29 July 2009

Wholesale mobile voice call termination response

T-Mobile welcomes the opportunity to respond to Ofcom's consultation "Wholesale mobile voice call termination."

Executive Summary

The UK mobile market is fiercely competitive. Ofcom's recently published Mobile Sector Assessment consultation ("Mostly Mobile") confirmed this view:

> *"Our core finding is that competition within the mobile sector is generally working well: we see shifts in retail and wholesale market shares between existing players, switching levels are robust, new suppliers (such as MVNOs) are able to enter the market and providers are innovating with new product and price options".*[1]

In recent years, mobile call termination rates have fallen steadily and consistently, in line with cost reductions within the industry. Ofcom, BT and the MNOs have recently spent a huge amount of time, money and effort in the Competition Appeal Tribunal and Competition Commission process that arose from Ofcom's last market review and the consequent appeals by BT and H3G. The result of that process was to endorse LRIC+; Ofcom's tried and tested regulatory methodology. In T-Mobile's submission, Ofcom should not now move away from this cost orientated methodology to a new approach unless there is a very good reason to do so. T-Mobile does not consider that there have been any significant changes in the market since Ofcom's 2007 Statement which would justify a departure from the existing LRIC+ methodology.

Of course, the last call termination market review took place before the publication of the European Commission's Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU ("the EU Recommendation"). Ofcom rightly notes the publication of the EU Recommendation in this consultation. However whilst Ofcom is required to have the utmost regard to the EU Recommendation, it is not legally bound to follow it. In contrast, Ofcom is legally bound by Article 8 of the Framework Directive, which requires Member States to promote efficient investment and to avoid distortions of competition, and Article 13 of the Access Directive, which requires Ofcom to ensure that any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits.

T-Mobile believes that a significant detriment to consumers would arise if termination rates were set below the costs of providing the service. As a result of the waterbed effect, mobile operators will seek to recover their lost call termination revenues from other retail charges. This would impact on all mobile users; however prepay customers and those on low-incomes, who currently receive significantly more calls than they make, would be disproportionately affected. High-end users, who make a higher volume of outgoing calls, may end up benefiting from this change. T-Mobile does not consider that such redistribution from low-income to higher-income users is generally desirable or in keeping with Ofcom's duties.

Whilst it may be thought that fixed line consumers would benefit from a reduction in termination rates, this is demonstrably not the case. First, the vast majority of fixed line consumers also have access to a mobile phone and could expect to end up paying a correspondingly higher retail mobile phone bill should wholesale mobile termination rates be

[1] Ofcom, Mostly Mobile, 8 July 2009, paragraph 4.5

reduced. Second, BT (and others) do not fully pass through reductions in mobile call termination costs in their fixed to mobile prices. For example, this is evident in an analysis of BT's margins following previous mobile call termination price control determinations. Hence, even if Ofcom were to mandate a steep reduction in mobile termination rates, this would only be partially reflected in fixed to mobile retail prices (with a corresponding increase in the operating margins for fixed operators). Absent competitive or regulatory pressure on fixed network operators to reduce their prices to the full extent to match any reductions in mobile termination rates, reductions in mobile termination rates cannot be justified by an assumption that fixed retail charges would be reduced sufficiently to offset the consumer cost of higher mobile prices.

Furthermore, mobile operators are entitled to recover their efficiently incurred costs of call termination (Article 13 of the Access Directive). Therefore Ofcom's approach to regulating mobile call termination rates must, as a matter of law, be to set the 'right' cost-based rate. Regulating to efficient costs is not the same as Ofcom's proposed aim of reducing regulated rates as far and fast as possible. Setting the wrong rate, through excessive and over-zealous regulation, would discourage investment in communications infrastructure, as well as generating other significant negative impacts on the market and for consumers.

[✂]

The risk of over-regulation is that the equilibrium balance of return and reinvestment is disturbed, inhibiting investment in the new technologies that will continue to provide economic growth. Reducing termination rates further will lead to lower returns on equity and debt. The mobile industry already has a lower Return on Capital Employed (ROCE) than most comparable industries and a further decline in returns would threaten the investment needed to ensure a high quality mobile network infrastructure is maintained into the future.

Ofcom must also consider termination rate regulation beyond the current five national mobile networks. Until recently, there were only five mobile networks. However, a number of new entrants are rolling out networks of varying types and sizes. In each case they have proposed high termination rates unrelated to their actual costs of termination. Ofcom has been forced to regulate their rates through its dispute resolution powers. However, as Ofcom has acknowledged, it is severely limited in the amount of information and time available to it as part of the dispute resolution process. Consequently, the termination rates of new entrants are being regulated by proxy, but outside the proper market review mechanism. T-Mobile believes that it is essential that all operators in the mobile market, including new entrants, should be regulated in line with the efficient costs of supply. The same approach to assessing SMP status needs to be applied to all providers of mobile call termination, irrespective of their size and the technology employed. If new entrants are not regulated, whilst the rest of the mobile industry is, they will have opportunity to charge termination rates above efficient costs. Avoiding an assessment of SMP and permitting new entrants to charge termination rates unrelated to their costs of termination would breach Ofcom's duty not to discriminate between communications services or networks, or the means by which these are made available.

T-Mobile believes that Ofcom needs to maintain their current LRIC+ methodology for regulating mobile termination rates. On the various alternative options to LRIC+ proposed by Ofcom, we have the following comments:

- **Bill & Keep** would lead to substantial negative impacts for operators, for the market and for consumers. It would threaten current prepaid plans, for which UK consumers have shown a strong preference; and UK consumers do not want to have to pay to receive calls. The countries which employ Bill & Keep models and to which Ofcom has referred in this consultation (i.e. US, Japan, Hong Kong and Singapore) are significantly different to the UK in terms of market conditions, coverage, etc. such that no meaningful comparison can be made. The introduction of a bill & keep regime in the UK would also cause significant disruption to the UK market in the short and medium term.

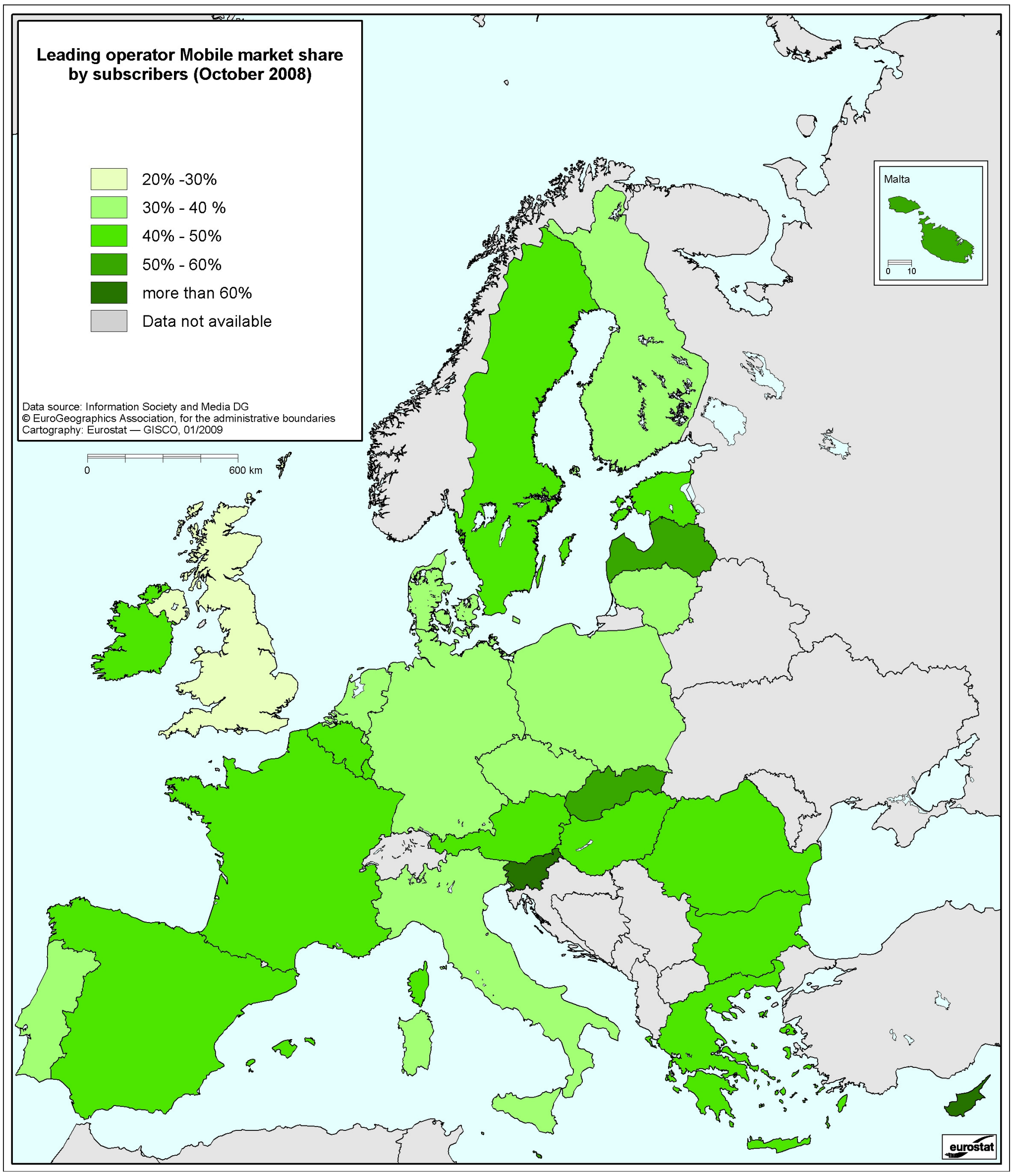
- **Mandated reciprocity** between fixed and mobile networks is not appropriate and would be unlawful under the EU Regulatory Framework. There are genuine differences in costs between fixed and mobile networks that must be taken into account.
- The **Long Run Marginal Cost** approach excludes common costs and, depending on how it is applied, coverage costs. It is therefore not a true cost-orientated approach and suffers from the same legal deficiencies as the more radical options mentioned above. Ofcom's own criticisms of the draft EU Recommendation apply to this option.
- **Capacity Based Charging** warrants further consideration, in our view. There are theoretical arguments both for and against a move to capacity-based charging, though there may also be serious practical difficulties in implementing this model that would need to be addressed before it could be implemented.
- **Deregulation** of mobile termination rates should be Ofcom's long term objective.

In addition to the six options set out in the consultation document, there are other simple approaches, for example based on indexation, which could deal with Ofcom's concerns regarding the regulatory burden of the LRIC+ approach, while avoiding the problems outlined above.

Question 3.1 - Do you agree with our preliminary view on market definition? Has anything changed, or is anything likely to change within the period of the next review, which would materially impact on the definition of the market(s)?

The UK mobile market is ferociously competitive, with market penetration of almost 70 million active customers, and differs significantly from other European markets as there is no single dominant company. As shown in Figure 1, the UK immediately stands out as the country with the lowest market share for the leading operator and the only EU member where the leading operator has a share of less than 30%.

Figure 1: Market Share of the leading operator in the market, October 2008[2]



In the previous market review T-Mobile, together with other mobile operators, argued that mobile call termination needed to be considered as part of the wider range of mobile services offered in an extremely competitive market. As such, mobile call termination would not be treated as a separate market. T-Mobile believes that its position is still correct for the same reasons as set out in detail previously. There are also important matters that should be

[2] EC, 14th Implementation Report, Staff Working Paper: Volume 2, 24 March 2009, p22

considered concerning the nature of a two-sided market which we repeat below and which Ofcom should take into account in defining the market for any future regulation.

> *"T-Mobile believes that the appropriate market definition to determine whether consumers overall would be harmed by unregulated mobile termination charges is the general market for mobile services including mobile outgoing and incoming calls and data services (i.e. based on the competition law concept of a cluster market and recognising the strong economies of scope in supplying termination and other mobile services). If competition is effective in relation to the market for mobile services then there is little reason to believe that regulators can improve upon market outcomes…. One analytical perspective that we do believe is useful is the concept of a two-sided market. Such markets involve the use of a common platform to deliver services to two types of customers. The economic literature on two-sided markets has developed significantly since the 2001 Oftel inquiry leading to the current charge controls. The general conclusion of this literature is that it is not possible to examine price effects on one side of a two-sided market without considering the effect on the other side and the feedback effects between them. This conclusion is in stark contrast to the final outcome of the Competition Commission's inquiry in which the case for regulation came down to a narrow focus on achieving benefits to fixed-to-mobile customers regardless of the impact on overall consumer welfare. "*[3]

Whether Ofcom maintains its current approach to definition of the call termination market, or amends it going forward, it is clear that the essential elements of the definition would apply equally to any operator that terminated calls, irrespective of the size of their network or technologies employed. If there is a separate market for calls that terminate on T-Mobile's number range, then equally there must also be a separate market for calls that terminate on any other provider's mobile number ranges: call termination is not technology specific. Accordingly, under this approach, there would be markets for call termination on each GSM (including DECT guard-band) operator's network, as well as the individual networks of Wi-Fi and VoIP operators to which Ofcom has allocated mobile numbers. Independent supplier-specific markets also support the position that any remedy should be specific to the efficient costs of supply of using that technology and in that location.

Question 4.1 - Do you agree with our view? Or are there other developments, not considered elsewhere in this consultation document, for potentially removing the underlying causes of SMP?

The overall mobile market, as described above, is highly competitive and no individual operator has significant market power in it. T-Mobile continues to believe that this overall market, and the fierce competition within it, ought to be the primary focus of Ofcom's market review. This would imply that no ex-ante price regulation was necessary. If, however, Ofcom sustains its previously held view that the relevant reference market is call termination on individual networks, T-Mobile is not aware of any developments since the last market review that would be sufficient to alter Ofcom's conclusion that each network operator has SMP for mobile call termination to its customers. The rollout of additional competing mobile networks and the continuing growth of the use of VoIP do not yet alter these views.

The issue concerning SMP designation for the mobile operators and the appropriate remedy to apply thereafter has been dealt with at length by the Competition Appeal Tribunal and Competition Commission in the appeals brought by H3G and BT following Ofcom's 2007 price control statement. A major finding from those appeals was the absence of

[3] T-Mobile, Response to Mobile Call Termination Market Review 2006, 25 May 2006

countervailing buyer power on the part of BT and the consequent conclusion that all network operators would have SMP as a result of their 100% market share for call termination on their individual networks.

T-Mobile believes strongly that the same approach to assessing SMP status needs to be applied to all providers of mobile call termination, irrespective of their size and the technology employed. In particular, the call termination market review should extend to all providers of wholesale mobile call termination, including new entrants using alternative technologies, such as MCom, C&W and Stour Marine/Greenfone. The fact that BT (like other fixed/mobile networks) has accepted the rates proposed by new entrants implies that BT has no countervailing market power vis-à-vis such new entrants in the same way as with the other established operators. Furthermore, the fact that new providers are likely to have only limited volumes of call minutes means that large companies like BT have less of an incentive to object to the rates proposed, even if those rates are not cost orientated. To some degree, BT also has a conflict of interest given its holding of a mobile number range.

If new entrants (and new entrants alone) are not regulated, they will have opportunity to charge termination rates above their efficient costs, and cross-subsidise their retail services. T-Mobile submits that permitting termination rates above efficient costs for new entrants, whilst regulating the rest of the industry, would breach Ofcom's duty not to discriminate between communications services or networks, or the means by which these are made available. A failure to take account of their efficient costs of termination would be discriminatory and therefore in breach of the fourth Community requirement.[4] It should not be for existing operators to bear the costs of new entry by other firms nor to cross-subsidise their competing retail offers; this would distort efficient competition in the mobile market. Furthermore, as the rates of new entrants are increasingly referred to Ofcom for assessment through its dispute resolution powers, it is appropriate that Ofcom consider their regulation more generally, since the dispute resolution process is severely limited in its scope for determining an appropriate rate.

Question 5.1: What are likely to be the main sources of detriment to consumers of excessive termination rates in the period 2011 to 2015?

T-Mobile does not think that a lack of *ex ante* regulation would lead to sustained excessive mobile termination rates. In fact we think that the most likely scenario for the operators who are currently regulated is that there would be disputes between communications providers leading to references to Ofcom under its dispute resolution powers. At this point *ex post* regulation would need to be employed, which in theory ought to lead to similar rates or regulation being imposed as would have been imposed under *ex ante* regulation, albeit within the limitations of the dispute resolution procedure. For more details of our view of what would happen if there was no *ex ante* regulation after April 2011, see our response to Question 6.4.

Detriment to mobile consumers if termination rates are set below costs

In contrast, T-Mobile considers that significant detriment to consumers would arise if termination rates were to be set below the efficient costs of providing the service in the period

[4] The fourth Community requirement is a requirement to take account of the desirability of OFCOM carrying out their functions in a manner which, so far as practicable, does not favour:—
(a) one form of electronic communications network, electronic communications service or associated facility; or
(b) one means of providing or making available such a network, service or facility, over another.

2011 to 2015. It has been acknowledged by regulators that as MNOs receive less revenue from call termination they will inevitably attempt to offset this reduction through the operation of the "waterbed effect". The Competition Commission concluded in 2003 that lower termination rates would lead to higher retail prices:

> "In our view, there will be a waterbed effect, i.e. most of the reductions in revenue from termination charges being capped will be recovered from the retail market."[5]

Therefore any reduction of termination rates to below efficient costs will lead to mobile operators needing to raise other retail tariffs to recoup lost call termination revenues. This would have an impact on all consumers with a mobile phone. Prepaid consumers, who make up 63% of the UK subscribers[6], would be particularly affected by these changes.

Options that would sharply cut termination charges from current levels would require a greater share of mobile operators' costs to be recovered from each operator's own customers.[7] As Ofcom notes "*different approaches would affect different types of consumers to differing degrees*".[8] One major impact of a sharp reduction in termination charges from current levels would be to redistribute benefits between different types of customers; the key issue facing Ofcom is whether such redistribution would be desirable.

Cutting mobile termination rates reduces the extent to which the calling party contributes to the cost of the mobile service and increases the share of the cost to be recovered from the mobile subscriber. On the one hand, customers who make relatively large volumes of calls to mobile subscribers may be made better off. On the other hand, mobile customers who receive relatively large volumes of calls are likely to be made worse off as the cost they bear for their mobile service would be likely to increase. The survey commissioned by Ofcom found that 32% of customers receive significantly more calls than they make, implying that a large group of customers are likely to be made worse off as a result of reductions in mobile termination rates.[9] Among socio-economic groups DE, the survey finds that an even higher percentage (37%) receives significantly more calls than they make. In contrast, a smaller proportion of customers tend to make significantly more calls than they receive. As Ofcom has noted elsewhere[10], contract customers tend to make more calls than they receive whereas customers receiving more calls than they make are predominantly on prepay tariffs. Accordingly, a general observation is that the options to radically cut termination charges would be likely to lower the cost of mobile ownership to contract customers (particularly those making large volumes of calls) while increasing the cost of mobile ownership to prepay customers (particularly those making relatively few outgoing calls). Around a third of UK mobile customers stand to be made significantly worse off from severe cuts in termination charges and this would disproportionately affect low income consumers.

A related effect is in relation to the sustainability of prepay tariffs, i.e. the tariffs that the majority of UK customers have chosen to be on.[11] The popularity of prepay reflects the revealed consumer preference to avoid upfront charges in favour of the flexibility to vary payments by varying usage rather than being locked into contracts for large bundles and high

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[5] UK Competition Commission, "Calls to mobiles report", 2003, paragraph 2.290 found at http://www.competition-commission.org.uk/rep_pub/reports/2003/fulltext/475c2.pdf
[6] EC, 14th Implementation Report, Staff Working Paper: Volume 2, 24 March 2009, p26
[7] Ofcom emphasizes greater retail flexibility as a purported benefit of its radical options. However, this is misleading as the impact of more severe termination regulation reduces the overall pricing flexibility available to operators. In particular, by forcing more costs to be recovered from mobile retail services, these options would reduce operators' flexibility over their level of retail prices.
[8] Consultation Document, para. 1.11.
[9] ibid, Annex 10.2, p.2.
[10] See Ofcom's Defence in relation to H3G's appeal before the CAT (Case No: 1083/3/3/07).
[11] See our response to 6.5 below

fixed charges. This budgeting flexibility is particularly attractive to low income customers. The Consultation Document authors seem unaware of this valued feature of prepay – in particular, the Consultation Document appears to treat it as an anomaly in the finding that consumers would not be indifferent to an increase in handset prices accompanied by lower call prices and that 8% of prepay respondents to Ofcom's survey would react by ceasing to have a mobile.[12]

Ofcom's data shows that while the majority of people with incomes over £30,000 are on contracts, the majority of people with incomes lower than £30,000 are on prepay tariffs.[13] This data highlights the seriously regressive nature of severe reductions in termination charges – the proposals would dramatically cut the volumes of termination revenues despite these being critical to support the commercial viability of the current cheap prepaid tariffs.[14] Indeed, taking a more detailed examination shows the policy is even more regressive than appears from the more general data. Amongst people with the lowest incomes (i.e. less than £11,500), 81% are reliant on prepay phones. This is particularly concerning as almost a quarter of this group are reliant on their mobile phone as their only form of telecommunications access.[15]

Ofcom shows little appreciation for the serious effects of the options being considered while focusing on other effects of little relevance. The consultation document emphasizes greater retail flexibility as a purported benefit of the radical options proposed. However, this is misleading as the impact of more severe termination regulation reduces the overall pricing flexibility available to operators. In particular, by forcing more costs to be recovered from mobile retail services, these options would reduce operators' flexibility over the level of retail prices. Particularly concerning is the potential risk to the sustainability of current prepay tariffs.

The consultation document does note that "*The net effect of the rebalancing of call and subscription charges would be likely to favour consumers that make more calls, against those that make fewer calls.*"[16] However, Ofcom provides little further assessment of this distributional effect – yet this effect in itself should be of great concern to a regulator. Rather the consultation document proceeds as if regulation that makes low income consumers significantly worse off would only be of concern to the extent that consumers are forced to give up their mobile phones entirely.

Ofcom proceeds to propose that some sort of social tariff should be introduced to address the risk of customers being forced to give up their mobile phones. However, Ofcom's own survey has found that 32% of customers (and 37% of consumers in the socio-economic groups DE) receive more calls than they make – a much larger share of customers for whom compensation would be necessary to prevent them from being harmed. A subsidy scheme, similar to that currently offered by BT for fixed lines, to compensate such a large number of customers would be highly costly and a serious administrative burden. There would be no commercial reason for mobile operators to prepare a specific low income tariff and specific regulation would be unjustified given the lack of universal service obligation on mobile operators. Moreover, to ensure that low income customers are not disadvantaged would also require the scheme to replicate the budgeting flexibility provided by current prepay tariffs – a further administrative difficulty. In short, there appears no particular justification or logic in

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[12] Consultation, Annex 10.1, para. 4.
[13] Ofcom, The Consumer Experience, 2008, Figure 26.
[14] A report by Frontier Economics highlights the fact that European style prepay tariffs are simply not available in the US (Frontier Economics, Assessing the impact of lowering mobile termination rates, July 2008, p.38).
[15] Ofcom, The Consumer Experience, 2008, Figure 30.
[16] Consultation, para. 6.48.

replacing a perfectly suitable and commercially viable existing option (prepay) with a regulatory imposed, uneconomic social tariff which presents significant disadvantages. There may also be significant additional knock-on effects resulting from many prepay users giving up their phone which Ofcom has not considered. For example, it may be necessary as a result of these effects to make more payphones available across the UK, so as to provide the most disadvantaged consumers with some access to telephone services.

Even in relation to the potential for some customers to be forced to exit the market, Ofcom's reasoning is flawed. While there is widespread take-up and high affordability of services today, significant increases in upfront charges could readily affect affordability for low income consumers. Ofcom's data shows that mobile penetration remains substantially lower in the US and Canada than in the UK[17] despite these countries having higher GDP per capita levels than the UK. In Canada the take-up of mobile services is only around half that in the UK. If Ofcom's regulation were to drive UK market outcomes towards those of Canada's, a sizeable proportion of the UK population would ultimately exit the market. Ofcom's most recent communications tracking survey shows a fall in the share of people with incomes below £11,500 using mobile phones between the second quarters of 2007 and 2008 – future data will show whether this change is sustained and, indeed, whether the more severe cuts in termination charges arising from the CAT appeals result in a sharper fall over time.

A Frontier Economics study estimated that a reduction in mobile termination rates to 2 euro cents would reduce consumer welfare in Western European countries by 11% (and potentially higher under other assumptions).[18] The result was based on elasticity estimates that indicated that the resulting waterbed effect would lead to a 9% fall in penetration. Other findings of the Frontier Economics study are also concerning:

- coverage is significantly lower in the US than in the EU;
- US consumers simply do not have available the same types of prepay tariffs that European consumers have chosen to adopt (instead US prepay tariffs can require significant minimum payments); and
- the number of medium and low usage subscribers in Europe who would be worse off in a US-style market is much higher than the number of European high usage subscribers who might benefit.

It is difficult to draw comfort from Ofcom's statement that the regulatory authorities in US, Hong Kong, Canada and Singapore have not expressed concerns about distribution issues – these countries have higher GDP per capita than the UK (on a PPP basis) and do not necessarily share European values regarding social inclusion. The provision of coverage is very significantly different in each of these markets compared to the UK. Singapore and Hong Kong are city states, and coverage is patchy at best outside the main urban areas in North America. In comparison the mobile networks across the UK have coverage to over 99% of the population, including covering those in the most rural regions. The more relevant question that Ofcom should be considering is whether the interests of UK consumers would be best served if as large a share of the UK population was excluded from the mobile market as is the case in the Canadian and US markets.

The available evidence, including much of the evidence presented by Ofcom itself, indicates that severe cuts in termination charges would leave a third of the UK population worse off including a disproportionate number of low income customers. There is no reliable basis for expecting that sharp cuts in termination charges would raise consumer welfare overall.

[17] Ofcom, The Consumer Experience, 2008, Figure 19.
[18] Frontier Economics, Assessing the impact of lowering mobile termination rates, July 2008, p.4.

Minimal benefit for fixed consumers if termination rates are set below costs

As Ofcom have explained, the vast majority of adults have access to both fixed and mobile lines, and only 8% of adults have access to only a fixed line. This compares to 12% of households who only have access to a mobile.[19] Ofcom's own analysis, confirms that mobile phones have been critical in providing access to communication for low-income households, who have an inability to meet regular monthly payments:

> "Evidently, PAYG was an ideal payment method for low income consumers and mobile take-up was widespread as a result."[20]

Low cost options are currently readily available for mobile ownership, particularly if one wishes mainly to receive calls. Fixed-line customers, even those on low incomes who qualify for the 'BT basic' service, need to pay a minimum monthly charge of £4.50 to be contactable by telephone. By contrast, a mobile customer only needs to pay a minimal amount every 3-6 months to keep their prepay phone active and will benefit from a service which allows them to always be contactable.

A reduction in mobile call termination rates would lead to an increase in the retail mobile prices for the 90% of adults who currently have access to a mobile phone. It might be expected that the majority of consumers, who have access to both fixed and mobile services, will be left no worse off because of a reduction in fixed line prices. However this is not the case because fixed line providers have demonstrated that they are only likely to pass on a limited share of the fall in mobile termination rates.

From information given in Ofcom's narrowband market review consultation[21], it is clear that the price of calls to mobiles has not fallen to the same extent as the price of other calls. When discussing the appropriate price for mobile call termination, BT has argued strongly for a reduction in the regulated rates, on the basis that it would lead to a reduction in the price of calls to mobile and subsequent consumer benefits. However, limited pass-through suggests that fixed call prices are unlikely to fall sufficiently to offset the overall consumer welfare loss resulting from higher mobile call prices

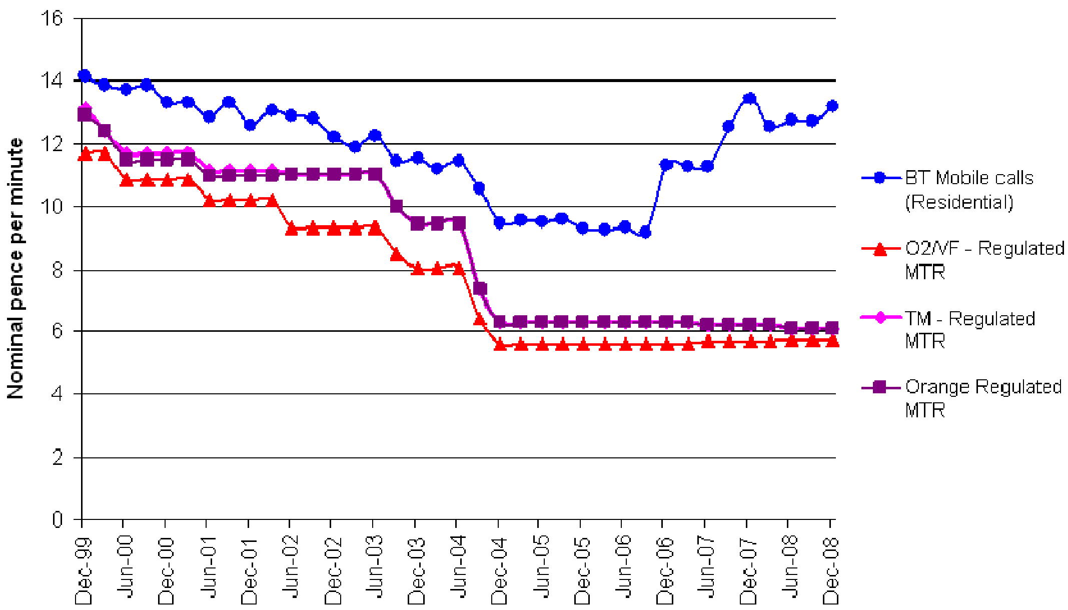
Indeed, if we compare the revenue per minute for BT calls to mobiles with the regulated rates for mobile call termination, we can see that wholesale price reductions have not been passed on to consumers. Figure 2 shows this comparison and we can see that the margin between wholesale mobile termination rate costs and the BT retail revenues has grown significantly over time. This shows that savings in the wholesale rate have not been passed on to fixed line consumers in the form of lower prices for calls to mobiles.

[19] Ofcom, Fixed Narrowband Retail Services Markets, 19 March 2009, Table 4.2

[20] Ofcom, Low income consumers and the communications market, 20 November 2007, p.15

[21] ibid 4.76

Figure 2: Comparison of mobile termination rates with BT's revenue per minute[22]



Ofcom have noted that "the price of a fixed call to mobile increased significantly relative to a fixed geographic call between 2007 and 2008."[23] This period coincided with the start of the new mobile call termination price control, where aside from the application of new glide paths reducing mobile call termination rates for the four 2G operators, H3G also began to be regulated for the first time and had a steep reduction in their termination rate. It is inconsistent and anomalous that BT was able to increase its retail charges for calls to mobiles significantly at a time when mobile call termination rates were falling.

A major reason for all the increasing price of calls to mobiles is the additional charges that fixed operators incorporate, in addition to the actual headline per minute charge:[24]

- **Call Set up charge**: This charge is currently set at 8 pence for BT's standard tariffs and is charged equally for a call of one second and a call of one hour. It has been increased frequently from a much lower 4ppm charge in 2004. BT's call set up charge is going to rise to 9.05 pence from October 2009. Charges for other fixed operators have also increased over the same period, with TalkTalk and Sky also charging 8 pence and Virgin charging 9 pence across all their tariffs.
- **Call Price Rounding**: Prices will be rounded up to the whole penny for calls made from BT to mobiles.
- **Call Duration Rounding**: The duration of calls made from BT's fixed network to mobiles is rounded up to the next whole minute. This change, from per second

[22] BT's revenue per minute was calculated using information from Ofcom's Telecommunications Market Data Tables. The historical regulated termination rates were taken from the following regulatory sources: www.competition-commission.org.uk/rep_pub/reports/2003/fulltext/475c6.pdf , http://www.ofcom.org.uk/consult/condocs/mobile_call_termination/mct_consultation/annexh.pdf www.ofcom.org.uk/consult/condocs/wholesale, www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf. When operators were not yet regulated, a weighted average of the termination rate set was used using the following weightings (daytime - 0.5, evening - 0.25, weekend - 0.25)

[23] ibid 4.76

[24] See http://www.serviceview.bt.com/list/public/current/Gen_Notes_boo/0001_d0e219.htm

billing, was introduced in 2006 as the official price controls on BT's retail services ended.[25]

Mobile operators do not utilise any of these non-transparent practices in the wholesale prices that they charge BT. Calls are charged only by the call termination rate applicable at that time period and only for the exact duration of the call. The approach of fixed operators inflates the margin that fixed operators make on calls to mobiles, while flattering the headline per minute retail charges they advertise. As an example whilst we may expect, based on the actual per minute call charge, that a two minute and one second call from BT to T-Mobile during the daytime in June 2009 would cost approximately 25.7 pence, in fact due to these additional hidden charges the cost of the call would be nearly double that at 47 pence.[26] The wholesale mobile termination rate charged by T-Mobile for this call would only be 11.8 pence, or 25% of the total price charged.

In BT's response to Ofcom's March 2006 consultation, following its arguments in favour of a reduction in call termination rates, the issue of call termination pass-through was dealt with:

> "*Finally, BT has offered to extend the commitment we have made in the past to pass on any further reductions in mobile call termination rates to our customers. Competition in the provision of fixed-line services should, in any case, mean that lower call termination charges will continue to be of direct benefit to fixed users.* "[27]

This follows similar informal commitments given by BT in June 2004, after Ofcom had previously regulated the termination rates. BT then promised to "pass on these reductions penny for penny to consumers".[28]

However, BT has neither honoured these commitments nor continued its pre-deregulation approach on pass through. This is clear from the evidence of actual revenue per minute for calls to mobiles: once the glide path was finalised for the 2007 – 2011 period, BT actually deliberately introduced additional charges and hidden policies in order to increase the revenue it received per minute for calls to mobiles. Over this charge control period the call set up charge was increased from 5 pence to 6 pence in August 2007 and then again to 8 pence in January 2009. It will increase again to 9.05 pence in October 2009. In addition, the move to per-minute billing, which was introduced in 2006, significantly increased BT's revenues from calls made to mobiles.

In parallel, however, BT's gross margins for calls to mobiles have increased as its wholesale costs fell, resulting in even higher profits following the latest call termination price controls.[29] BT's increasing profit margins on calls to mobiles is clearly contrary to the interests of consumers. It shows that in fact it is BT shareholders, rather than consumers, who have benefited from the reduction in call termination rates imposed as a result of regulation.

Increased charges over lower costs are clear evidence that there is limited competitive pressure in the fixed line market on BT or other fixed operators to bring down the price of fixed to mobile calls (or that the fixed providers have an incentive to limit the overall utility of a mobile service compared with their fixed services). In a competitive market, one would expect BT's fixed line competitors to react to BT's price increases by attempting to undercut BT's prices and increase their market share. However, even though BT's retail charges for calls to mobiles have increased over recent years, its charges are still cheaper than those of

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[25] http://news.bbc.co.uk/1/hi/business/5231412.stm
[26] This is based on the peak per minute charge of 12.7ppm and a call set-up charge of 8ppm
[27] BT's response to Ofcom, Mobile Call Termination Market Review, March 2006 , paragraph 29 found at http://www.ofcom.org.uk/consult/condocs/mct/responses/bt.pdf
[28] see http://www.computerweekly.com/Articles/2004/06/02/202842/bt-promises-mobile-price-cuts.htm
[29] Ofcom, Fixed Narrowband Retail Services Markets, 19 March 2009, A5.11 and Figure A5.7

other fixed operators who have also increased their prices of calls to mobiles.[30] Indeed, fixed operators like BT hide behind what they describe as "extortionate" mobile call termination rates as the reason why prices of calls to mobiles are high. This is despite the fact that as mobile call termination rates have halved in nominal terms between 2003 and 2008, the price of fixed calls to mobiles and BT's margin on those calls has risen significantly over the same period.

Given their conduct in recent years, we see no reason to believe that fixed line providers will in future pass on the full extent of the wholesale reductions to their consumers. Consequently, it is highly likely that any gains for fixed line consumers will be less than the detriment suffered by mobile consumers leaving UK consumers worse off overall as a result of any reduction in mobile call termination rates in the period 2011 to 2015. This reflects that only part of the additional retail prices that mobile consumers will be paying will be funding reduced retail prices for fixed customers; the rest will be captured as higher profits in the fixed sector.

Question 6.1: Should our policy approach to regulating MCT change? For example, given the possible benefits, should we adopt a policy of reducing termination rates as far and fast as we reasonably can, within the boundaries of sound economic policy, and whilst recognising underlying cost differences? If our policy approach did change, what do you think are the relevant factors for us to consider in deciding on the best future policy to regulating MCT?

T-Mobile would strongly object to Ofcom adopting a policy of reducing termination rates 'as far and as fast as it reasonably can'. The correct policy for Ofcom to follow should be to ensure that the regulated rate is the 'right rate' as opposed to the 'lowest possible rate'. Ofcom has legal duties to promote efficiency and overall consumer benefits and must determine its approach to mobile call termination regulation to fulfil these duties. The efficient mobile call termination level that maximises overall consumer welfare needs to be determined with regard to:

- The rate allowing for the recovery of efficient costs;
- The regulatory framework encouraging stable investment in mobile industry. This is especially true given the proposals highlighted in the Digital Britain Final Report to make the promotion of investment in communications infrastructure one of Ofcom's principal duties[31];
- Not making a radical shift when any significant change could lead to significant negative knock-on effects;
- Promoting competition both within the mobile industry and between mobile and fixed line services; and
- Ensuring that any rate will protect low-income and disadvantaged users from paying higher prices.

As we have detailed in our response to Question 5.1, there are likely to be only limited benefits for fixed consumers from a significant reduction in termination rates as fixed operators historically have not passed through all of these reductions to their customers. At the same time, the waterbed effect in the mobile market would result in mobile operators needing to compensate for any loss of income caused by lower mobile termination rates by charging higher retail prices. This would be likely to result in negative impacts on investment, on competition in the mobile market and on mobile penetration. Furthermore, as we have detailed in our response to Question 5.1, it is likely that reducing mobile termination

[30] Ofcom, Fixed Narrowband Retail Services Markets, 19 March 2009, A5.12 and Figure A5.8
[31] DCMS and BIS, Digital Britain Final Report, paragraph 67.

rates significantly will disproportionately impact marginal and low-income customers on prepay tariffs who will end up being made substantially worse off. As such, a policy approach which looks to reduce termination rates as far and fast as possible is likely to lead to significant consumer detriment, with the greatest harm being suffered by consumers in lower socio-economic groups.

T-Mobile notes that any proposed changes to the approach for call termination charges need to be considered within the current legal framework, in particular the provisions in the Framework and Access Directives.

- Art. 8 (2) of the Framework Directive, which requires Member States to promote efficient investment and to avoid distortions of competition.
- Article 13 of the Access Directive, under which NRAs can impose obligations relating to cost recovery and price controls, including cost-orientation of prices. NRAs are obliged to take into account the investment made by the operator and allow a reasonable rate of return. The principle of cost recovery including a reasonable rate of return on the capital employed means that, for example, an arbitrary setting of interconnection prices at zero is excluded under the framework.

In effect, the current legal framework therefore requires the current type of price control to be used where there is a return on the service involved (economically this is also the right approach). Other specifically non-cost orientated approaches, which aim to reduce termination rates as far and fast as possible, must be discounted in the absence of a change in the law.

The suggestion that MTRs should be set as low as possible seems to be based on the erroneous assumption that the lower the rates are, the greater the benefit for consumers. This is clearly not the case. While there is clearly a case that higher value customers will benefit from larger bundles if MTRs are significantly reduced, consumers generally will suffer if the rates are set too low in just the same way as they would if the rates are set too high. This is because where rates are set below cost; operators will need to recover those costs by raising the price of other services, above the costs of those services, which is inefficient. Such inefficiencies would result in a detriment to consumers overall, with marginal customers who can least afford increases in retail charges suffering the most. If the regulated rates are set below costs and operators cannot offset lost revenues, this will have a negative impact on future investment with negative knock-on effects for consumers. The correct objective for Ofcom must therefore be to set MTRs at the efficient rate; that being a rate which adequately reflects the costs incurred in providing the service.

It is likely that a move to any approach which reduced termination rates below efficient costs would result in the same sorts of problems as T-Mobile identified concerning "Bill & Keep" in our response to Ofcom's Mobile Sector Assessment consultation.[32] Those problems, which would apply equally when following a LRMC approach, a mandated reciprocity approach or a bill & keep approach, include the following:

Impact on consumers

(i) Charging to receive calls

If termination charges are set at zero or below the cost of termination, operators will need to recover this cost from other services. For prepay customers who make more calls than they

[32] Adapted from T-Mobile's response to "Mobile citizens, mobile consumers: Adapting regulation for a mobile, wireless world" consultation, 20 November 2009, p75

receive (a significant share of the UK population), operators will have little choice but to impose charges to receive calls. Even for other customer-types, competition in the market is likely to make significant cross subsidies between services unsustainable so that they may also be subject to charges for receiving calls (or implicit receiving charges as received call minutes are included in the particular monthly bundle acquired by the customer). Limited information would be available to the receiving party to allow them to make an informed decision on whether answering the call will represent sufficient value to them that merits the cost of paying to receive the call (including where they would use up some of their monthly minutes allowance). They may not receive the ID of the caller and if they do, they may not recognise the ID. Even armed with the ID of the caller, in most cases, they will not be aware of the nature of the conversation that the caller wishes to have. Customers have a legitimate fear of paying for receiving sales calls or other calls that they did not want to receive in the first place, wasting not only their time (which would always be the case) but also their money - and sales calls may increase if cuts in termination charges reduce the cost of calling mobiles. An example of a form of receiving party pays ("RPP") system occurs in international roaming. This is, in our view, not generally a popular way to charge for calls, and has the result that people often turn their mobiles off when traveling abroad. Our experience is that charging for receiving calls is likely to be very unpopular with retail customers in the UK. We would expect considerable disapproval from customers and consumer organisations. There is a strong customer preference in the UK to pay only for calls made and there is a fear of paying for receiving sales calls that the customer did not want to receive in the first place. Given this strong customer preference in the UK, charging customers for calls received could well have a negative impact on all mobile networks that operate in the UK[33].

(ii) Call prioritisation

A further risk is that networks would give priority to calls originated by their own customers instead of calls being received from other operators, particularly if subject to capacity constraints. This would be detrimental to customers of all networks. The existing arrangements for interconnection payments across the UK appropriately place the costs onto the party who tends to derive the greatest benefit from making the call. In the case of a personal call, the greatest benefit will tend to be derived by the call originator – he or she has made the decision to call and the connection facility is provided by the originating and terminating operator in response to this demand. With Bill and Keep, the retail revenue is not shared between the networks enabling the call. In the absence of an appropriate cost-related interconnect payment to the terminating operator there is a reduced incentive for the operator to terminate a call originated by one of his competitors. If the originating customer is unable to connect to the customer of the terminating network, the customer is more likely to blame his or her own service provider for failing to provide the facility, whilst the called party may never know that a party attempted to call him.

Impact on the market

(i) Prepay model

The UK market has flourished through the development of a prepaid market that allows customers the flexibility to purchase telecommunications services as and when they need to, without minimum monthly commitments. 64% of subscriptions in the UK are PAYG

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[33] The idea that RRP is unpopular can be seen from the posted comments to Ofcom's Mobile Sector Assessment Interactive Executive Summary at http://comment.ofcom.org.uk/msa_summary/2008/08/121.html#comments which was specifically trialled as Ofcom want "as many people as possible to be able to comment on our consultation document".

subscriptions.[34] However, a significant proportion of prepaid customers receive many more calls than they make – indeed, a large number of prepaid customers make very few calls. **[✂]**

Figure 3: [✂]

Current prepaid plans will need to be reviewed if termination charges are substantially reduced. Operators may seek to raise call prices or impose minimum monthly spend requirements. This could limit further subscriber growth or discourage customers from being mobile subscribers where they are concerned about committing to regular payments. This would also act to reduce access to communications services.

Vodafone argue in their submission to the European Commission on the draft recommendation that substantial decreases in termination rates could result in significant numbers of mobile users abandoning mobile (up to 10 % of users or 40 million users in total).[35] Frontier Economics also set out the potential adverse impacts to the market of a significant reduction in mobile termination rates.[36]

Operators may be forced to scrap the concept of a pay-as-you-go tariff and instead provide the equivalent of the USA prepay tariffs where prepay money has a specific expiry date and there are daily minimum access fees. This model would not be popular in the UK, as we have seen with some of the responses to this consultation on public forums.[37]

Ofcom's International Communications market report shows the very different customer profiles between European countries and the USA, Canada and Japan who all employ a Bill and Keep system for regulating termination rates. This difference is shown in Figure 4.

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[34] Ofcom, Telecommunications market data tables Q1 2008, 2 October 2008, p20 at http://www.ofcom.org.uk/research/cm/tables/q1_2008/q12008.pdf

[35] Vodafone. 1 September 2008. Vodafone comments on the Draft Commission Recommendation on the regulatory treatment of fixed and mobile termination rates in Europe. http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/vodafone.pdf
The Commission's video response by Martin Selmayr is available here: http://ec.europa.eu/unitedkingdom/press/frontpage/29082008_copy_en.htm

[36] Frontier Economics. July 2008. "Assessing the impact of lowering mobile termination rates." A report prepared for Deutsche Telekom, Orange, Telecom Italia, Telefonica and Vodafone. http://www.frontier-economics.com/_library/publications/Frontier%20publication_MTRimpact.pdf
See also presentation of 20 October 2008: http://www.frontier-economics.com/_library/publications/Frontier%20presentation%20-%20mobile%20for%20IBC%20Final.pdf

[37] See http://www.theregister.co.uk/2008/08/29/ofcom_mobile_assessment/comments/ and http://comment.ofcom.org.uk/msa_summary/2008/08/121.html#comments for examples of consumer hostility to such an arrangement.

Figure 4: Mobile subscription by type: 2002 and 2007[38]

(ii) Impact of Waterbed Effect

The mobile operators compete to win subscribers, who then provide a stream of revenues. They compete by offering attractive prices for outbound mobile calls and subscription and, in the case of both prepay and post pay customers, discounted or free handsets. In setting prices, operators will take into account all of the revenues that will result from acquiring a customer and equally all of the costs of acquiring and serving that customer. Part of these revenues will come from the termination revenues that flow from people calling the subscriber. When considering its pricing policy, a mobile operator will take these termination revenues into account. The higher an operator expects the termination revenue to be, the more it will be willing to reduce charges for outbound calling and handsets to attract customers to its network. Lowering subscriber prices increases subscriber numbers as the service becomes cheaper, which enables the operator to earn additional termination revenues earned. It follows from this that if termination charges and hence revenues rise, then operators will be willing to lower outbound prices in order to win additional subscribers. The reverse is also true: if termination charges and revenues fall, operators will raise their prices to subscribers.

Regulators generally accept that the 'waterbed effect' will be complete when competition for subscribers is strong ensuring that no operator is able to make excess economic profits. In this market, regulation of termination charges would affect the structure of prices, but not overall profitability. It would imply that some consumers were better off (those who make many calls to mobile phones but make few calls from mobile phones), but that others were worse off (those who make few calls to mobile phones but make many calls from mobile phones).

Understanding the existence and magnitude of the 'waterbed effect' following the reduction of termination rates is essential to explain the social costs and benefits of the regulation of mobile termination rates. Whilst the 'waterbed effect' is likely to be 100% under a fully competitive market; even with imperfect competition it is clear that lowering termination rates will lead to retail prices being higher than they would be in the absence of this regulation. Genacos and Valletti (2007) test the "waterbed" hypothesis across Europe and conclude that "the waterbed effect is strong, but not full."[39] In this case, lowering mobile termination rates would both lower overall returns to the mobile sector to some extent and lead to a significant increase in other charges.

Considering the fact that the waterbed effect exists, any reduction in termination rates will lead to a transfer of money from mobile subscribers to fixed operators and, to a lesser extent,

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[38] Ofcom, The International Communications Market 2008, 20 November 2008, p235
[39] Genacos and Valletti. October 2007. "Testing the waterbed effect in mobile telephony." CEP discussion paper No 827. http://cep.lse.ac.uk/pubs/download/dp0827.pdf

fixed subscribers (see above). As the vast majority of people who call mobile phones also own (and receive calls on) mobile phones, the two customer groups will inevitably be largely the same people (Ofcom's own survey evidence shows that 92% of households with a fixed phone also have at least one mobile phone[40]). It follows that there can be expected to have been a very small overall distributional effect arising from termination rates being reduced.

When considering the impact of a reduction in MTRs, Ofcom have stated that their provisional view is that:

> "International comparisons provide evidence that this relationship between termination rates, and take-up and usage, exists. A simple analysis of cross-country data (annex 5) suggests that countries that have, broadly speaking, systems that adopt reciprocity or 'bill and keep'-like arrangements – US, Hong Kong and Singapore (and to a lesser degree Canada) – have higher usage than countries with 'Calling Party's Network Pays' regimes."[41]

However, the CEG econometric study that has been published by Ofcom at Annex 7 actually found that there was no statistically significant relationship between the level of termination charges and usage. Indeed the study also found no robust evidence of a relationship between the level of MTRs and retail prices except in relation to low usage bundles where lower MTRs were associated with higher prices for mobile customers. Therefore given the statistical evidence, T-Mobile does not believe that Ofcom's provisional view concerning the relationship between termination rates and usage is correct.

[✂]

The mobile industry is still relatively young, yet it is already anticipating its fourth generation technology. In an industry that has such a heavy requirement to reinvest, it is crucial that regulators do not over-regulate. The risk of over-regulating is that the equilibrium balance of return and reinvestment is disturbed, preventing operators from generating the necessary funds to invest in the new technologies that will continue to provide economic growth. At a time when funds from the capital markets are shrinking, Ofcom must be especially cautious when considering regulation that will dramatically alter the way in which mobile operators are able to generate funds internally to meet their reinvestment requirements.

In recent years, European regulatory policy has primarily focused on short term price cuts, e.g. in termination rates. Lowering termination rates leads to lower returns on equity and debt. In a recently published study[42], A.T. Kearney and Prof. David Newbery pointed out the relatively poor return on capital investment by the mobile phone industry in comparison to other industries. With a return on capital employed (ROCE) of only 9%, the innovative mobile industry had the second lowest returns of all the industries measured. In industries like high tech, the pharmaceutical and software industry, a ROCE of over 20% was achieved. As a consequence of these low returns, the attractiveness of investments in mobile networks is diminishing. Since the mobile communications industry is a key sector of the economy, as recognised in Digital Britain, reduced investment incentives risk harming the overall dynamism of the economy with a large negative impact on the labour market and economic growth.

Indeed, from a consumer's perspective, mobile termination rate cuts may be more perceptible, tangible or visible, and therefore more popular than benefits from investment. But this is a short-sighted perspective. Cuts in mobile termination rates destabilise the MNOs'

[40] Ofcom, The Consumer Experience, 20 November 2007, Figure 20.
[41] Consultation, 6.40
[42] European Mobile Industry Observatory, 2008, p8

expectations for the amortization of an investment. However, investment and innovation (new products, better quality) increase consumer surplus sustainably. For European competitiveness in terms of long-term growth and dynamic welfare aspects, investments in new network infrastructure are inevitable. Therefore, the most important aspect of regulatory policy has to be to stabilise the expectations of the companies that are willing to invest in the long-term in high quality mobile network infrastructure. This requires that the MNOs must have an opportunity to achieve yields that are on a par with all the other dynamic industries.

Question 6.2: Are there additional options (other than the six set out in this consultation) that we should consider? If so what are they and what advantages/disadvantages do they offer?

In T-Mobile's response to the Mobile Sector Assessment, we proposed a few simple approaches, based on indexation, to regulate mobile termination rates going forward. These aimed to address the concerns that Ofcom had with the regulatory burden that is involved with building a complex LRIC+ cost model. By detailing these options, T-Mobile aimed to show that there were light touch regulatory options available to Ofcom which were intuitively as simple as Bill & Keep, whilst still being based on the costs of termination.

However, if Ofcom still aims to regulate this market thoroughly and robustly, then the only available option is to develop an accurate LRIC+ model. This would produce termination rates that are truly based on the best estimate of the efficient costs of providing that service and would replicate the conditions of a competitive market. Different parties will undoubtedly disagree about some of the specific elements of this pricing model. Nonetheless, resolving such differences is an acceptable cost in ensuring that regulation is based on the actual efficient costs of offering the service of call termination, which can best be derived from a LRIC+ model.

The options that Ofcom have suggested in this consultation, which would lead to a sharp reduction in termination rates, do not meet the criteria of ensuring that the costs of providing the service are recovered. As a result, T-Mobile does not think that these options warrant further consideration.

Question 6.3: Do you agree with our preliminary views set out for each of the options? If not, what are the additional factors that we should take into consideration, and why are they relevant to our analysis?

T-Mobile does not agree with the preliminary views set out for each option. We refer you to our detailed response to each option in Questions 6.4 – 6.9.

Question 6.4: Do you agree with our preliminary view of the de-regulatory option? If not, what are the additional factors that we should take into consideration, and why are the relevant to our analysis?

Ofcom rightly should have a policy bias against intervention, and therefore should always have as an objective of removing regulation where possible. In the market for mobile call termination, deregulation should be Ofcom's long-term objective. However we agree with Ofcom that removing all *ex ante* regulation now is unlikely to lead to a stable outcome in the interests of consumers. We think it is likely that any period of deregulation would be swiftly followed by a dispute over termination rates. At that stage, Ofcom would need to consider how best to regulate the market, whilst only being only able to use the more limited time and resources available to them to resolve a dispute. Therefore, we think that pursuing a de-regulatory approach immediately, would merely delay and impair any regulation that is needed. The uncertainty created by the removal of the current regulatory framework would also lead to a period of unexpected and unpredictable changes which may lead to a risk of consumer harm.

In the long term, however, T-Mobile believes that competitive pressures could develop to support ongoing deregulation. As the mobile market continues to develop and the number of ways of contacting a particular mobile subscriber increases, there will be a need to revisit whether operators continue to have SMP in the market for call termination on their network, and whether price controls remain an appropriate and proportionate remedy.

This will require a detailed assessment of the alternatives to call termination, which over time are increasing. T-Mobile urges Ofcom to undertake this economic analysis. T-Mobile believes that there are a number of factors which could support call termination regulation being removed in the longer term. These factors include:

- The increasing level of competition in the mobile market; and
- The increasing number of alternative methods to reach a mobile subscriber (e.g. instant messaging, email, VoIP…)

It may still be true that in order to connect a call to a person's mobile number, one needs to go through their mobile operator's network. However it does not follow that this will continue to be the only method of reaching that subscriber. With the advent of VoIP and Wi-Fi enabled phones, customers are able to choose to be contacted without mobile termination charges being imposed. The market for contacting a customer therefore needs to be extended to include all the potential ways to contact a customer. Some of these services and products may be less convenient than traditional mobile voice calls, but it is the aggregate impact of the various constraints that matter in assessing the need for future regulation. As technology and customer usage patterns develop, Ofcom should maintain a watching brief to enable deregulation once competitive constraints are sufficiently developed.

Question 6.5: Do you agree with our preliminary view of the LRIC+ option? If not, what are the additional factors that we should take into consideration, and why are the relevant to our analysis?

The LRIC+ option is the established regulatory best practice which has supported the successful development of the UK mobile market and which operators and Ofcom are deeply familiar with. Ofcom would need a robust justification to support any movement away from this approach. This is particularly relevant given that it has only been a matter of months since the Competition Commission determination was published, which supported the continued use of a LRIC+ cost model in preference to the more radical options proposed by H3G. In that appeal process, Ofcom itself defended its continued use of the LRIC+ model throughout these proceedings.

In addition, Ofcom and BERR, in their response to the EU draft recommendation noted that:

> *"The draft Recommendation proposes a major departure from established best practice without adequate justification for the departure. In particular, established best practice for cost-oriented termination charges based on long-run incremental costs includes a reasonable allowance for fixed and common costs. We do not think the draft Recommendation provides sufficient justification for changing to an approach where there would be no such allowance in regulated termination charges"*

There is no reason to depart from that reasoning now. Indeed, T-Mobile believes that Ofcom would need to provide adequate justification for departing from the established methodology for regulating call termination for the exact same reason.

Furthermore, LRIC+ should not be considered as just merely one of the many options available to Ofcom, but rather viewed as the default approach from which any departure needs particular justification, with a cautious approach taken as regards the potential risks. Any move away from this methodology would have (both foreseen and unforeseen) negative knock-on effects on the industry as a whole. The uncertain effect of a change in approach is a factor that Ofcom should have regard to in deciding whether to risk a change.

A LRIC+ approach ensures that all of the costs of providing call termination are recovered from the regulated rate. Any move to set rates lower than the rates which would result from this option will mean that costs would need to be recovered from other mobile services. In fact the economic principle of the "waterbed effect" would mean that this reduction of termination rates would lead to higher retail prices for consumers.

T-Mobile thus disagrees with the view that LRIC+ may not continue to be a suitable approach to regulate mobile call termination in the future. In contrast we think that this is the only regulatory approach that would not threaten the long term successful development of the mobile sector. This is because this is the only approach which will properly allocate the costs incurred from mobile termination to that service. The other regulatory options which Ofcom have proposed each lead to the inefficient recovery of these costs from other services. Setting a termination rate, which does not properly allocate the costs of termination, would also lead to a subsidisation of fixed operators by mobile operators. As we have described above, mobile operators would need to increase prices for their retail services, to mitigate against the fact that they would not recover their costs of call termination. Conversely, as we have seen above, BT has increased its margins on calls made to mobiles as the termination rate has been reduced. This cross-subsidisation from mobile to fixed operators therefore inevitably leads to an anti-competitive structure for the communications industry.

Indeed the complaints that some stakeholders, notably H3G and BT, have concerning the current mobile call termination methodology result from the intrinsic costs involved with mobile communications and the traffic profile of H3G's customers. The concerns do not come directly from the LRIC+ model used to prepare the charges; the model brings out these underlying issues but does not itself make those concerns legitimate or justify adapting call termination to particular business models or away from efficient costs. Any move away from this methodology would not have any impacts on these structural points. The costs of mobile communications would still be higher than fixed communications, and operators with a higher proportion of contract customers with large bundles would still make more calls than they receive. However if there was a change to the method for regulating mobile termination, it would mean that these structural impacts would not be adequately dealt with through the price control. Therefore they would just impact negatively on other areas of the mobile industry.

One of the points that Ofcom have queried concerning the LRIC+ option is whether it is still appropriate to recover fixed and common costs from call termination. Indeed Ofcom suggests that:

> *"in practice, they may also be recovered from other types of charges (for example through fixed retail charges, such as bundles of call minutes. To the extent that this is possible, it may be more appropriate to recover common costs in this way, which may stimulate increased usage."* [43]

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[43] Consultation, 6.28

Such an arrangement may be possible for the minority of UK mobile consumers who are contract customers. However as shown in
Table 1 the majority of customers are prepay customers, for whom there is no concept of a fixed retail charge. Therefore any move to not recover the full costs of termination from the regulated rate will destroy the current prepay model, that being the model which is favoured by the majority of UK consumers. Given that operators rely to differing extents on prepay, the change would also impact operators differently risking changes in market structure and the loss of the current competitiveness of the overall UK mobile market.

Table 1: Percentage of contract and prepay customers on each network, Q4 2008[44]

	Vodafone	O2	T-Mobile	Orange	H3G	Total
Contract	48%	39%	24%	39%	66%	**39%**
Prepay	52%	61%	76%	61%	34%	**61%**

When discussing the assumptions on which the LRIC+ approach rests, Ofcom explain the potential for a mobile tariff structure developing with significant on-net and off-net differentials that could create competitive distortions to the market.[45] The tariffs shown in Annex 9 of the consultation indicate that the vast majority of both prepay and contract customers pay no more for an off-net call than for an on-net call. This is because the majority of contract tariffs include bundles of “any network, any time” minutes and prepay tariffs have identical prices for on-net and off-net calls. Given Ofcom’s own evidence, it is erroneous to put weight on a concern that the use of a LRIC+ cost model could lead to these differentials affecting consumer behaviour and competition to a material extent. The fact that any differentials may have occurred historically, or in other countries, provides no evidence concerning the continued use of the LRIC+ option in the UK.

Another assumption that Ofcom discuss here is the issue of un-internalised call externalities. This issue is also referred to later in the consultation, when Ofcom note that bill-and-keep may be the most appropriate regime in the presence of un-internalised call externalities.[46] Given the extent of negative comments made in the past year concerning any regulatory move which would lead to paying to receive calls[47], it should be clear that call recipients would not value being called enough to pay for some of the costs of receiving calls. Therefore it appears correct to assume that there are no significant un-internalised call externalities. We note that most calls are made between parties who regularly call each other and hence can internalise call externalities via that means. For the minority of calls in which the caller makes a one-off call to someone (say to check if a museum is open), the call is likely to mainly benefit the caller without giving rise to a calling externality.

Question 6.6: Do you agree with our preliminary view of the LRMC option? If not, what are the additional factors that we should take into consideration, and why are they

[44] Calculations done using information from Ofcom’s Telecommunications market data tables, Q4 2008 at http://www.ofcom.org.uk/research/cm/tables/q4_2008/q4_2008.pdf. Data for H3G is taken from Merrill Lynch, European Telecoms Matrix Q2 2009, 29 May 2009
[45] Consultation, 6.108.3
[46] ibid 6.149
[47] The idea that RRP is unpopular can be seen from the posted comments to Ofcom’s Mobile Sector Assessment Interactive Executive Summary at http://comment.ofcom.org.uk/msa_summary/2008/08/121.html#comments which was specifically trialled as Ofcom want “as many people as possible to be able to comment on our consultation document”.

relevant to our analysis? In addition what do you expect the costs of a move to this option to be?

As Ofcom notes in paragraph 6.109 of this consultation, LRMC is effectively the approach advocated in the EU Recommendation. In the consultation on the EU Recommendation, Ofcom and BERR set out in their joint submission of 10 September 2008 a number of clear objections to the Commission's preferred approach. Those objections were sound at the time and they continue to apply and to be relevant now. Whilst Ofcom must pay the utmost regard to the EU Recommendation, the Recommendation is not law and is not legally binding on Ofcom. As Ofcom and BERR noted in their joint response:

> *"The fact that the Commission has recommended a particular approach does not of itself provide sufficient justification for adopting it, especially in the absence of adequate supporting analysis of rationale or impact."*

Instead Ofcom must ensure that its approach is consistent with its duties under UK and EU law, including ensuring that any regulation of network access pricing is appropriate for the purposes of:

(i) promoting efficiency;
(ii) promoting sustainable competition; and
(iii) conferring the greatest possible benefits on the end-users of public electronic communications services.

It is also noteworthy that the EU Communications Committee (COCOM) did not adopt a favourable opinion under the advisory procedure on the draft Recommendation: only five member states voted in favour, with 12 member states voting against and 10 abstentions at the COCOM meeting on 18 February 2009. This lack of member state support combined with the flaws identified by Ofcom/BERR, the inadequacy of the Commission's impact assessment and consultation procedure seriously undermine the EU Recommendation.

T-Mobile believes that the EU Recommendation and the accompanying explanatory statement are inconsistent with Ofcom's statutory duties. Further, T-Mobile considers that the LRMC approach suffers from a number of inherent flaws and legal problems. The LRMC approach would require the development of a new, even more detailed cost model than the existing LRIC+ model. However, the maximum termination charges that would result from an LRMC model would not be cost-orientated and a significant share of the costs of termination would need to be recovered from other services. As a result, the LRMC approach is unlikely to be comparable with Article 13 of the Access Directive.

Unlike the EU Recommendation, Article 13 of the Access Directive, is binding, and requires Ofcom to ensure that any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits. If Ofcom were minded to apply the LRMC approach, it would need to explain clearly and in sufficient detail why the objections that it canvassed earlier (and those raised by other interested parties) were no longer of concern. Ofcom has not done so, to date, and T-Mobile doubts that there is any change of circumstance that would allow a credible distinction to be drawn. In any event, if Ofcom ultimately decides to apply the LRMC approach, appeals against that decision are inevitable.

A move to LRMC would lead to substantial negative impacts for UK consumers and the mobile industry, in similar types of ways as would arise from a move to mandated reciprocity or bill-and-keep. This is due to the fact that mobile operators would be prevented from recovering their costs of termination through the regulated rate. For more information on these negative impacts, please see our response to Question 6.1 above. In addition, any change to the tried and tested LRIC+ methodology will inevitably lead to further costly and protracted litigation before the Competition Appeal Tribunal and another reference to the Competition Commission, unnecessarily reopening issues that have only recently been determined.

Ofcom and BERR, in their joint response to the EU draft recommendation listed a number of major problems with adopting this approach. These problems would equally apply today for any Ofcom sanctioned move to the LRMC approach.

- Shifting the burden of cost recovery away from callers towards call recipients is likely to feed through into changes in the level and structure of retail tariffs, which may benefit some consumers but has the potential to disadvantage others (such as lower-spending customers). These possible consumer disbenefits must be taken into account.
- Ofcom/BERR did not think that the EU Recommendation provides sufficient justification for changing to an approach without a reasonable allowance for fixed and common costs.
- The EU Recommendation is inconsistent with the Commission Recommendation on Accounting Separation and Cost Accounting Systems.
- The expected benefits of regulation must be balanced against the associated costs. If this cost/benefit analysis is not properly conducted, regulatory intervention can lead to regulatory failure.
- Any account taken of the EU Recommendation could be vulnerable to legal challenge, because of the departures from established best practice.

Omission of common costs is erroneous

The omission of common costs within the calculation of termination rates would result in discrimination in relation to other services of the regulated operator. As termination rates would not cover a fair share of common costs, other services would need to recover a disproportionate share of common costs. This leads to a positive discrimination in favour of wholesale customers purchasing termination as well as a negative discrimination against all other wholesale and retail customers of the regulated operator. The current fixed regulation ensures that BT’s current business model allows it to recover all its costs of termination. Any move to disallow for the recovery of a proportion of common costs from mobile call termination will mean that the mobile operator’s current business models would need to change. This asymmetry of regulatory impacts is unfair and potentially distortionary. Ofcom should not underestimate the potential distortions that could arise through these discriminatory effects at a wholesale level.

Established economic theory, encapsulated in Ramsey-Boiteux pricing, shows that common costs should be efficiently recovered in prices so as to minimise the loss in welfare resulting from the need to recover these costs. As the Consultation Document notes, such pricing to maximise consumer welfare requires taking into account the elasticity of demand of the different services.

A move away from the recovery of common costs would be a significant departure: Ofcom has recognised the need to allow for the recovery of common costs in all its termination charges regulation to date, including the current controls. The Competition Commission has also previously determined that termination charges should include a contribution to the recovery of common costs, noting that “…economic theory recognizes that, where there are fixed or common costs to be recovered, setting price equal to marginal cost will leave firms making losses."[48] In its 2009 Determination, the CC also determined that Ofcom's current charge controls were appropriate in relation to allowing termination charges to contribute to the recovery of non-network costs. While both Ofcom and the CC have rejected formal Ramsey pricing particularly because of concerns over its practicality, it would represent a major and unjustified departure from their previous reasoning for Ofcom to now decide to adopt a highly skewed pricing approach in which termination charges alone make no contribution to common cost recovery. The EC has presented no new or robust reasoning to support such a major change in approach. Indeed, the EC's recommended approach would be in sharp conflict with Ofcom's duties to promote efficiency and confer the greatest benefit on end-users.

Omission of coverage costs is also erroneous

In addition to common costs, the LRMC approach also fails adequately to consider costs related to coverage, as noted by OFCOM/BERR at paragraph 3.17 of their joint submission on the draft EU Recommendation. Mobile coverage costs are not subscriber driven, in the same way as, for example, handset costs are, and therefore need to be recovered from traffic on the network. There is no equivalent in the mobile industry to the subscriber access charges that are in place in the fixed industry and mobile coverage costs can only be recovered from actual traffic. Indeed the recommendation to not include these coverage related costs appears to be a misguided attempt to replicate regulation from one market where it is appropriate to another where it is inappropriate and incompatible.

The main effect of expenditure on mobile network coverage is to increase traffic from existing customers rather than increasing the number of subscribers to the network. There is a very large probability that the vast majority of calls routed over a newly built base station will be initiated or received by existing customers that have already subscribed to the network before. This is underlined by the current penetration rate of 121% in the UK.[49] The consequence is that these coverage related costs should be integrated in the price of traffic. If an appropriate proportion of these coverage costs are not allowed to be recovered from mobile call termination, these would need to be recovered disproportionately by the retail services and incentives to invest in increased coverage would be seriously undermined.

The exclusion of 'coverage related' costs would also have a disproportionate impact on smaller operators than on larger operators. If such costs are unable to be recovered in termination charges, they will need to be fully recovered in prices for retail services over which operators compete. However, operators with smaller traffic volumes would need to set higher retail prices to recover a given amount of coverage costs either putting them at a significant competitive disadvantage or risking that they are unable to recover their coverage costs overall.

Even were Ofcom to wrongly believe that the exclusion of common costs was an appropriate principle, the suggestion that termination charges do not need to contribute to coverage costs and spectrum costs is erroneous. Oftel has previously explained why the common costs of coverage are small with most of the 'stand-alone' cost of coverage really reflecting the lumpiness of the equipment and that actual network common costs are likely to include only the relative small components of network management equipment and site acquisition.[50] The Competition Commission subsequently endorsed this approach.[51] While Ofcom has noted that the migration to 3G may have increased common costs somewhat, such a claim needs to

[48] Competition Commission, Calls to mobile inquiry report, 2003, para. 2.214.
[49] EC, 14th Implementation Report, Staff Working Paper: Volume 2, 24 March 2009, p14
[50] Oftel, Network Common Costs, 19 February 2002.
[51] Competition Commission, Calls to mobile inquiry report, 2003, para. 2.264.

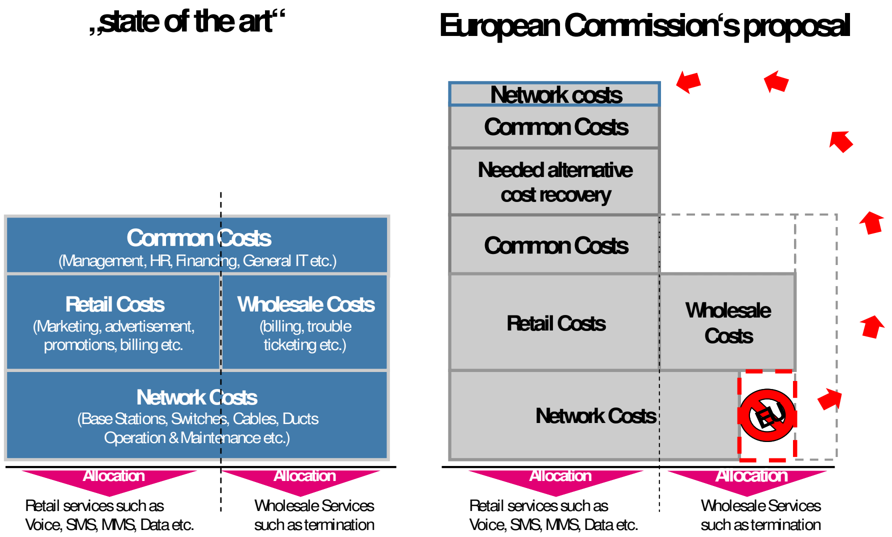
be further examined from the perspective of identifying how costs would actually vary with different volumes of 2G or 3G services – i.e. a network element that is used in both the supply of 2G and 3G services is not necessarily a common cost. In any event, the European Commission's apparent belief that the cost of providing coverage should be considered a common cost in its entirety is clearly wrong.

The view of spectrum costs presented in the EU Recommendation is also flawed. The European Commission does acknowledge that termination should contribute to additional spectrum acquired for the purposes of supplying interconnection services. However, the EU Recommendation fails to recognise that even the use of initial spectrum carries an opportunity cost that should be incorporated into efficient prices. This omission is remarkable as the European Commission has previously criticised Ofcom's proposed termination regulation on the grounds that it may depart from "*the opportunity cost of 3G spectrum*".[52] In any event, in the 2008-09 appeals, both Ofcom and the Competition Commission accepted the principle that termination charges should be based on the opportunity cost of spectrum. Moreover, with the introduction of spectrum trading over time, there is even less of a basis to adopt an approach that would treat some spectrum costs as fixed.

These considerations show that even were Ofcom to adopt an avoidable cost approach (in conflict with its duties that support an approach that would allow for an efficient contribution to common costs), termination rates would still need to make significant contribution to both 'coverage' costs and spectrum costs.

Deutsche Telekom Group's response to the European Commission's draft recommendation explained the problems that would result from adopting the LRMC approach.[53] Figure 5 below, taken from that response, shows in graphical terms the impact that would be felt on retail services if wholesale services are unable to recover the appropriate allocation of costs.

Figure 5: Impact of European Commission's Recommendation on Allocation of costs



At the moment the costs are allocated to each service as a result of cost causation. This is an efficient structure for pricing different services. The EU Recommendation calls for certain

[52] European Commission letter of 21 November 2006 to Ofcom, signed by Fabio Colasanti, Director General (SG-Greffe 2006, D/206994).
[53] See Deutsche Telekom's response to the draft recommendation at: http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/deutsche_telekom.pdf

costs that are incurred through call termination to be excluded from the price control. These costs, however, will still be incurred and will instead need to be recovered from retail services. This would lead to an inefficient structure of prices as retail prices will need to be increased significantly to incorporate the costs of termination that will not be recovered from the new reduced price control.

Question 6.7: Do you agree with our preliminary view of the CBC option? If not, what are the additional factors that we should take into consideration, and why are they relevant to our analysis? In addition what do you expect the costs of a move to this option to be?

T-Mobile considers that a CBC option has a number of theoretical pros and cons, which we discuss in more detail below, and therefore warrants further consideration from Ofcom.

T-Mobile also notes the significant practical difficulties that would also need to be dealt with before such an option could be implemented. For example, it would be extremely difficult to even begin to calculate the appropriate charge that would be needed for the operators, as it would require a completely different basis than that which is used now by any operator or regulator. This would create the risk of mistakes, particularly during any transition stage, which could have a profound impact on the mobile industry and consumers. These implementation costs and risks would need to be taken into account in deciding whether such a scheme would be desirable overall.

The costs and practical difficulties involved mean that CBC would probably not be able to implemented industry-wide by April 2011. Accordingly, even if it were considered ultimately desirable, Ofcom may need to employ a “stop-gap” price control as an interim measure until the implementation problems have been resolved. It would also be important that such a radical change is introduced concurrently across the industry as a whole, and not just for mobile call termination, so that operators do not need to employ two distinct billing systems simultaneously. A delay for a year or potentially even for the entire period of the next price control until April 2015 might therefore be necessary before such a radical change in approach is implemented.

Further, a move to CBC would mean that termination would be paid for as a fixed charge as opposed to on a per minute basis. As a result T-Mobile believes that the issues concerning the separation of common costs from the incremental costs of call termination, as proposed under the LRMC approach, would fall away and, as a result the only efficient and appropriate cost standard to use under a CBC approach would be the LRIC+ cost standard.

Theoretical arguments concerning Capacity Based Charging

Fundamentally, CBC would enable interconnecting operators to purchase their expected capacity needs for a forthcoming period, rather than paying a per minute price as they use a network’s resources. By committing to the acquisition of capacity, interconnecting operators would effectively bear some or all of the risk of the investment required to meet their needs. This could result in a more efficient distribution of risk compared with per minute pricing. While regulated CBC pricing would not preclude commercially offered wholesale per minute pricing, such commercial arrangements would be expected to lead to prices that incorporate any shift in who bears the risk of the required investment.

As Kennet and Ralph have identified, CBC can lead to additional benefits over per minute charges in terms of:

- more efficiently aligning interconnection prices with costs;
- reducing the risk of inefficient facility-based entry;
- enabling additional mark-ups for overall cost recovery to be levied in a more efficient way than is possible with per minute charges only (the authors suggest an approach guided by Ramsey pricing principles);
- reducing the risk of distortions to wholesale competition (better aligning wholesale prices with costs can also reduce the risk of margin squeezes); and
- being better suited for Next Generation Networks providing new non-voice services as well as calls.[54]

CBC would address the main problem identified by Ofcom with the current interconnection arrangements, i.e. "*that the structure of MCT prices of pence per minute does not properly reflect the underlying cost structure of mobile networks as costs are less driven by minutes of traffic, and more by the capacity required to carry that traffic*."[55] Moreover, CBC would be preferable to some of the other alternatives being considered by Ofcom.

- As noted by Kennet and Ralph, CBC can support the efficient recovery of fixed and common costs compared with the arbitrary and inefficient LRMC approach in which the common costs of a network are required to only be recovered from the retail services supplied using that network.
- By aligning interconnection charges with the actual network costs being incurred, CBC would reduce the likelihood of on-net/off-net differentials arising from the divergence between per minute interconnection charges and the network costs of supplying interconnection services.
- While CBC would not apply the full price flexibility of bill-and-keep or bring mobile termination rates in line with fixed termination rates, there is a very good reason for this – such price outcomes are inefficient as interconnection charges would not cover the incremental costs of supplying interconnection.

However, paying for a bulk of capacity as opposed to per minute may potentially lead to some inefficiency, if operators end up accruing capacity that is not needed. This risk arises because the traffic profile of mobile operators has significant peaks and troughs with a clear "busy-hour" when the volume of calls is much higher than other hours. The average daily profile of traffic is shown in Figure 6.

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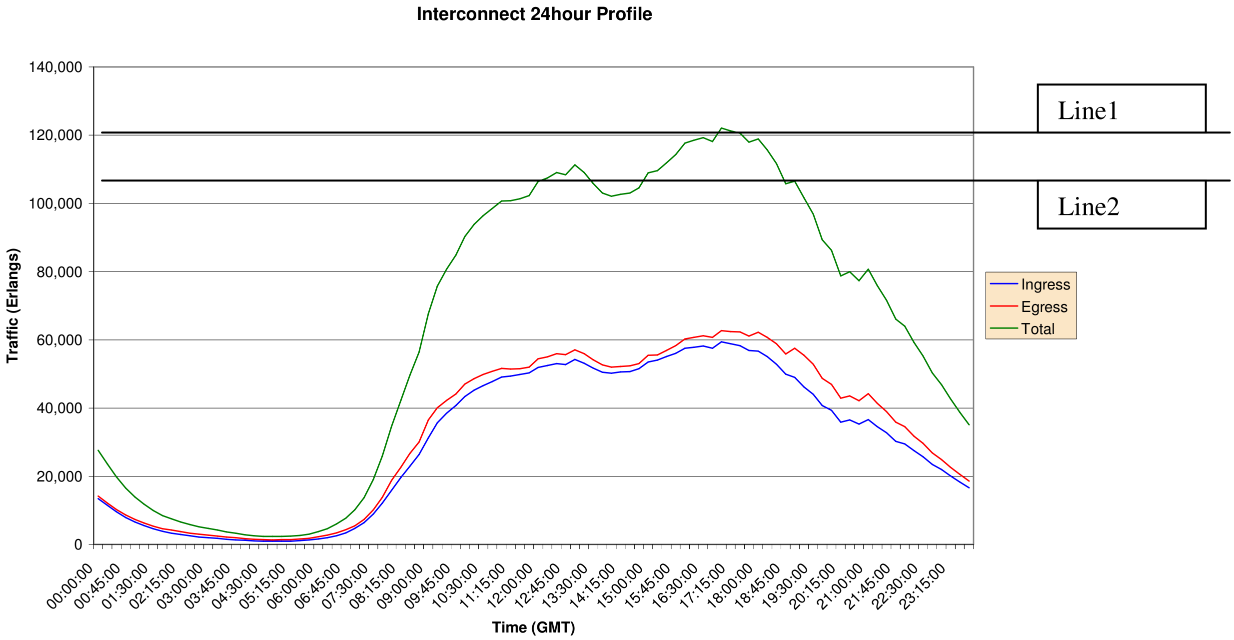
[54] See Kennet, D.M. and Ralph, E., (2007), "Efficient Interconnection Charges and Capacity-Based Pricing", *International Economics and Economic Policy*, 4(2), pages 146,147 and 153.
[55] Ofcom, Consultation Document, para. 6.100.

Figure 6: Profile of demand through typical day



Paying for a set amount of capacity of call termination for all times of day would risk over capacity for the majority of the day. The consequence of having multiple operators acquire capacity on a single network may mean that overall capacity is managed less well. There may be an incentive not to invest in all the capacity that is needed if the returns from that investment are too low. In Figure 6 above, line 1 shows the full capacity requirement to successfully terminate all calls. Line 2 shows the situation where a decision has been made to invest in less capacity and allow some call failures due to congestion. This would lead to more dropped calls and poorer quality of service, similar to the poorer quality of the internet at peak times of day. This is clearly not in the best interest of consumers.

As Ofcom have correctly noted, many costs for a mobile operator are fixed or lumpy in nature and are not impacted by actual calling volumes. For example a base station will cost the same amount if it processes one call or one billion calls. Similarly once it reaches capacity, the operator will need to invest in a second base station. This structure of costs make recovery from traffic difficult as the cost is not directly linked to the level of traffic. In an ideal world all the costs of all network elements would be more explicitly traffic dependent so that a cost model can easily be built up and services can be easily accounted for. As an extra unit is used by a customer, a cost would be incurred and a price would be charged to account for this. This is what happens with mobile call termination. When a customer makes an outbound call, a specific per minute charge is made by the terminating network and therefore the customer can easily be charged a retail price that recovers this cost, which is directly impacted by the usage.

CBC risks making mobile call termination costs similar to other costs, which are lumpy in nature and not 100% dependent on traffic. This may exacerbate the problem that operators have concerning lumpy investments and would risk either over-capacity (with more costs needing to be recovered) or under-capacity (with congestion and poor service quality).

It could also be argued that it is more theoretically correct to set a regulatory criteria in the same unit as used currently in the retail market; i.e. pence per minute. The structure of termination charges today appropriately reflects the way in which retail customers are charged and this is widely understood by them. It may be inappropriate for Ofcom to try and force the retail market to move to another more capacity and subscription based business model, as this is not the aim of mobile termination rate regulation. Moreover, it is simply not feasible to consider charging customers for voice calls on a capacity basis.

Following further detailed work from Ofcom, T-Mobile will be in a better position to analyse whether the costs of moving from the current pence-per-minute pricing structure to this CBC structure outweigh the benefits that we have described above.

Question 6.8: Do you agree with our preliminary view on Mandated Reciprocity? If not, what are the additional factors that we should take into consideration, and why are they relevant to our analysis? In addition what do you expect the costs of a move to this option to be?

A move to mandated reciprocity would lead to substantial negative impacts for UK consumers and the mobile industry, in the same way as a move to LRMC or bill-and-keep would. This is due to the fact that mobile operators are not able to recover their costs of termination through the regulated rate. For more information on these negative impacts, please see our response to Question 6.1 above.

This significant problem is noted by Ofcom in paragraph 6.139 of the consultation and they are correct to state that this will disproportionately impact on mobile operators and their consumers as the fixed termination rate would remain cost orientated whereas the mobile rate would be mandated below efficient costs. In effect this distorts the competition between fixed and mobile operators by forcing mobile customers to subsidise the cost of inbound calling in a way that is not required in the fixed market and is unlikely to be permitted by the Access Directive.

The relevant factor that needs to be a significant part of any regulation of fixed and mobile operators is the differing cost basis of the respective networks particularly with regard to the recovery of access costs. Until the costs of terminating a call on either network are similar, then separate price controls applying a similar methodology but taking into account those differences in underlying costs are the only appropriate remedy.

Question 6.9: Do you agree with our preliminary view of the B&K option? If not, what are the additional factors that we should take into consideration, and why are they relevant to our analysis? In addition what do you expect the costs of a move to this option to be?

T-Mobile believes that a move to a bill-and-keep regulatory regime would lead to substantial negative impacts for the UK consumers and the mobile industry. In our response to the Mobile Sector Assessment in November 2008, we included a detailed assessment of the bill-and-keep approach to Call Termination. This is still relevant now, and we have reproduced the majority of these issues in our response to Question 6.1 above, as they would apply equally for any proposal which meant that mobile operators are not able to recover their costs of termination through the regulated rate. The remaining issues, which apply primarily for bill-and-keep, are reproduced below.

Impact on consumers - Spam

Consumers would be detrimentally affected as bill-and-keep fosters the problem of SPAM/SPIT (spam over internet telephony) because the diffusion of vast amounts of traffic would be nearly cost free. The argument that the called party just should not accept the call in case of a SPIT call is short sighted because the main problem of SPIT is not only the content of the call but also the telephone ringing at every time of the day and night. This would incentivise customers to switch off their phones. In the US where customers are charged for receiving calls and texts, the receipt of unwanted text messages (for which customers must bear the whole cost) has led to significant customer dissatisfaction and litigation. Many US consumers now disable their phone's text functions as a result.

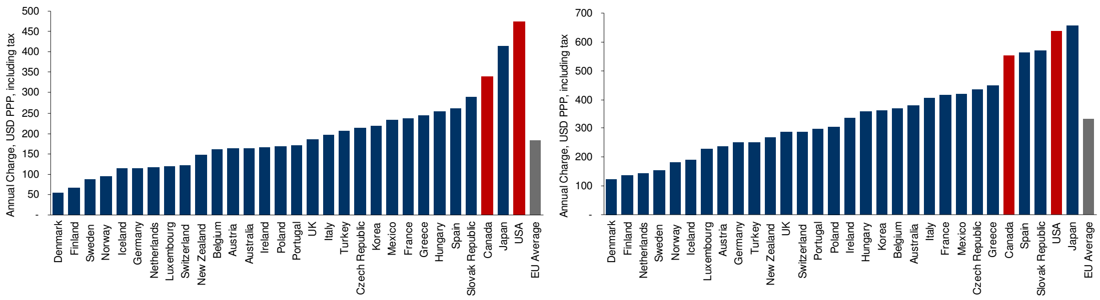
Impact on the market -Affordability of mobile phones

This form of call termination regime would have a negative impact on inclusion and affordability of mobile phones.

It is often argued that a bill-and-keep /RPP regime would lead to lower retail prices and higher usage. But empirical evidence reveals that countries with bill-and-keep systems have higher instead of lower mobile retail prices for all usage profiles compared to the EU average. This is the result when examining how much it would cost to purchase a representative bundle or 'basket' of services in each country, based on OECD data which provides a well-established methodology for analysing international telecommunications price levels. The OECD notes that the use of a standard consumption basket "…is the most efficient and meaningful way to do cross-country comparisons of such telecommunications prices."[56] However, a problem can arise when using the reported prices from this methodology to compare calling party pays ("CPP") and RPP because the methodology calculates prices only for outgoing minutes. Hence it does not accurately reflect the price paid in RPP countries. This issue has been addressed in recent work by GSME, which adjusted the corresponding figures by doubling the basket of minutes for RPP countries in order to facilitate a meaningful comparison between the two different pricing regimes.[57]

The following figures show the results of the OECD's comparison for representative baskets of mobile services bought by a low, medium and high usage customer.

Figure 7: Adjusted OECD basket of low user & medium mobile telephone charges, May 2008[58]



Low usage Medium usage

These comparisons strongly suggest that the US has amongst the most expensive mobile prices in the OECD for low and medium user groups. Even for high-usage customer the US value is slightly above EU average. Notably, for all three usage baskets it is the Nordic (CPP) countries that are the cheapest. The OECD pricing comparisons provide no support for

[56] OECD Communications Outlook 2007, p.211.
57 GSME, GSM Europe's response to the ERG IP interconnection consultation", July 2008.
[58] Adjusted Teligen data, May 2008

arguments that Bill and Keep/RPP systems with no (or low) mobile termination charges would contribute to low mobile retail prices.

We note that some proponents of bill-and-keep, such as WIK[59] have presented figures that suggest that European mobile phone prices (which they proxy by average revenue per minute) are relatively expensive and that European mobile usage is relatively low compared with RPP markets. The data relied upon by WIK contains a number of serious flaws which make it unreliable for policy-making. For example, the data overstates minutes of use in bill-and-keep markets and thus understates average revenue per minute. In particular, on-net calls are double counted as a consequence of being charged to both the caller and the receiver and this problem is exacerbated by allowances for unlimited on-net calls on standard mobile plans being common in the US – a factor unrelated to termination charges. Minutes of use are also inflated in North American by the much more frequent use of recording the minutes charged as opposed to the minutes used, as we do in Europe. Therefore if an operator has per minute billing in the USA, the usage will be recorded in this rounded up format. In Europe, even if the operator charges on a per minute basis, the usage will be recorded from the actual figures. In addition, average European minutes of use per subscriber are lower as a consequence of the presence of many low usage subscribers in Europe while in North America such consumers continue to be excluded from the mobile market. Further, the data also overstates revenues in CPP markets because termination charges are effectively double-counted (i.e. by being recorded by both the operator receiving the termination revenue as well as by operators in their off-net call revenues which include a component that must ultimately be paid to other operators as termination payments). The problems in the data imply that it cannot be reliably stated that the difference in termination charge levels results in higher minutes of use per capita in North America than in Europe.[60]

Impact on network efficiency and investment

Probably the most substantial drawback of a bill-and-keep regime from T-Mobile's perspective is that it would not allow T-Mobile to recover the efficiently incurred network costs for terminating the calls from a key service (the provision of termination) which causes those costs to be incurred.

Bill-and-keep would also induce technical inefficiencies and leads to free riding problems instead of efficient network usage (so called "hot potato routing") – there would be an incentive for all parties to hand over calls at the earliest possible opportunity rather than at the most efficient point. This hot potato routing problem results from parties not being compensated for the costs they incur for transmitting and receiving calls. The operators will then only focus on minimizing their own costs, irrespective of the fact that their actions may lead to the routing of the call in fact being more costly overall. In the current system, with operators compensated for these costs, this incentive to minimize inefficiently costs does not exist.

Give the lack of traffic symmetry between the interconnection partners in the UK (network size and structure, costs, traffic), bill-and-keep would lead to massive market distortions and reduce incentives for network investments. Larger networks would be at a disadvantage because they bear higher network costs than small networks. Small operators could free-ride on the larger operators' networks. Therefore bill-and-keep would additionally lead to an adverse selection problem.

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[59] WIK prepared a report for the European Commission on the future of IP Interconnection which favoured a move to Bill and Keep.

[60] Indeed, adjustments to remove some of the problems with the data shows that minutes of use per capita in Canada are likely to be significantly below the European average.

There are also additional arbitrage problems that would need to be considered when setting up a bill-and-keep style arrangement. If operators in other countries maintain existing call termination arrangements arbitrage opportunities will arise as a result of the existence of a different arrangement in the UK.

Bill-and-keep would also result in incentives for network operators to hand over the traffic to another network as soon as possible because usage is for free and transport over distance is not compensated. Regulatory obliged bill-and-keep would also lead to adverse selection in the context of quality of service. As network operators would not get paid for the network usage, higher costs for better quality of service could not be recovered. Hence, the incentive to invest in better quality declines.

For all of the above reasons, bill-and-keep is contrary to the objectives laid down in Art 8 (2) of the Framework Directive, which requires NRAs to promote competition by, amongst other things, ensuring that all users derive maximum benefit in terms of choice, price and quality of service, that there is no distortion or restriction of competition, and that efficient investment in infrastructure is encouraged.