Your Internet Connection*, November 2008 ([http://www.newamerica.net/files/HomesWithTails\\_wu\\_slater\\_0.pdf](http://www.newamerica.net/files/HomesWithTails_wu_slater_0.pdf))

OECD Stats Portal (<http://stats.oecd.org/WBOS/index.aspx>)

OECD, *Communications Outlook 2007* (<http://213.253.134.43/oecd/pdfs/browseit/9307021E.PDF>)

OECD Tax Database, ([http://www.oecd.org/document/60/0,3343,en\\_2649\\_34533\\_1942460\\_1\\_1\\_1\\_1.00.html](http://www.oecd.org/document/60/0,3343,en_2649_34533_1942460_1_1_1_1.00.html))

Ofcom, *Draft determinations to resolve mobile call termination rate disputes between T-Mobile and BT, O2 and BT, Hutchison 3G and BT and BT and each of Hutchison 3G, Orange and Vodafone*, May 2007,

([http://www.ofcom.org.uk/bulletins/comp\\_bull\\_index/comp\\_bull\\_ccases/closed\\_all/cw\\_942/deter.pdf](http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_942/deter.pdf))

Ofcom, *Mobile citizens, mobile consumers*, August 2008

(<http://www.ofcom.org.uk/consult/condocs/msa08/msa.pdf>)

Ofcom, *A New Pricing Framework for Openreach*, 5 December 2008

(<http://www.ofcom.org.uk/consult/condocs/openreachframework/off.pdf>)

Ofcom, *Review of the wholesale local access market*, August 2004,

([http://www.ofcom.org.uk/consult/condocs/rwlam/rwlam\\_state/rwlam2.pdf](http://www.ofcom.org.uk/consult/condocs/rwlam/rwlam_state/rwlam2.pdf))

OFTA, *Charge for Interconnection between Public Mobile Radiotelephone Services (PMRS), Personal Communications Services (PCS) and Value Added Services (VAS) and the Public Switched Telephone Network (PSTN) Operated by PCCW-HKT Telephone Limited*, 29 September 2001, (<http://www.ofta.gov.hk/en/tas/interconnect/ta20020930.pdf>)

OFTA, *Determination under Section 36A of the Telecommunications Ordinance of the Terms and Conditions of Interconnection between PCCW-HKT Telephone Limited and Wharf T&T Limited*, 27 February 2003, (<http://www.ofta.gov.hk/en/ta-determine/de20070710.pdf>)

OPTA Press Release, 15<sup>th</sup> May 2007 (<http://www.opta.nl/asp/en/publications/document.asp?id=2320>)

Ovum, *Europe & Americas additional benchmarks tables and charts*, July 2008

Dr Charles M. Rush, *Approaches to Frequency Management*, June 2006

([http://reports.tmgtelecom.com/\\_PDFS/Frequency%20Management%20Dehli.pdf](http://reports.tmgtelecom.com/_PDFS/Frequency%20Management%20Dehli.pdf))

UK Census, 2001, (<https://www.nomisweb.co.uk/home/census2001.asp>)

United Nations, *The United Nations World Population Prospects: The 2006 Revision*

## 8. Appendix 2 : Comparators used in the Determinations

Mobile termination rates of 31 EU countries, July 2008 (€/min)<sup>63</sup>

Country	Rate)	Country	Rate)
Austria	0.060	UK	0.077
Belgium	0.087	Iceland	0.079
Denmark	0.085	Hungary	0.086
Finland	0.053	Bulgaria	0.151
France	0.069	Romania	0.068
Germany	0.082	Slovak Rep	0.113
Greece	0.100	Estonia	0.088
Ireland	0.099	Lithuania	0.078
Italy	0.108	Malta	0.096
Luxembourg	0.090	Slovenia	0.064
Netherlands	0.094	Czech Republic	0.126
Norway	0.084	Latvia	0.088
Portugal	0.110	Poland	0.107
Sweden	0.046	Croatia	0.108
Switzerland	0.114	Cyprus	0.020
Spain	0.071		

Average	0.087
Exchange rate used by ACCC (€/AUS\$)	0.557
<b>Average (AUS\$/min)</b>	<b>0.156</b>

Notes: The ACCC also highlights the 'Big Five European Countries' which have an average rate of AUS\$ 0.146

ACCC refers to 30 countries (as opposed to 31 above) though average is the same

<sup>63</sup> ERG (08) 41, *Final MTR Snapshot*, pp.1-2

ULLS monthly charges, Q2 2008. (AUS\$)<sup>64</sup>

Country	No PPP	PPP	Population / sq km
Norway	21.19	15.00	12
Finland	19.96	15.39	16
Sweden	15.40	11.71	20
Ireland	29.25	21.77	59
Spain	17.31	15.38	86
Austria	16.61	13.81	99
France	16.54	13.40	111
Portugal	16.01	15.06	114
Italy	13.60	11.31	195
Denmark	17.31	9.97	126
Germany	18.69	15.34	232
United Kingdom	15.45	13.83	248
Belgium	16.54	13.75	341
Netherlands	14.24	11.69	393

Australia		967.5 (Band 2)
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<b>Average</b>	<b>17.72</b>	<b>14.10</b>
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<sup>64</sup> Ovum, *Europe & Americas additional benchmarks tables and charts*; United Nations, *The United Nations World Population Prospects: The 2006 Revision*

## 9. Appendix 3 : Author CVs

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**KIP MEEK** Ingenious Media, 15 Golden Square, London, W1F 9JG  
Mobile: 07770 450867

### CAREER DETAILS

**May 1<sup>st</sup> 2007 Chairman, Ingenious Consulting Network**

**- present** Responsible for building up Ingenious Media's consulting capability

**Chairman, Broadband Stakeholder Group (BSG)**

The BSG is an advisory body to the UK government, concerned with the infrastructural and content aspects of broadband

**Director, RadioCentre**

The RadioCentre is the body representing the UK's commercial radio sector.

**2003-2007 Executive Board Member, Ofcom**

Joined Ofcom in April 2003 before it took on its formal powers in December 2003 and was a major contributor to its design and establishment.

**Subsequent roles in Ofcom were:**

**Senior Partner, Content and Competition (2003-2005)**

Responsible for the major policy groups within Ofcom, i.e. those colleagues dealing with competition issues, with spectrum management issues and with content issues.

Main achievements:

*During Ofcom's start up phase:*

- Establishing the relevant managerial units with effective leadership
- Ensuring each policy unit became effective both in terms of quality and speed
- Recruitment of senior team (80% of Ofcom's senior managers were recruited externally)

*During Ofcom's operational phase:*

- Leading the negotiation of the undertakings with BT which set up Openreach
- Transferring advertising regulation to the ASA
- Overseeing the regulatory relationship with ITV (post-merger) and C4
- Introducing a new regime for local loop unbundling

### **Chief Policy Officer (2005 to 2007)**

Main achievements were:

- Setting up an international group within Ofcom
- Chairing the European Regulators Group (ERG). The ERG is comprised of heads of 33 European regulatory bodies and has an official role in advising the European Commission (and specifically Commissioner Reding).

### **Board Memberships at Ofcom:**

Ofcom Main Board, Ofcom Content Board, Executive Committee, Policy Executive, Chair of the Radio Licensing Committee (until March 2006).

### **1993-2003 Founder & Managing Director, *Spectrum Strategy Consultants***

**Spectrum Strategy Consultants is a specialist consultancy advising on major decisions in the media and telecoms industries**

#### **Achievements**

- Negotiated venture capital backing for Spectrum
- Created and sustained a unique culture within Spectrum which helped the company retain high calibre staff
- Maintained the company's profitability through good and bad times
- Built Spectrum's brand position in the media and telecoms industry
- Taking Spectrum international – successful offices openings in Brazil and Singapore
- Built a top flight management team
- Took hard decisions in a timely fashion (closing the German operations, implementing redundancies in October 2001)
- Maintained a professional reputation for integrity and clarity of thought

### **1988-1993 Partner, Head of the Media Practice, *Coopers & Lybrand***

Set up Coopers' Media Practice in 1988 and in the course of 1990 / 91 advised six successful bidders for ITV licences. Worked extensively in cable and telecommunications.

### **1986-1988 Managing Director, *Octagon Services Ltd***

Created this business offering a portfolio of services to the information technology sector.

### **1984-1986 Deputy Director, Marketing, *British Telecom***

Responsible for 200 staff in BT and for the following areas: pricing, marketing intelligence and planning.

### **1981-1984 Consultant, *McKinsey & Co, London***

Consulted mainly to the financial services, consumer goods and government sectors.

**1977-1979**    **Consultant, *Boston Consulting Group, Boston USA***

Consulted across a range of industries (financial services, power tools, paper, etc).

**EDUCATION**    **1979-81**    London Business School, MSc with Distinction

**1973-76**    Magdalen College, Oxford, First Class Honours, Modern History

## Rob Kenny

<b>ICN Group Company</b>	Human Capital
<b>Job Title</b>	Managing Director

**Profile**

Rob joined Human Capital as managing director in 2006. His clients include CSL, the BBC, Sky and TPG. His projects have covered telecoms, TV, magazines, music and events, and he has a particular specialisation in online. His functional expertise includes regulation, transaction support, modelling and public value work.

Prior to joining Human Capital Rob was co-head of corporate development for Level 3, the leading internet backbone provider. Before joining Level 3 Rob had been Commercial Director for Reach, the largest Asian internet backbone operator; a Founding Director of IncubASIA, a venture capital firm investing in Asian internet businesses; and Director of Corporate Development (M&A and strategy) for Hongkong Telecom.

He has a degree in Mathematics and Management from Cambridge University.

<b>Employment History</b>	Human Capital	Jul 2006 – now
	Level 3 (SVP, Corporate Development)	Jul 2003– Nov 2005
	Reach (Commercial Director)	2001 – 2003
	IncubASIA (Founding partner)	1999 – 2001
	Hongkong Telecom (EVP e-commerce, Director of corporate development)	1996-1999
	Delta Strategy Asia (Founder, MD)	1993-1996 1990-1993
	LEK (Associate Consultant)	

## Professional Consulting Experience (sample)

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<b>2008</b> <b>Telecoms</b>	<b>CSL et al - Interconnect dispute support</b> <i>Project lead</i>  Led team that analysed an interconnect determination by OFTA, the Hong Kong regulator, demonstrating that the proposed charges were unreasonable, and that an inappropriate methodology had been used to cost the network in question
<b>2008</b> <b>Online/TV</b>	<b>BBC - Public Value Test Support for new learning service</b> <i>Project lead</i>  Led team that provided a distinctiveness analysis, a demand forecast and a preliminary market impact assessment for a possible BBC learning service aimed at 6-10s, in support of BBC Management's submission for a Public Value Test
<b>2008</b> <b>Online classified ads</b>	<b>SUP - Market opportunity analysis</b> <i>Project lead</i>  Led team reviewing online property, job, auto and auction sites, to understand key drivers of success, to assess the potential for such business in Russia and to identify appropriate partners
<b>2007</b> <b>Consumer magazines</b>	<b>TPG – Commercial due diligence</b> <i>Modelling lead</i>  Supported TPG in its bid for Emap, including forecast modelling of individual titles, and detailed analysis of competitor performance
<b>2007</b> <b>Cross-media</b>	<b>Sky – News plurality review</b> <i>Project lead</i>  Undertook detailed analysis of audiences' consumption of news across platforms and publishers, and the effects of Sky's investment in ITV, for submission by Sky to the Competition Commission. Resulted in CC rejecting news plurality concerns raised by Sky's competitors
<b>2006</b> <b>Telecoms</b>	<b>Barlow Lyde &amp; Gilbert – Litigation support</b> <i>Advisor</i>  Provided sector knowledge and analysis of witness statements to BLG, to support successful defence of an insurance claim related to a faulty submarine fibre-optic cable
<b>2003</b> <b>Telecoms</b>	<b>CTM (Macau incumbent telco) – Strategy awayday</b> <i>Project lead</i>  Designed and led a strategy awayday for CTM, to identify new business opportunities

## Other Professional Experience

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2003-05

**LEVEL 3 (Leading wholesale telco and internet backbone operator)**

**DENVER, USA**

**SVP Corporate Development (2003 -5)**

**SVP Strategic Marketing (2003)**

Co-led the M&A and business development team, managing multiple projects including acquisition strategy, individual acquisition reviews of public and private companies, disposals of subsidiaries and customer workouts. Transactions included:

- *Disposal of (i)Structure*. Led disposal of this IT outsourcing subsidiary for \$81.5m. Level 3 share price up 5.1% in a down market on announcement. Managed bid process and negotiations, run in parallel with potential IPO
- *Repurchase of McLeod fiber*. Negotiated repurchase of nationwide dark fiber backbone leased to McLeod, generating ~\$100m of termination revenue for Level 3
- *Acquisition of software resale business*. Led purchase of the CSC's Australian reseller division

2001-03

**REACH (Asia's largest international telco. PCCW/Telstra JV)**

**HONG KONG**

**Commercial Director (2002 -2003)**

**Director of Corporate Development (2001-2002)**

As Director of Corporate Development, created strategy and led acquisitions and disposals, reporting to the CEO. Worked with the board to secure approvals. Built the corporate development team from scratch. Major achievement was:

- *Acquisition of Level 3's Asian assets*. Led negotiations, due diligence and integration for the acquisition of \$600m of assets from Level 3. REACH paid no cash or equity, but received \$90m cash and working capital in exchange for taking on future obligations. Called 'deal of the year' by Comms Day Asia. Deal executed without financial advisors

As Commercial Director, reporting to the CEO, managed a team of 200 across 14 countries, covering data sales, product, customer care, provisioning and corporate development. Responsible for ~\$300m of net revenue, half the company total. Achievements included

- *Increased sales*. New weekly sales up by 49%, H2 2002 vs H1 2002
- *Improved relationship with major customer*. Relationship with largest customer shifted from adversarial to collaborative through improved service and better engagement
- *Improved provisioning*. On time delivery of circuits increased

from 70% to almost 100% through operational changes, creation of cross functional teams and consistent management attention

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**1999-2001**

**INCUBASIA (Incubator of Hong Kong and US internet start-ups)  
HONG KONG  
Co-Founder and Partner**

Co-founded incubator providing finance and advisory services to Hong Kong start-ups. Raised US\$12m fund, including investments from two Hang Seng Index companies. Led three of the firm's five investments. Served as a director of investee companies, including:

- *Black Octopus*, a developer of instant messaging and SMS applications, with dominant market share in Taiwan
- *Enabilis*, an online exchange linking Asian travel agents and consolidators
- *Incentify*, a jobs board providing incentives for consumers to recommend candidates

**1996 -99**

**HONGKONG TELECOM  
HONG KONG  
Executive VP, E-Commerce (1999)  
Director of Corporate Planning and Dev't (1996 -1999)**

Developed corporate strategy, reporting to executive directors. Responsibilities included: M&A; competitive and regulatory strategy; investor relations; providing reports and presentations to the board. Areas of focus included mobile, fixed, international and IP services. Achievements included:

- *Sale of C&W HKT international monopoly*. Member of core team of 3 that negotiated US\$1.5bn compensation from government. Extensive involvement in all aspects of the deal
- *Regional and global internet strategy*. Devised, planned, and executed C&W HKT's regional internet strategy. Led team making acquisitions throughout Asia
- *Online Brokerage*. Negotiated JV with local investment bank to establish online brokerage

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**Education**

1987-1990 Cambridge University, BA in Mathematics and Management

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**Publications**

*Can Oxford be Improved?*, 2007  
(Book on the future funding and structure of Oxford University – Co-author)

## 10. Appendix 4 : Letters of instruction

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### MALLESONS STEPHEN JAQUES

Mr Kip Meek  
Mr Rob Kenny  
Mr Tom Broughton  
Mr Ed Corn  
Ingenious Consulting Associates Ltd  
15 Golden Square  
London W1F 9J6  
UNITED KINGDOM  
**By Email**

9 December 2008

Sarah Weinberg  
Direct line  
+61 3 9643 4369

Partner  
Agata Jarbin

Dear Mr Meek, Mr Kenny, Mr Broughton and Mr Corn,

#### **Telstra Corporation Limited**

We act for Telstra Corporation Limited (“**Telstra**”) in relation to:

- 1 Telstra’s ordinary access undertaking in relation to the Unconditioned Local Loop Service (“**ULLS**”) dated 3 March 2008 (“**Undertaking**”); and
- 2 Telstra’s response to the ACCC’s *Draft MTAS Pricing Principles Determination and indicative prices for the period 1 January 2009 to 31 December 2011* (“**Draft MTAS Pricing Principles**”) for the Mobile Terminating Access Service (“**MTAS**”).

#### **Report**

We are instructed to request you to prepare a report for use by Telstra in the context of the Undertaking and the MTAS Pricing Principles, expressing your opinion as to whether or not the benchmarking comparators relied upon by the ACCC in the draft decisions on the Undertaking and the Draft MTAS Pricing Principles are appropriate; and if not, why they are not appropriate.

#### *Guidelines for Expert Witnesses*

Enclosed with this letter is a copy of the Federal Court of Australia’s *Guidelines for Expert Witnesses in Proceedings in the Federal Court of Australia* (“**the Guidelines**”). Please read the Guidelines carefully and have regard to the requirements of the Guidelines in preparing your report. In particular, please have regard to the requirements in Item 2 of the Guidelines which concerns the form of the report and other matters which your report should address. If you rely on any facts beyond those stated in this letter or make any assumptions in forming the opinions expressed in your report, please ensure that these are clearly stated to enable the reader to understand the basis for the opinions which you are expressing.

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## **Background**

### ***Part XIC***

Part XIC of the *Trade Practices Act 1974* (Cth) makes provision for a telecommunications access regime whose object, as set out in Division 1 (section 152AB), is to promote the long term interests of end-users ("LTIE") of carriage services. An extract of Part XIC of the Act is included in the enclosed bundle of documents.

Division 2 of Part XIC of the Act provides for the declaration of certain listed carriage services. Once a service has been declared, the access provider is subject to certain access obligations as specified in Part XIC and access to the declared service must be provided to access seekers. The terms and conditions of access can be the subject of agreement between the parties. If there is a dispute, the terms may be arbitrated by the ACCC.

### ***Ordinary Access Undertaking***

The process for submission of an access undertaking to the ACCC is governed by Division 5 of Part XIC of the Act. Pursuant to section 152BS, a carrier or carriage service provider can give to the ACCC an access undertaking by which the carrier or carriage service provider undertakes to comply with the terms and conditions specified in the undertaking in relation to the applicable standard access obligations. Section 152BU(2) requires that after considering an access undertaking submitted to it, the ACCC must accept or reject that undertaking. Where the ACCC accepts an access undertaking, any arbitral determination made by it which is inconsistent with the terms of the accepted undertaking will be of no effect to the extent of the consistency.

Section 152BV(2) requires that the ACCC must not accept an undertaking unless:

- 1 the ACCC has:
  - (a) published the undertaking and invited people to make submissions to the ACCC on the undertaking; and
  - (b) considered any submissions that were received within the time limit specified by the ACCC when it published the undertaking; and
- 2 the ACCC is satisfied that the undertaking is consistent with the standard access obligations that are applicable to the carrier or provider; and
- 3 if the undertaking deals with price or a method of ascertaining price - the ACCC is satisfied that the undertaking is consistent with any Ministerial pricing determination; and
- 4 the ACCC is satisfied that the terms and conditions specified in the undertaking are reasonable; and

- 5 the expiry time of the undertaking occurs within 3 years after the date on which the undertaking comes into operation.

In considering whether the terms of the undertaking are reasonable, the ACCC is required to have regard to the following (as to which see section 152AH of the Act):

- (a) whether the determination will promote the LTIE of carriage services or of services supplied by means of carriage services;
- (b) the legitimate business interests of the carrier or provider, and the carrier's or provider's investment in facilities used to supply the declared service;
- (c) the interests of all persons who have rights to use the declared service;
- (d) the direct costs of providing access to the declared service;
- (e) the value to a party of extensions or enhancement of capability, whose cost is borne by someone else;
- (f) the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility; and
- (g) the economically efficient operation of a carriage service, a telecommunications network or a facility.

In addition, the ACCC may take into account any other matters that it thinks are relevant.

Section 152AB provides further detail in relation to the criteria set out above.

### ***Pricing Principles***

The ACCC must determine pricing principles relating to the price of access to a declared service as soon as practicable after declaring a service or varying the declaration of a declared service (pursuant to section 152AQA). If the ACCC is required to arbitrate an access dispute, it must have regard to the pricing principles.

The process for making pricing principles is set out in section 152AQA.

The ACCC has stated that "*when it is making pricing principles for a declared service, it is appropriate to have regard to the matters in section 152AH*"<sup>1</sup> (see above).

The ACCC may, if it exercises its discretion to do so, specify indicative prices as part of a pricing principles determination (section 152AQA(2)).

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<sup>1</sup> ACCC, Draft MTAS Pricing Principles, p 8.

## **ULLS**

ULLS is a service declared by the ACCC pursuant to Part XIC of the Act. It is a service which can be acquired by access seekers to supply any voice and/or data (broadband) services to end-users. Telstra owns the Public Switched Telephone Network in Australia and as a result of the declaration of ULLS is required to provide ULLS to access seekers.

Essentially ULLS provides the access seekers with the use of the copper based wire between the network boundary point at the end-user's premises and a point of interconnection located at or associated with a customer access module (which can be located at Telstra's exchange building or somewhere between the exchange building and the end-user customer). Currently, however, ULLS services are acquired by access seekers from the exchange building. In order to provide voice and data services to end-users, the access seeker must connect its own network to the copper based wire.

### ***Telstra's ULLS Band 2 Undertaking***

On 3 March 2008, Telstra lodged its Undertaking, specifying certain terms and conditions under which Telstra undertakes to meet its standard access obligations in respect of ULLS.

The Undertaking proposes a monthly charge of \$30 for ULLS in Band 2 exchange service areas ("ESAs") where the point of interconnect is in an exchange building. In support of its Undertaking, Telstra submitted the Telstra Efficient Access model ("TEA model"). Telstra's proposed price of \$30 is below version 1.2 of the TEA model's estimate of \$47.86 in Band 2.

In November 2008, the ACCC published its *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking: Draft Decision* ("ULLS Draft Decision") in which it proposes to reject the Undertaking.

## **MTAS**

The MTAS is a wholesale input, used by providers of calls from fixed-line and mobile networks, in order to complete calls to mobile subscribers connected to other networks. In instances in which the person originating the call and the person receiving the call are on different networks, a point of interconnection will exist.

The network owner from which the call originates purchases the MTAS from the network owner completing the call.

### ***Draft MTAS Pricing Principles***

The MTAS was declared on 30 June 2004 and the ACCC released the *MTAS Pricing Principles Determination for the period 1 July 2004 to 30 June 2007*. Subsequently, the ACCC released the *MTAS Pricing Principles Determination for the period 1 July 2007 to 31 December 2008*.

In November 2008, the ACCC issued its Draft MTAS Pricing Principles.

## **Use of international benchmarks in ULLS Draft Decision<sup>2</sup> and Draft MTAS Pricing Principles**

In the ULLS Draft Decision, the ACCC relies upon a report by Ovum entitled *Europe & Americas additional benchmarks tables and charts - benchmarking period Q2 2008*, dated July 2008 ("**Ovum Report**") to "*determine appropriate international benchmarks for assessing*"<sup>3</sup> Telstra's proposed monthly charge. Based on the Ovum Report, the ACCC concludes that "*the ULLS charge averaged for all international countries is significantly below*"<sup>4</sup> Telstra's proposed monthly charge.

In the Draft MTAS Pricing Principles, the ACCC considers that "*international cost benchmarking can be considered as one of various methodologies to assist in determining MTAS costs*"<sup>5</sup> based on ERG, *MTR update snapshot*, ERG (08) 41 MTR Snapshot.

## **Assumptions**

For the purposes of your report, please make the following assumptions:

- Band 2 largely consists of urban metropolitan areas excluding the central business district. An exchange service area falls within Band 2 if it contains more than 108.4 services in operation per square kilometre<sup>6</sup> excluding the central business districts.
- the TEA model assumes:
  - (a) one active copper pair per lead in;
  - (b) 60% fill factor in the distribution network; and
  - (c) 90% fill factor in the main network.
- the most sensitive inputs into the TEA model are WACC, trench sharing in new estates, use of a flat (as opposed to tilted) annuity and demand (that is, the dispersion of customers in the network).

## **Materials**

Please find enclosed the following:

<sup>2</sup> ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 Monthly Charge Undertaking*, Draft Decision, November 2008 ("**ULLS Draft Decision**").

<sup>3</sup> See ACCC, ULLS Draft Decision, pp 42-43.

<sup>4</sup> See ACCC, ULLS Draft Decision, p 42.

<sup>5</sup> See ACCC, Draft MTAS Pricing Principles, p 16.

<sup>6</sup> ACCC, *Final Determination in access dispute between PowerTel Ltd and Telstra Corporation Limited in relation to ULLS*, page 3.

- (a) Part XIC of the Act;
- (b) ULLS Draft Decision;
- (c) Draft MTAS Pricing Principles;
- (d) the Ovum Report;
- (e) ERG, MTR update snapshot, ERG (08) 41 MTR Snapshot;
- (f) ACCC's service description of ULLS;
- (g) ACCC's service description of MTAS;
- (h) Ovum Consulting, Review of the economic principles, capital cost and expense calculations of the Telstra Efficient Access cost model, A Report to the ACCC. Please note that section 2.1 under the heading "Underground Equipment" deals with the fact that there is no alternative to placing equipment underground in Australia;
- (i) Wik-consult, Mobile Termination Cost Model for Australia (see p 57 for Government mobile coverage programs);
- (j) Wik-Consult, WIK Mobile Network and Cost Model Version 1.2 User Guide;
- (k) Telstra, Access Network Dimensioning Rules;
- (l) A spreadsheet entitled "TEA Model Outputs" setting out the contributors to ULLS costs;
- (m) IDC, Australia Mobile Services 2008-2012 Forecast and Analysis, (which includes data on mobile subscribers and penetration in Australia); and
- (n) the Guidelines.

**Confidentiality**

Please ensure that any information provided to you by or on behalf of Telstra is kept confidential and not disclosed to any person without Telstra's consent.

Yours faithfully

*Mallesons Stephen Jaques.*

# MALLESON'S STEPHEN JAQUES

Mr Kip Meek  
Mr Rob Kenny  
Mr Tom Broughton  
Mr Ed Corn  
Ingenious Consulting Associates Ltd  
15 Golden Square  
London W1F 9J6  
UNITED KINGDOM  
By Email

12 December 2008

Sarah Weinberg  
Direct line  
+61 3 9643 4369

Partner  
Agata Jarbin

Dear Mr Meek, Mr Kenny, Mr Broughton and Mr Corn,

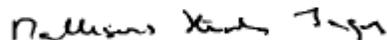
## **Telstra Corporation Limited**

We refer to our letter dated 9 December 2008.

For the purpose of preparing your report, we advise that:

- 1 the length of non-freeway roads in Australia is 1,069,550.71 kilometres; and
- 2 the resident population of Australia, as at 12 December 2008, is projected by the Australian Bureau of Statistics to be approximately 21,529,945.<sup>1</sup>

Yours faithfully



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<sup>1</sup> See <http://www.abs.gov.au>.