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IN THE COMPETITION APPEAL TRIBUNAL

Case Nos. 1151/3/3/10 1168/3/3/10

1169/3/3/10

Victoria House, Bloomsbury Place, London WC1A 2EB

13 April 2011

Before:

MARCUS SMITH QC (Chairman)

PETER CLAYTON
PROFESSOR PAUL STONEMAN

Sitting as a Tribunal in England and Wales

BETWEEN:

BRITISH TELECOMMUNICATIONS PLC EVERYTHING EVERYWHERE LIMITED

Appellants

-v -

OFFICE OF COMMUNICATIONS

Respondent

EVERYTHING EVERYWHERE LIMITED VODAFONE LIMITED TELEFONICA O2 UK LIMITED HUTCHISON 3G UK LIMITED

Interveners (Case 1151)

BRITISH TELECOMMUNICATIONS PLC
EVERYTHING EVERYWHERE LIMITED
VODAFONE LIMITED
TELEFONICA O2 UK LIMITED
HUTCHISON 3G UK LIMITED
OPAL TELECOM LTD
CABLE & WIRELESS UK

Interveners (Cases 1168 and 1169)

HEARING DAY SEVEN

APPEARANCES

- Mr. Graham Read QC, Miss Sarah Lee and Mr. Richard Eshwege (instructed by BT Legal) appeared for the Appellant.
- Miss Kassie Smith and Mr. Philip Woolfe (instructed by Regulatory Counsel, Everything Everywhere Limited) appeared for Everything Everywhere Limited
- Mr. Javan Herberg QC and Mr. Mark Vinall (instructed by the Office of Communications) appeared for the Respondent.
- Mr. Tim Ward QC (instructed by Herbert Smith LLP) appeared for the Intervener Vodafone Limited.
- Mr. Robert O'Donoghue (instructed by Telefónica O2 Limited) appeared for the Intervener Telefónica O2 Limited.

The Intervener Cable & Wireless UK was represented by internal counsel.

The Intervener Hutchison 3G UK Limited was represented by internal counsel.

The Opal Telecom Ltd did not attend and was not represented.

1	THE	CHAIRMAN: Mr. Herberg?
2		Dr. DANIEL JAMES HARRY MALDOOM, Recalled
3		Cross-examined by Mr. HERBERG, Continued
4	Q	Good morning, sir. Good morning, Dr. Maldoom.
5	A	Good morning.
6	Q	Can I start off this morning by taking you back to your seventh statement to para. 47,
7		bundle C1, tab 14. In this paragraph, Dr. Maldoom, you set out four assumptions which
8		you say have to be simultaneously correct for Ofcom's conclusion to follow, that is right, is
9		it not?
10	A	Yes, that's right.
11	Q	That is what you are doing?
12	A	Yes, exactly.
13	Q	Then you say at para. 49 that these are a "sequence of extreme assumptions". What I would
14		like to do is work our way through these four assumptions under para. 47 and see what is
15		really involved in them if we can?
16	A	Sure.
17	Q	The first assumption is that retail prices do not fall a sufficient amount despite the
18		incentives that the NCCNs should create for lower prices. So this is really t he direct effect,
19		is it not?
20	A	Indeed, yes, it is whether the price falls to – whether we get a full reduction or we only get a
21		partial reduction.
22	Q	But this assumption does not say what a sufficient amount is, does it? A sufficient amount
23		in one sense is simply question begging, is it not?
24	A	Yes, it does not say what the amount is. I think we have some points where we know what
25		is going on, I think there is general agreement that if we have a full price reduction then we
26		do not really need to go any further down the list.
27	Q	That is the clear scenario, but once we get above that we are into uncertainty, are we not?
28	A	We are into uncertainty. I think in some ways actually it might be helpful just to look again
29		at my figure 2, Mr. Myers' figure 8. If we just agree to put away the rulers on this one
30		today I think this is a very helpful summary in a way. It might be useful to come back to
31		this at a few points because I think this really shows what para. 47 is getting at.
32	Q	If you could focus on 47a first, by all means explain by relevance to figure 8?
33	A	Yes, we look at this diagram the issue is that the relative sizes, particularly the indirect
34		effect, and the direct effect relative to the MTPE determine – we haven't got here shown,

1 and it is perhaps unfortunate, perhaps I should have added it, a sort of total net effect that 2 there would be a break even point ----3 Q Yes? 4 -- below which there would be a net benefit, above which there would not be. A 5 Q And that would be somewhere between 12.5ppm and the current price? 6 Α Indeed. So then the question is about how that is affected by the assumption, so I think 7 when I am talking about "sufficient" what I have in mind is that point. 8 Q Yes, I see that, but it is therefore a bit unfair certainly to describe 47a as an "extreme 9 assumption", it is a pretty neutral assumption because of the word "sufficient" begs the 10 question as to how far you go or where you are in the line? 11 Yes, I think what I subsequently did is try to flush out what is the case. There is another A 12 way of looking at this which actually might be more helpful. What we could do actually is 13 a little bit of what we were doing at the end of yesterday and actually say: "What if retail 14 prices only fell a little bit?" because we have an unambiguous conclusion from Ofcom 15 which is that Ofcom says that in that case there is an adverse welfare effect. I think that is 16 quite useful to focus on because then we do not even need to ask this question of "What is a sufficient amount?" We can ask the question for a small price change of full ** price 17 18 decline: "what is necessary to achieve Ofcom's conclusion?" That is quite helpful and I 19 think you can see that again from figure 2. We will expand on this in a moment I am sure 20 from your questions; you can see that it will be to do with what is going on at the current 21 price point and how we interpret these C and B dimensions, whatever they might be. 22 Q I do not want to cut off your answer, but A is really dealing with the direct effect, is it not? 23 It is where you need to get to on the direct effect so that the welfare calculus comes out with 24 a positive answer? 25 No, no, it's broader than that. It is not just about the direct effect, it is to do with the entire A 26 trade-off. Again, refer back to this figure 2, because we can see that as prices fall then all of 27 these effects are being modulated by the price decline. Again, it's something we have 28 discussed. We discussed the direct effect at some length yesterday, but equally the indirect 29 effect and even the MTPE are potentially affected by ----30 Of course, I phrased that question badly. It is where the retail price, as it were, comes down Q 31 to on the direct effect, that that then engages the welfare analysis that brings in all the 32 effects, the indirect effects, and so on?

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Indeed, absolutely, I agree.

- Just looking at the way you have the assumptions in para.47, and I quite understand your wider case on the level of the fall. What it is positing is that you need to have a sufficient they must fall a sufficient amount, despite the intentions that the NCCNs should create lower prices.
- 5 A What I had in mind when I wrote this was essentially what you might call a sequence of tests, if you can think of it that way.
- 7 Q Indeed.
- A So if we are below this point where there is a break-even, essentially we don't need to say anything more. In a sense, what we should do is to concentrate on the other cases which I think are in dispute, which would be the cases where we don't achieve a sufficient price decline. Obviously Professor Dobbs will have views about this from his work, what that decline is.
- 13 Q I understand that.
- A My focus was really on the counterfactual case that that wasn't achieved, and actually trying to unpick what had to be so to get Ofcom's conclusion in that case, which is really the other points.
- 17 Q Can I come on to (b) then. The second extreme assumption is that:
 - "a welfare standard is adopted that focuses on consumer surplus almost to the exclusion of profits (a minor reweighting towards consumer surplus would not be sufficient for Ofcom's conclusions)."
- 21 A Yes.

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- Q This is not really an assumption at all, is it? It mischaracterises an assumption. It is, certainly on Ofcom's case, simply an issue of law as to what is the correct, or what is the permitted, welfare analysis. That is fair, is it not?
 - I wouldn't like to deal with issues of law, but I think there are economic principles, quite fundamental economic principles involved with this, where I think there are important points to be made. I think we can actually simplify this even, which might actually cut through some of this. I think the focus of this is the service provider profits. I have written this as talking about all profits here and there are obviously issues about profits of OCPs to the extent that the waterbed is incomplete and there are some profits there that are a source that might go towards paying for termination if there is a change there. Let's park that for one moment. There's the TCP issue about whether there might be a retention by BT, which again I think is it has been discussed at some length. I think Ofcom is saying that they expect replicability of these tariffs to some degree. There is a debate to be had about that,

- but again that is not that significant an issue. I think the essence of this is really the service provider profits, which is what we were talking about yesterday, where that fits into a consumer welfare analysis.
 - Q Can I just take that stage by stage. The first two sets of profits that you referred to, the MNO profits potentially and BT's profits, you would accept that on Ofcom's consumer welfare approach, which you do not agree with, but on their approach those two are both disregarded, are they not?
- 8 A Yes, they are. I think that is rather incidental. I can see that ----
- 9 Q I understand it is incidental. I am just taking it step by step. Those are disregarded.
- 10 A Absolutely.

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- 11 Q That is why you say it is more important to focus on the SP profits. You understand that
 12 Ofcom's case on the SP profits is that the SP profits have been taken into account but given
 13 less weight.
- 14 A Okay, can I just pick up one point on the OCP profits before we move on, just to finish that?
- 15 Q Of course, yes.
- 16 I think it is quite – in many ways I agree with Ofcom here, that I think it is quite sensible, Α 17 applying their welfare standard, to say, "Actually we will not look at OCP and TCP profits". 18 I don't really have a big disagreement on that. However, I think I would focus on OCP 19 profits to some degree, because if we need to look at cases where the waterbed is 20 incomplete we can't forget about them, because if we come to these pipe diagrams you see 21 that they are a potential source of revenue in cases of partial price reduction. Yes, they 22 probably shouldn't be in the objectives, but on the other hand they need to be in the 23 analysis. Is that okay, are we able to park those on that basis and return to your original 24 question?
- 25 Q Yes.

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A So back to service provider profits. I think the issue here is that, as I understand it, and it has been quite difficult to understand I have to say because it is a matter of unpicking and trying to understand what the implicit assumptions are in Ofcom's analysis, my understanding is that service provider profits are getting an extremely low weight here and the question is what pass through there is from any revenues that service providers might get in the partial reduction scenario, pass through into caller benefits essentially in Ofcom's way of looking at it. I think that way of looking at it is very problematic. I do not want to address the legal points; I purely want to address the economic ones. My worry here is actually a number of things. We had a brief discussion yesterday about service provider

competition and I think really we do not have any premise for presuming that in this case service provider competition is weak. Secondly, even if it were there is an innovation question about any revenues that flow to these, you could have a monopoly SP who potentially creates a new service, they are a monopolist as a result of creating a new service, and they may only do that if they get revenue, and particularly if they get a volume of calls to support that service. So it seems to me that there are actually a whole bunch of rather important issues around the service provider profit.

I think there is also a broader problem here as well which is what you might call the 'opening of the service provider box' and I think this is getting a little closer to the legal points, but it is still an economic one. What essentially has happened here, as I understand it, is that Ofcom has opened the service provider box to look at what service providers would do with any money that they received, and then made some value judgments about how worthy that is in terms of economic welfare. I think that is a very difficult thing to do because I think the service provider is essentially a consumer of a telecom service here, that they are using this platform to basically pass through services to customers, and we generally do not unpack a consumer. We might have a consumer who is buying, just a company buying mobile phone services, we would not expect to unpack that company and say: "What is it doing, is it a monopolist in its product market, what is the market power in that market?" Our mineral water bottle, is that actually supplied by a monopolist or in a competitive market? One would not expect that analysis to form part of a regulatory analysis or a dispute resolution analysis by a telecoms' regulator, because essentially that is looking at conditions of competition amongst consumers in those consumers end markets.

- Q Dr. Maldoom, I understand you have had a chance to think about the evidence of yesterday, but I am going to ask you to focus quite closely on what I am asking you. I am going to resist the urge to go back over matters we discussed yesterday, I would like you to listen to my questions and try and answer the questions I am asking rather than going over ----
- 27 A Okay, I'll do my best ----
- Q I am not trying to cut you off, of course, if you feel you need to qualify an answer by referring to something?
- 30 A Okay.

- 31 | Q I want to take you back to where we were on assumption b on para. 47?
- 32 A Yes.
- And what we have there is effectively a proposition that may be a proposition of law or it may be a proposition which you have an economic view on which is that for Ofcom's

1 conclusions to hold you say a welfare standard is adopted that focuses on consumer surplus 2 almost to the exclusion of profits. One might almost say completely to the exclusion of 3 profit? 4 To be fair I don't believe that's what Ofcom's does. A 5 O Is that because you say SPs are being taken into account with some weight, and that is their 6 profits that are being valued? 7 A My problem is that obviously there isn't really any transparency here to know exactly what 8 is being done, I feel, but as I understand it service provider profits seem to be there with 9 some weight, okay? 10 Q Yes? 11 But when I look at the conclusion that is reached I can only conclude that that weight must Α be very small for reasons that I expand in the text – I will pause at that point. 12 13 The reason that Ofcom have included them is because they are treating service providers as Q 14 consumers? 15 No, I don't think they are, because if they were a consumer they would be an unopened box A 16 and then one would talk about consumer surplus. 17 Q They can be a consumer of hosting services, can they not? 18 Α Well they are indeed a consumer of hosting services, yes. 19 Let me move then on to proposition "c", or assumption "c". This is the waterbed effect, the Q 20 money going to the MNOs in other words. The waterbed effect is strong relative to the pass 21 through of additional revenues to SPs into consumer benefits to enhance services? 22 A Yes. 23 O So that the net effect of the revenue flow triggered by the higher termination charges is to 24 transfer consumer benefit into somebody's profits? 25 Yes. A 26 O If Ofcom is right, and I know you dispute this, but if Ofcom were right – this is the debate 27 we had yesterday – about the lack of relevant competition between service providers, 28 meaning that service providers will retain most of their benefits, and therefore low value 29 them on Ofcom's calculus, then the waterbed would not have to be a very strong effect to 30 counter, it would not take much to make it strong in relative terms -this is what you have 31 said here – if the assumptions are correct. Is that right? 32 Can I just put your assumption slightly more precisely. I agree with what you are saying, A 33 but I think that what you want to say here is that if we are discounting those profits of the 34 service provider I think that is implicit on your construct ----

- Q Or giving them a low weight?
- Yes, exactly. I think there is a tension, as it were, between the waterbed effect, the size of that and the size of the service provider, the size of the weight one gives service providers, I think that is what these flow diagrams were intending to show. I will not do this now unless you think it useful but I think you can also see that again on this figure 2 in my report.
 - No, I will stick, if I may, with the assumptions for now, because it is really the framework I am understanding. The last extreme assumption is that the waterbed effect is strong enough, this is in absolute terms, so that any creation of profit at the expense of consumer surplus is large enough to outweigh the direct effect including all sources of external benefit?
- 11 A Yes.

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- Q Can I put this to you in slightly different terms and see if you agree because I had a little trouble understanding the calculus at "d". In other words, what has to be strong enough is the negative effect of MNOs putting up their other 080 prices, that is the creation of profit at the expense of consumer surplus, is it not? That is MNOs waterbedding, putting up their prices on other 080 prices?
 - I think it is probably this term "absolute" that is confusing. The reason it was there I was just trying to distinguish between the point in "c" which, as you rightly said, it is an issue about the relative strength in the waterbed and the weight that is given to service provider profits. I was putting that as a relative point, but obviously there is also an absolute point. The easiest way to see that is essentially figure 3 on the opposing page. What I was trying to get at, the idea here was that what has to happen is you have to take some consumer surplus and destroy it by essentially turning it into service provider profit. I think we agree that that is essentially what has to happen within the Ofcom model from the way that you phrase your questions. I think you can see from that diagram we have kind of got two issues which are in terms of any revenue flow-through into service providers there is a question of where that revenue comes from and whether relatively it is coming from mobile customers or whether it is coming from profits, which is a waterbed issue. Then there is a question of where that goes to, whether that service provider profits, TCP profits, whatever
- Q Yes.
- A -- the sort of issue of how large those effects are in absolute terms as well because at some point we would need to come back and compare this against the direct effect, which I have sort of parked for now.

- Q Well is that not what you seem to be doing in "d", this is what slightly puzzled me. You are comparing on the one hand the mobile tariff package effect, the creation of profit at the expense of consumer surplus?
- 4 A Yes.
- On the other hand you are saying it has to be large enough to outweigh the direct effect, including all sources of external benefit. So you are not at that point comparing it against the indirect effect, you are comparing it against the direct effect?
- A It might have been more helpful to put it that way, yes. That is a sufficient condition but not a necessary one.
- 10 Q It is a very easy test to satisfy potentially?
- 11 | A Indeed ----
- 12 | Q (Both speaking at once) rather harder test
- 13 A ... by putting it that way.
- 14 Q No, indeed.

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- 15 A What I was trying to get at this is not a very easy point to convey succinctly.
- 16 Q I think I understand the point.
- A Essentially what those flow diagrams are doing, which deal with essentially point (b) and
 (c) the flow diagrams are looking at what you might call a pump within the Ofcom model
 that takes consumer surplus and turns it into service provider profit. We can analyse that
 pump because under Ofcom's analysis that pump must create a net disbenefit, which I think
 we are all agreed at. Then the question obviously is, well, that pump itself has to be
 sufficiently big that it can outweigh the direct effect, and then we are back into questions
 about how large price declines are, and so on.
 - And as you fairly expressed your assumption four, the waterbed effect has to be strong enough to, as it were, for the pump to work. What I would suggest to you is that again this is, as it were, magnificently question begging, "strong enough" does not tell you the answer. "Strong enough" puts the proposition. What cannot be said is that this is an extreme assumption from Ofcom's point of view without completely separate further reasoning.
 - A Well, I think you can. What I'm trying to do is to pose the question of what would have to be true for Ofcom's conclusion to follow. I think we are largely agreed on the framework from what you've just discussed. I think that framework then leads you to be able to ask that question, because you know that this effect by which consumer surplus is transferred into profit, which is then not counted with full weight within the Ofcom framework. That process has to be sufficiently significant, and that puts certain restrictions on what has to be

true about the weight provided to service provider interests and the waterbed effect – okay. This is what I was getting by putting Xs and Ys on these flow diagrams.

- THE CHAIRMAN: Dr. Maldoom, it does seem, in terms of difference between your approach and Ofcom, you are placing greater weight on service provider profit than you think Ofcom is. Would it be fair to say that is a criticism you are making of the Ofcom approach?
- A No, that's absolutely there is a difference in the welfare standard that is being adopted here, which I think has only been flushed out as a result of the dialogue that has occurred which you see in the respective reports backwards and forwards. I think it is quite clear that service providers are being downweighted. I think the easiest way to understand that issue is again, unfortunately, in terms of this figure 2. Essentially, what is happening is that a small weight is being applied by Ofcom to the indirect effect because that's basically the pass-through of any revenue. What I am saying, however, and both myself and Professor Dobbs started from a slightly different position which is that we considered that the service provider should be treated as a customer within a box. We had no way of discounting them or lowering their value within analysis because we didn't see any objective reason for doing that. So we proceeded on a neutral basis that a service provider should be treated, if they were buying services to provide an NTS number they should receive the same weight in the welfare analysis as if they were buying, say, a mobile phone service That should receive equal weight.
- Q That is puzzling me slightly, and it may be that you can assist me. Perhaps the witness could have bundle 22, and we can look at tab 4 there. That might assist. What one has here is simply the Ofcom National Telephone Numbering Plan, which I am sure you are familiar with?
- 24 A Yes.

- 25 Q Then could you turn to p.13. Yu will see there the description of the significance of various non-geographic numbers.
- 27 A Yes.
- 28 Q Including, but not exclusively, the numbers at issue here.
- 29 A Yes.
 - Q Looking at the numbers that are at issue here, 080, 0845, 0870, is it not right that the profit flowing to the service providers is actually quite low when compared to, for instance, the 0871 numbers or the 090 numbers, which envisage much higher rates being paid by the caller which obviously can be distributed, depending on how the chain operates down the line, where one can see the revenue might be of importance to the service provider, whereas

in the numbers we are looking at here, I thought, and you no doubt will correct me if that thought is wrong, that the point was that the customer, according to the label of the description of these numbers, was, when calling, being assured that the rate would be either the local rate or the national rate, and that was what the customer could expect to pay. On that basis though the amount of revenue flowing down towards the SP is surely not going to be that significant.

- A I think the clearest example is just simply to take 080. Essentially there is a payment. Obviously the NCCNs could change things in that that payment would get smaller. If I am offering a freephone number on this bottle of water, then the amount that I would have to pay out could potentially be reduced as a result of the NCCNs. So I think you are absolutely right, that essentially there is no magic in zero here. There might be payments as well as receipts here.
- Q The point I think I am putting, and I think you are agreeing, is when one is looking at the intention behind these different codings, the profit going to the service provider one can see as being intended to be of significance in, let us say, the 090 and 091 numbers. The intention is rather less significant, as I think you have just agreed, on 080 where the revenue flows are precisely the other way round. The aim is that the call is free to the caller, and that is anyone is paying it is the service provider?
- A Yes, that's the situation as we find it. I think what this tells you about the weight of different parties' though I think this is still important. Even on 080, the intention in the numbering plan is clearly that there is a predictability in retail prices. This is a complicated system with many parties involved, but the effect of that is essentially to create it's like a shop front, essentially, for the service provider in that that retail price is controllable. If they don't want free they've got these other ranges all the way up to premium rate potentially, depending on what exactly it wants to do. Essentially, this sets out a kind of selling mechanism for the service provider. I think, when it comes to the analysis, we also have to look at, it's not just the revenue going to the service provider, it's volume effects for the service provider. There are other issues. I just took as my starting point, that I felt that those should I had no reason to give those any different weight from anybody else within the system, the caller, say.
- Q Disregarding volume benefits, I quite see the point there, but simply focusing again on revenue, would you agree with this, that the situation we have got here is where revenue appears to be being generated from callers by MNOs in a manner that is inconsistent with the designation provided in the national telephone numbering plan for those numbers?

Ofcom's policy preference is very much that that revenue not be generated, but if, contrary to the intention, that revenue is generated, it should flow down through to the SPs. That is very much the second best alternative – do you agree with that?

- I don't entirely. I think the way that you put this, that analysis is correct. I think the conclusion is one I would not necessarily agree with. What we have here, this morning we've been talking primarily about the case of partial price reductions, but I think we have to remember that certainly my view, BT's view, is that we think there would be a substantial price reduction as a result of this. I think it's almost worth thinking about the NCCNs as being what one might call a market solution to this problem that does not require regulatory intervention. You can almost even think about it as actually being a cost that the originator would have to face for harming the service provider, so it's almost like a polluter pays kind of principle. What it's trying to do is try to tie together interests of OCPs and essentially SPs at the end of the line and actually produce a more efficient outcome by producing more aligned incentives. I think that's just an entirely different approach to regulating. Ofcom's got proposals out to do that. There is a big question here as to whether it is better to do it through an emergent kind of market of market based solution where you use a more sophisticated vertical contracting regime versus doing it through a regulatory solution. There's no reason why those are even exclusive. There may still be residual incentive problems that might remain even if regulated in certain respects. Then there may even be a role for something like this. Sorry, that's a very general answer.
- 21 THE CHAIRMAN: Thank you very much. I am sorry for interrupting you, Mr. Herberg.
 - MR. HERBERG: Not at all, sir, it was very helpful. (After a pause) I am going to resist the opportunity to put another question on that topic, and move on to ask you about a different subject, which is the proper welfare standards?
- 25 A Yes.

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- Q I am not going to ask you in detail about this, partly because it may be a question of law, and secondly, because Professor Dobbs deals with that in great detail. You would obviously accept that the proper interpretation of Ofcom's statutory duties under the Communications Act is a matter of law?
- 30 A It is, I do not want to address legal points.
- Q Let me take you perhaps to a more specific question. Paragraph 157 of your seventh statement, tab 14, C1?
- 33 | A Yes.

- Q You say there: "... it is not appropriate to give predominant regard to consumer surplus, as Mr. Myers proposes." You are saying this, if I can put it plainly, from an economic standpoint is this fair you would say it is not good economics to take this approach. Is that a fair way of putting it?
- A It is not good economics, and I think it also causes significant problems in terms of the outcome one gets in looking at this case. I think it really goes to this point about overconsumption, which is a term which was used in the simplifying NGNs consultation. It is pretty difficult to understand what the concept of over consumption means unless one has some idea of resource cost which one balances consumer surplus. It is a point which I make a number of times throughout here. This is what concerns me, and that is in a sense that I think this is good economics.
- Q Some of the reasons you give, you go on to say:

"Consumers' interests would be best served by a zero price for those goods and services they consume. However, this would not be economically efficient, as no regard would be given to the resource costs of meeting their demands."

And so forth. One obvious response to that in this case is that that is simply not a conceivable scenario at all, is it, because Principle 1 prevents that from happening. Principle 1 ensures that the mobile operators receive their costs of ----

- A That was a general comment to identify this. We can make it specific within this context of the case if you want. Just to show you the issue. If we go back to this over consumption point, I think we discussed yesterday in the whole tariff rebalancing issue, and I think we agreed that there was an issue where we might have NTS prices too high, and correspondingly we might then have other mobile services too low, to a small degree they may be too low.
- Q And that is where there is agreement between Ofcom and you ----
- 26 A Indeed.

- 27 | Q -- and Ofcom reflects that by placing greater weight on the direct effect?
 - A Yes. What I would say is that that point about over consumption of those mobile services well let us take something which looks superficially crazy for a minute; I mean let us just suppose that we pushed up the price of mobile services without doing anything else. If we genuinely believe that that tariff rebalancing problem is there is that an improvement or is that not an improvement? This is a good question to ask because I think it really flushes out the issue. I think what I would say would be that actually if you did that then what matters is obviously what you do with the money and in this case that would go to SPs which I say

1 should not receive any less weight. So in my sense I see a resource cost here which is that 2 actually resources are not available to the service provider as a result of this, this over 3 consumption point. So although I put this quite generally I think it actually has specific 4 application here. 5 Q That is you slightly changing an answer you gave yesterday, is it not? 6 Α Which part? If you want to put that to me again? 7 O We looked yesterday, and we had a discussion of what happens if you, as it were, pull out 8 of Mr. Reid's diagram, for example, the mobile tariff package effect, the bad part of it, as it 9 were? 10 Α Yes. 11 And you just look on its own about the utility or otherwise of a rise in MNO prices, and I Q 12 think we reached the position that you accepted then that on its own, shorn of any 13 counterbalance, rebalancing, that would not be viewed as a good thing in welfare terms – 14 unless it was actually being priced at a below cost price, for example, some real distorting 15 effect? 16 Α Yes. 17 Q On its own it would not be a good effect; you do accept that? 18 Α No, that is absolutely the case. My point is that actually there is a resource cost here, it is 19 just that it is something that is very hidden away within the mechanics of the system, 20 because these flows that go through the system essentially mean that at the end of the day 21 there is somebody who pays for that which in this case is a service provider. So I think we 22 cannot just pretend that the resource cost of that is zero here. 23 Q At para. 166 you argue there that: 24 "It is a leap indeed to argue that Ofcom's statutory objective implies that Ofcom 25 must take a pure consumer welfare standard that gives no regard whatsoever to 26 producer interests. Ofcom's predominant duty is to 'further the interests of citizens 27 in relation to communications matters'. Citizens may be shareholders in 28 producers and operators, so Section 3(2) does not give carte blanche to consider 29 only consumer interests." 30 Now, will you accept that this is effectively an issue of law that you are addressing here – 31 that does not mean that you cannot have a view on it, but this is an issue of law for the

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I think that is right. When I look at s. 3(1) I do not want to put any legal interpretation on

this but there is an issue about protecting consumers, protecting competition, also ensuring

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Tribunal, is it not?

1 that there is availability of services, that there are incentives for investment and innovation 2 because obviously telecoms is a rather unusual industry in the sense that every other bit of 3 the modern economy revolves around it, so actually ensuring that those services are there 4 and are functioning properly has a priority above and beyond certain other things. 5 O Indeed, and you then go on in the second half of that paragraph: 6 "Furthermore, a short-run focus on consumer surplus would mean that 'cheaper is 7 always better' without any regard to resource costs." 8 So that is effectively ----9 A Well that is what we just discussed, yes. 10 O -- the point you are making there. In relation to that, it is not entirely clear from that 11 paragraph, are you suggesting to the Tribunal that Ofcom, in determining these disputes has 12 adopted a short run focus to consumer surplus? 13 I think so. I hadn't really thought about that to be honest when I was writing this, but as Α 14 you put the question to me I think that is probably the case because again it is this weighting 15 that is supplied to service providers because there is a question here about new services, 16 quality improvements and innovation which are obviously things which only come over a 17 longer term, which are separate from any questions about short run price competition, 18 service competition amongst service providers, which obviously those are effects which can 19 have very large welfare consequences which can be multiplicative. You give a service 20 provider £1 and it produces £1 million of consumer surplus from a new product. That is 21 obviously enormously uncertain but again it goes back to this question of why I think you 22 should not unpack the service provider box because there are all these possible benefits in 23 there and I don't think we should unpack it and say: "No, we will not consider those", we 24 could just leave that as a sort of 'unknowable' as far as I am concerned because of these 25 innovation benefits, because of these issues about not truly knowing what service providers 26 will do with that service. 27 Can I put some considerations to you that means that I suggest to you that Ofcom clearly Q 28 was not simply adopting a short run focus on consumer surplus? 29 A Yes. 30 Q First, there is the point I have already referred to which is the formulation of Principle 1? 31 Α Yes. 32 O Principle 1 as a test is something which does not simply focus on short run consumer

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surplus, is it not?

A No, that is essentially a viability test. You are absolutely right, I mean it is quite a low standard so I am not sure it really gets to any ----

- Q Secondly, when considering the indirect effect, Ofcom was considering the benefits of investment in service quality was it not, to the extent that it was putting full weight on pass through by service providers to the customers through improvement in quality, that shows a perspective of considering benefit of investment in service quality, is it not? It places full weight on it?
- 8 A My problem here is not really knowing how much weight has been given. What I believe is 9 the case is that it has actually only been given rather low weight ----
 - Q If I can just interrupt you there, Ofcom's case, would you accept, is that placed full weight full equal weight on benefits that were passed through from service providers to their customers?
 - A Okay, but as I understand it only part I mean, essentially what's happening with the Ofcom analysis is part of the revenue, only part of the revenue that's going to service providers gets counted, okay. Now, some of that might be taking in profits. In the short run those profits, as I understand it, are discounted from the Ofcom analysis. What if those profits are a spur to innovation? They would be discounted, as I understand this.
 - Is that not why you actually do need to unpack the service provider box, as it were, to see if the profits are going through investments for callers, for improving service quality for callers, whether there is that mechanism there for the profits to be used in that way; or whether it is more likely that they are going to be put in the pocket of the service provider, gone into shareholders' returns, or going into the rest of their business, because often these service providers have main businesses and this is some adjunct to it. That is precisely what Ofcom is doing, is it not? It is unpacking the box to look at, not at short run consumer issues, but to look at whether there is genuine investment taking place, potential for it?
 - A I just cannot see how that can be done, practically. And I think if Ofcom addressed that every time a business bought a telecom service, I think Ofcom would be a very busy body indeed.
 - Well, it clearly does not do it at that level of granularity, but when it is looking at what weight to give to the indirect effect monies, it is looking to see whether there is a plausible mechanism for SP profits, which might otherwise just go in shareholders' returns, to be fed through to callers. And, if there is that mechanism, then they will be fully valued. If Ofcom is right in its conclusion that the state of competition in that market means that significant sums will not be passed through, then Ofcom on its own consumer surplus test, is taking the

judgment that they should not be given full weight, and that is a judgment which is not a short run consumer surplus judgment, it is taking into account very definite, very specifically investment in service quality.

Yes. I mean, there were quite a few points there. My starting point with this is that I am A deeply troubled by the apparent small weight that service providers are given, and I frankly find it difficult to reconcile an approach which just says, "Well, we think that actually innovation an improvement by service providers is important" with giving them a small weight, and that has to be really quite a small weight which was, you know, we started with this question of trying to unpick what the implicit assumptions are, and to get to Ofcom's conclusions, they have to be given small weight. I just find that very difficult to reconcile with the proposition that those service providers, if they improve quality, if they come in with a new service, that is considered. Can I just say I think this is a highly material effect, because we're really here talking about a situation where, if I'm a service provider wanting to push out a service over mobile, primarily, and say I've got some information which I want to market up by making available through a voice service over mobile, then really we can see, I think, what problems there are; and it may be that that service is entirely unviable. So, I think this question of innovation and what effects there might be on the services that are made available as a result of changes, whether they are regulatory or induced by the NCCNs I think is a material point.

PROFESSOR STONEMAN: Can I just interrupt? Standing back from the detail.

A Yes.

- Q It sounds to me as if you are arguing yourself into a position whereby a world in which the price is not 12.5p but, shall we say, somewhere between 12.5p and the current price, is better than the world where the price is 12.5p because, if the price is above 12.5p there is a revenue flow to go to the SPs. So, in fact, aiming for 12.5p is in fact aiming for a second best position because it would be better to have an intermediate price. Would that be consistent with what you are saying?
- A No, not in, no, it wouldn't. I mean, there are two issues. There's also the benefit that the SP gets from the price being more predictable, the retail price. So, again, it's second best (I think "second best" is a good term to use here). I mean that situation is clearly second best for the SP as well. If the NCCNs are not successful in producing a full reduction, then as an SP what you get is a sort of mixed outcome where you get better retail pricing. So, if I take the example of this, you know, hypothetical SP wanting to offer a service primarily over a mobile, clearly that might well tip the balance for them; but on the other hand they

- probably wouldn't get everything that they wanted, they would only get part of it. But then they would receive some monetary compensation. So, that may well be a second best outcome. But, there are limitations on what can be achieved here, because of the vertical relationships and the difficulty of creating a line of incentives.
- MR. HERBERG: Thank you, Professor Maldoom. Can I ask you about another matter, which is the treatment of volume effect within the direct/indirect effect?
- 7 A Yes.
- 8 Q And, can I ask you to turn to s.2.10 of your seventh report, and that is at p.21, 2.10, "The call volume effect for SPs and external benefits".
- 10 A Yes. I have it.
- Now, in this section I think you address a factor which you there suggest that Ofcom had omitted or misclassified, namely, the volume effect of SPs receiving a greater volume of calls, whether 08 retail prices fall. That is what you are addressing there, is it not, in that section?
- 15 A It is, yes. It is.
- I do not think we need to get, and it may be that there is not one, but I do not think we need to into a detailed debate about what you understand by the final determination, or what

 Mr. Myers said it meant, or indeed whose view is more reasonable. Can I just ask you, you understand, do you not, that Mr. Myers' position is that, although the definition of indirect effect appeared to include the volume effect, and you might remember that is 4.24 of the final determination.
- 22 A Indeed.
- Q Which you quote in para.56, I think, he says the body of the determination proceeded on the basis, which he says was clear —
- 25 A Yes.
- Q that the volume effect was taken into account, number one; and, number two, that it was taken into account by giving greater weight to the direct effect. And you, I think, note that explanation at para.60.
- 29 A Yes. I give a sort of "blow by blow" account of how —
- 30 | Q Yes, exactly, and that I hope is the archaeology that we may not need to go through.
- 31 A Yes, indeed.
- 32 Q You note his explanation at para.60, and indeed you accept that Mr. Myers considers that that is how it was captured in the final determination at 65.
- 34 A Yes.

- And, I think, you very fairly go further and accept that if that is right, then you have no concerns whatsoever about it being included there. It was a legitimate way to take it into account in principle in the welfare analysis.
- 4 Yes, I mean, clearly we were all kind of learning and working things out in this dialogue 5 that was going on and, you know, there was a taxonomy issue which didn't get resolved. 6 So, I think, what's left, I think that just leaves one residual question, which is, you know, 7 whether the externalities are adequately represented all the way through.
- 8 Q That is what is left.
- 9 A Yes.
- 10 Q You have a separate concern. If the classification is right, which it is, to the weight given to the volume effect —
- 12 A Well, there's no right or wrong classification, which I think both Mr. Myers and I have said.

 13 So, we are not, sort of, blaming each other.
- 14 Q No, absolutely not.
- 15 A I think we are agreed that, really, the issue now is about what the weight, what's in the direct effect, or in the weighting of the direct effect and whether that is adequate for capturing all of the externalities which are believed to be relevant.
- 18 Q Indeed.
- 19 A Because I think even the externalities are something which Ofcom and I agree on, the various sources, to a large degree.
- 21 Q Again, the weight of the effects, perhaps not.
- 22 A Yes.
- Q But the sources, yes. But, you have a very specific concern about the weight, which is that, in para.65, you suggest that the final determination seems to suggest that the greater weight is possibly only being used as a tie-break.
- 26 A Yes.
- 27 Q Again, this may just simply be a matter of interpretation, because Ofcom agrees with you
 28 that it would be erroneous to give the greater weight to the direct effect only in the tie-break
 29 situation. That would plainly be wrong in principle. It would also be wrong because, as
 30 you point out in para.66, the greater weight is reflecting not only the volume effect, but
 31 other things as well, the brand improvement, for example, capturing all the externalities as
 32 expressed in Ofcom's policy.

1 A I think this is again another piece of archaeology, because I think the issue here was really 2 the phraseology in the determinations. Certainly, to my mind, it was extremely suggestive 3 of there being a tie-break. 4 Q Yes. 5 Α Now, I am prepared to accept that that is not what Ofcom's done, but I think, you know, in 6 my view the way it was described in the determination certainly led me to believe, having 7 looked at that quite carefully, that that was a tie-break. 8 Q There was on particular paragraph and footnote that I took Mr. Myers to, footnote 5.28 and 9 footnote 125. 10 Α Yes. I think I actually have that reference — 11 Yes. Shall we just look at that one reference? Q 12 Sure. A 13 I just want to ask you whether you accept that there it does suggest that it is not a tie-break Q 14 scenario that Ofcom was contemplating. That is bundle B1. 15 So, is that 4.33? A 16 O 5.28, I think is where the footnote appears. It is p.70 in my version, which is plus or minus 17 three for you. It is para.5.28 and the associated father 125. 18 Α I am sorry, I think I've gone horribly wrong, I am in the ----19 It is bundle B1, tab 1. Q Α 20 I've got it. 21 Q You will see para.5.28, and we might be able to go straight to footnote 125: 22 "Our policy on retail charging for 0845 and 0870 calls means that we place less 23 weight on the Mobile tariff package effect in our assessment than the Direct 24 effect. This reduces the size of the positive Direct effect required for the overall 25 effect on consumers to be positive." 26 I accept that is one footnote buried away in the middle of it all, but that certainly does not 27 suggest, does it, that Ofcom was using it as tri-type break*, it is the opposite? 28 That does. My problem is obviously that there are other places like 4.33, which I think is A 29 what I have referenced, where it brings in the conditionality on those effects being equal, 30 and then talks about that case. I think that's the source of ----31 Q Mr. Myers suggested that those paragraphs were consistent with, as it were, either

explanation?

1 Α Yes, clearly they're consistent, but I think if it's a weight one would not naturally describe it 2 that way, because it's not talking about a trade-off, a pound more here balances a pound 3 more here, it's talking about a specific situation where two things are equal. 4 Q Yes. 5 Α I took 4.33, for example, to mean the opposite to that footnote. I think there's just 6 confusion here. I'm afraid. 7 MR. HERBERG: Sir, may I have a moment. Thank you, Dr. Maldoom. Sir, on the basis that I 8 am leaving section 4 of his report, which is the detailed treatment of the waterbed, to be 9 addressed by the interveners. I am not abandoning it, but leaving it for them, those are my 10 questions for Dr. Maldoom. 11 THE CHAIRMAN: Thank you, Mr. Herberg. Miss Smith? 12 Cross-examined by Miss SMITH 13 Q Good morning, Dr. Maldoom. 14 Good morning. A 15 Q As Mr. Herberg indicated, I would like to ask you some questions about the waterbed, the 16 MTPE, as it has been described in this case, but first I would like to step back a little from 17 this case and look at some issues of perhaps first principle. You would agree with the point, 18 I expect, that in general a firm which sets prices of multiple products will set prices 19 differently from the firm that is setting a price for just one product. A general proposition 20 you would agree with that? 21 Well, it has a different set of prices, yes. A 22 Q But it set those prices perhaps in a different way? 23 Α That depends on the circumstances. 24 Q So would you agree with the proposition that a firm that sells multiple products, a number 25 of different products, would aim to ensure, first, that each service covers its incremental 26 costs and that the revenue from all services together will cover overall costs? 27 Well, it would obviously like to do that. There's the small matter of competition it may A 28 face, it may mean that those are not achievable. I think that needs to be modulated slightly, 29 but as a starting proposition for a firm without particular strange competitive conditions that 30 is probably reasonable. 31 Q Would you also agree that, as a matter of fact, the mobile operators, which provide a 32 number of different services to their customers, set prices in this way?

1 Α I think that's true of all telecoms operators. Essentially they have a network which costs 2 them money which they can run multiple services over. So I think the multi-product pricing 3 issue is endemic across telecoms as a whole. 4 Q The approach of the mobile operators is that each of the services they offer must cover their 5 incremental costs and make some contribution to shared costs? 6 Α Yes, absolutely, I believe that would be how most telecoms operators I know go about 7 pricing services. 8 None of this is controversial ----Q 9 A No, I don't think so. 10 Q -- yet. You would also agree that mobile operators compete for subscribers by offering a 11 bundle of services, a selection of different tariff packages? 12 They do, yes. A 13 Q They need to price individual service elements in those packages so that, overall, the 14 packages are attractive to customers? 15 Plus they also need to look at the inter-relationships between those packages, otherwise you A 16 have self-cannibalisation issues, for example. It's a complicated matter. 17 Q It is a complicated matter, but it may mean, this approach, that services which customers 18 care more about within the package are priced lower than services that they do not care so 19 much about within the package, as a general proposition? 20 A Absolutely. The whole MTR debate is essentially – that's the logical consequence of that 21 starting point. 22 Q Put it another way, as long as each service is priced above its incremental costs it may be 23 welfare enhancing for mobile operators to set higher prices for certain products and lower 24 prices for other products? 25 It could be. There are some practical complications here. Obviously, mobile operators set A 26 their prices because of conditions of competition. I think what you are getting at here is the 27 idea of Ramsey pricing, and clearly that's an idea of welfare optimal pricing. There is a 28 complicated question about whether competition in a multi-product world will create 29 something that is socially optimal, which is an exceedingly difficult question which 30 economists have done a little work on, but it's a difficult matter. As a presumption, the idea 31 that there's a sort of getting a bit towards Ramsey pricing achieved by competition is not 32 unreasonable.

- I am not suggesting it is not complicated, but you would agree, I think, that it may be socially optimal or economically efficient for certain services within this bundle of services to bear more of a share of the fixed and common costs than others?
- A Absolutely, otherwise you will end up with losing customers, competition would be muted, people might not even have phones if that doesn't happen.
- Q In that case I do not think I need to take you back to an article that you produced in 2001, which we have already looked at.
- 8 A Which I think is the point that you make.

- Q The points were made very clearly in that article. Would you then agree with me that it is dangerous to say without anything else that you can look at certain prices charged by mobile operators for one particular service and say they are excessive or too high without looking at the pricing of a bundle of services overall?
 - A As a general proposition, that's true, but again that needs to be modulated by materiality questions. For example, for MTRs that's a large chunk of revenue, so that probably is one of a number of considerations. This is 2 per cent of mobile operators' revenue probably, so that's not going to make much of a contribution to common cost.
- 17 Q Would you agree with me that, as a matter of principle, one needs to look ----
- As a matter of principle, yes, that should be one thing that's up there to be considered along with everything else, yes.
 - Q So that is the static position. If we move on from that static position to the dynamic position, we have got a mobile operator that sets prices in the way we have just discussed, and something changes so that one of those services that they offer becomes less profitable so it makes less of a contribution to the common costs, the firm is likely to rebalance the prices across that?
 - A Subject to the disciplines of competition. They have no guarantees that they can do this. They may just be unable to, or they may be limited because they have to face costs. There are two issues. They have got other competitors who may limit what they can do; or their own tariff structure may limit what they can do because they're trying to increase something correspondingly and it will self-cannibalise other packages that they are offering.
 - At the moment we are just at the level of general principle, and I am going to move down into a bit more of the detail about how things might actually impact on the prices of the services we are concerned with in this case, and the 080 calls might impact on the prices of other services. We are at the level of principle and I think so far we are agreed. Let us move down then to the application in the present case, which is what is called Ofcom's

- mobile tariff package effect. Obviously we agree that if the new termination rate structure proposed by BT affects the mobile operators' profitability in some way that loss of profit may be recouped through the rebalancing of prices in their price portfolio and the raising of prices for non-08 services. That is effectively what Ofcom's MTPE is all about, it is a waterbed effect?
- A Yes. It's not binary. They may recoup some of it but not all of it. I think obviously the question is about what factors determine how much of it is recoupable. I have briefly mentioned these factors about competition and about price discrimination and self-competition what you might self-competition issues which ----
- 10 Q Those goes as well to the strength of the waterbed effect?
- 11 A Indeed.

- We will come to that. Just at this stage, I think we are clear that in the present case, when we are looking at the wholesale tariff structure, there are two different ways in which the loss of profits and the rebalancing of prices might be caused. First of all, there is the situation where retail prices for the 08 calls fall to the bottom tier, the full reduction scenario, and there is no rise in termination charges in that scenario, but because of the lower prices the mobile operators lose some of their contribution to the fixed and common costs that the 08 calls are making at the moment, so they try to rebalance their prices in response to a loss of revenue.
- A I think the second point is important though. There is no automatic loss. That depends on how effective the waterbed is. If it is very effective then the loss is virtually entirely mitigated. If it is partial then it is not mitigated
- At the moment what I want to concentrate on we will come to that if we may what I will concentrate on is the rebalancing, it happens in response to two different issues. There is a rebalancing in response to loss of revenue as a result of a reduction in price. There is also on the other side a rebalancing possibly, a second way in which rebalancing may occur, which is if prices do not fall, if the retail prices for 08 calls do not fall to the bottom tier, this partial or no reduction scenario, termination charges go up, and that has an adverse effect obviously on the mobile operator's profits, and they respond to that by increasing prices of non-08 services, but their rebalancing prices in that scenario in response to an increase in cost?
- 32 A Right sorry, I am not quite sure what the question is.
- You agree that there are these two scenarios: there can be a rebalancing of prices in response to a loss of profit, and a rebalancing of prices in response to ----

- A I am sorry, I don't want to complicate your scenarios but I think in this case we also have to remember that the wholesale tariff schedule has a particular structure that affects pricing as well, so even if somebody faces a cost increase there is still a pricing incentive issue for the pricing of the NTS calls created by the wholesale tariff, essentially, how much do I pay for a minute? That depends on my retail price. You really need to add that as well as all those considerations.
 - Q I think it is a simple point I hope it is a simple point you can agree with me. In this case in the second of my simple scenarios, the increased cost is in the form of an increased termination charge to BT, so there is a transfer of revenue at this stage between mobile operators and BT?
- 11 A In the partial reduction scenario that is correct, yes.
- 12 Q And there is no transfer of revenue in the first situation of a full reduction scenario?
- 13 A In the full reduction yes.

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- 14 Q But there is still a rebalancing of prices in the full reduction scenario as a result of a loss of revenue from the lower prices for the 08 calls?
- A There are a number of ways of looking at it. Probably a good way of thinking about it is that the wholesale tariff creates an incentive to lower the retail price of the NTS calls and then that might flow through to consequences elsewhere. That is sequential way of thinking about it is probably quite helpful because the NTS calls in themselves are relatively small components in the mobile bundle. So in that sense that sequenced approach is probably useful.
- THE CHAIRMAN: Miss Smith, there is a hidden assumption in your question that volumes remain constant?
 - MISS SMITH: Yes, I think there is a hidden assumption in the question. There are also assumptions about the waterbed effect and the strength of the waterbed effect which I will come to.
- 27 THE CHAIRMAN: I understand that.
- 28 MISS SMITH: But in both of these scenarios there is a rebalancing of prices across the bundle?
- 29 A There is.
- Q And we have agreed, I think, that as a matter of theory the balance of prices that results from competition in a market might be economically efficient, but if you rebalance those prices that may lead to a loss of efficiency as well as any loss of revenue over and above the loss of revenue to mobile operators?

1 Α That is rather a big leap. If you started from a set of efficient prices and moved away, yes. 2 But if you start from a set of inefficient prices and move towards something more efficient 3 then no. 4 Q I understand that point and that is probably one of the substantial issues between the parties 5 in this case. Can I move to the way you describe the MTPE in your report, and can I ask 6 you to look at p.11 of your report. 7 THE CHAIRMAN: Is this still in Maldoom 7? 8 MISS SMITH: Yes, Maldoom 7, sorry. I will move to other reports but most of my questions 9 will focus on Maldoom 7. That is bundle C1, tab 14, seventh report, the latest report, p.11 10 one of your pipe diagrams, figure 1, your "Hydraulic analogy for revenue flows associated 11 with the MTPE". You explain that diagram at para. 26 of your statement: 12 "The potential sources for any revenue flow created by increased unit 13 termination charges are either MNOs' profits (which might be inflated due to 14 excess margins on 08X calls) or mobile customers paying more for other services. 15 The relative balance between these two sources is determined by the strength of the 16 waterbed effect." 17 Yes. A 18 Q What you are looking at here ----19 It is this partial reduction scenario that you were just discussing. I am still abstracting from Α 20 the retail pricing issue and just really focussing on these wholesale – what's happening in 21 the wholesale market in this revenue transfer effect. 22 Q So what we are looking at here is where there is the hit taken by the mobile operators is as a 23 result of increased termination charges rather than the reduction in retail prices ----24 A Yes, I have parked all the stuff to do with retail pricing. Essentially it goes back to 25 Mr. Reid's A and B boxes. I have essentially parked box A and I think it is obviously easier 26 to look at box B on its own. 27 Also, this diagram just shows the revenue flows, as I see it, from one side of the market, the Q 28 OCP side of the market to the TCP side of the market. It does not show all the effects on 29 mobile consumers as a result of the rebalancing of prices between the 08 services and the 30 non-08 services. I take that from para. 25, just on the opposite page where you say in the

second sentence that these are the additional flows created due to the unit termination

charges increasing, and you also say in footnote 8, that I think you accept that what this

does not show – it shows the revenue flow – in the last two lines of that footnote that it is a

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- 1 loss to the mobile customer it may be more, it may be this revenue flow plus the associated 2 loss of consumer surplus due to higher pricing ----3 Let me explain. The diagram is very much motivated by the sort of unpicking of Ofcom's A 4 analysis rather than what one might necessarily create is the most helpful way of putting 5 this. What I am really focusing on here is a sort of change situation, so I am focusing on the 6 flows that are created by the NCCNs, if you see what I mean? 7 Yes, you are just looking at the flow of revenue? Q 8 Α Exactly, so it is a sort of change scenario. 9 Q But you quite fairly recognise in footnote 8 that there may be additional losses due to the 10 higher prices on other mobile services, the loss of consumer surplus ----11 Yes, what I was focusing on here, these are revenues, okay? Essentially you can associate Α 12 with those consumer surplus losses which will be larger, and I haven't drawn them on in the 13 interests of economy. 14 Q What I understand, this is a lawyer not an economist, how I understand this is, and I think 15 Ofcom took this into account in the determination, that there is an additional loss of welfare for consumers arising from the loss of efficiency because of the rebalancing of prices, and 16 17 that is what is not shown on this diagram? 18 Α Rebalancing is not a loss of efficiency if it is a correct for externalities, which I think is the 19 debate which I've had with Mr. Herberg to some degree. If you want to just purely talk 20 about consumer surplus I absolutely agree that if you look at the lower right hand tube, 21 there is an effect here which is a consumer surplus effect on mobile customers across the 22 whole range of services, essentially anything that the mobile operator provides, so that is 23 meant to be an inclusive category. 24 Q Can I move on then to the strength of the waterbed effect?
- 25 Sure A

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- 26 Q Still looking at your pipe diagram, if there is a perfect 100 per cent waterbed effect, as I 27 understand it the only source of revenue on the right hand side of your diagram would be 28 the lower right hand pipe which you call "Consumer Surplus of mobile customers"?
 - A Yes, if there is a perfect waterbed that means that the MNO can essentially, they have enough discretion to be able to jiggle prices around to get back to exactly the same position as they were before.
- 32 O If there were at the other extreme no waterbed effect at all? I am not saying that is realistic, 33 but if at the other extreme there were so that MNOs were unable to raise prices to recoup

- the lost profits as you have just described, then the only source of revenue would be the top right hand pipe, that is MNOs' profits from the 08 calls?

 A That's correct, yes.

 O That is right. Your discussion of the waterbed effect, and the magnitude of the waterbed
 - Q That is right. Your discussion of the waterbed effect, and the magnitude of the waterbed effect, as I understand it, is confined to the extent to which any increase in revenue flow from the right to the left of the diagram comes from consumers on the one hand or MNOs' profits on the other so the relative size of the pipes on the right hand side?
 - A Yes, I mean, I think we heard a little of this this morning. The reason I'm doing this is because I want to try and understand this sort of "pump" as I described it within the Ofcom model, which is taking consumer surplus and taking it through into profit for service providers. So, I think what we are discussing is, as it were, the source, and obviously the waterbed is the main determining factor as to whether the source is MNO profit, or whether it's MNOs customers' customer surplus. Yes.
 - Q That is right. So, I would like to consider, then, the evidence you give on the likely strength of the waterbed effect in this case. But, before we move to that, could you agree, as a general proposition again, I think this is uncontroversial the more competitive a market is, the more extensive a waterbed effect there is likely to be. So, the closer it is likely to be to 100 per cent.
- 19 A That's a very, sort of, bold statement, I think. I mean, there are a lot of other issues here.

 20 I briefly mentioned this issue about price discrimination, okay. I think competition is also a
 21 constraint on firms as well, what they can do, what a firm can do to respond will depend on
 22 what its competitors allow it to do. And what exactly happens is very very case specific,
 23 I think in terms of what we are waterbedding.
- Q Right. Earlier, you see, I understood in response to my questions that you said, well, the waterbed effect will depend upon, and the first point you said was the competition effect.
- 26 A Yes, that is one of the, okay, so, yes, I agree, competition. I would also add a few other
 27 factors including primarily this ability to price discriminate is actually pretty important in a
 28 competitive environment.
- Q Can I turn to para.29 of your statement. You say in para.29:

 "We should expect the waterbed effect to be partial, and that MNOs' profits [that is the top pipe] will be the significantly greater contributor to any such revenue flow for a number of reasons",
- and you set out the reasons there below in paras.A, B and C.
- 34 A Yes.

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1 Q Over the page, para.30 at the top of that page: 2 "Therefore, the proportion x in Figure 1 [which we have just been looking at] 3 which measures the extent a such revenue flow is funded from MNO profits rather 4 than mobile customers, is likely more than 50% [you are starting to put figures on 5 it] as the waterbed effect is likely less than 50%. Translating the CC's 6 assumptions about the waterbed [effect] for MTRs directly would suggest that x is 7 in the range of 66% to 90%". 8 Therefore I interpolate that the waterbed effect is in the range of 10% to 34% That is what 9 you are saying there. 10 Α Yes. I feel I have rather put my head above the parapet there by naming numbers. 11 Q Yes. 12 But I thought actually, really, one can't have a proper debate about this otherwise, and A 13 I think I'd sort of, somewhere else (I can't quite put my finger to it) I'd suggested the 14 numbers of, sort of 80:50 and a third as being quite useful points to think about and assess 15 the available evidence relative to that. (Yes. It's para.43). So, I'd sort of taken those as, 16 I just thought that they were quite useful to compare the CC empirical papers and so on. Yes. 17 Q 18 Q They are in your evidence. You have put your head above the parapet. You have put these 19 numbers down in 30. You repeat the point in 43, as you said, on p.17. In fact, you put it 20 even stronger, I think, in para.43. You say, in the second sentence: 21 "However, a waterbed of 80% or more is inconceivable; indeed any waterbed 22 effect stronger than 50% would be implausible and anything significant stronger 23 than one-third at odds with the CC's views in 2009". 24 A Yes, that's right. 25 Q And when you refer to the CC's views in 2009, we are talking here about the Competition 26 Commission's 2009 determination on mobile termination rates, are we not? 27 Correct, yes. A 28 Now, you go on to deal with that, to be fair, at paras.123-131 in a little more detail. Q 29 A Yes, that's right. So, essentially, what I'm doing here is just sort of flagging up in advance, 30 as it were, my kind of objectionable potentially conclusion, and then going through that 31 subsequently and relating the evidence to these points, this 80 and 50 and a third, yes. 32 Q Well, to be fair, let us take you to para. 123 of your statement, which is at p.46. You see 33 there, at para.123:

1	ĺ	"What is clear, however, is that there is neither empirical evidence nor <i>a priori</i>
2		reason to assume that the waterbed is complete or even particularly strong. We
3		should only expect a modest proportion of any 'bounty' earned from excessive
4		
5		08X prices to be passed back through corresponding lower prices for other mobile services".
6		
7		So, only a modest proportion, you are talking about now. You then go through, in
8		paras.124-131 discussing the Competition Commission's 2009 determination. Yes.
9	A	
	Q	And you draw your conclusion, your overall conclusion, about the strength of the waterbed
10		at 131, which is on p.49 of your statement, and you say:
11		"It is clear that assuming the waterbed is 100% or close to 10% would be
12		unjustified. The CC's views suggest that the MTR waterbed was very weak, but
13		there is a question of applicability here."
14		So you caveat that slightly, perhaps, by saying there is a question of applicability of the
15		CC's determination to the current case.
16	A	Yes, I mean, it's quite a sort of limited summary of what's gone before, because, I mean,
17		clearly there's this leakage issue with the CC as well. So, I think this is a very succinct
18		summary of what's gone before. I think there's quite a lot of work needed to be done to
19		unpack the CC determination to actually take something useful from it.
20	Q	I would agree with you on that. It is just I just want to test, because you make quite strong
21		statements —
22	A	No, well, I have tried my best to draw something out.
23	Q	— that, inconceivable that the waterbed would be above 50, and it is more likely to be —
24	A	No, it's inconceivable above 80. I mean, the reason for 80
25	Q	"Implausible", I am sorry.
26	A	"Implausible", I think. I think "inconceivable" was the word I used about 80, in the sense
27		that —
28	Q	"Implausible above 50 and anything significantly stronger than a one third at odds
29		with the CC's views".
30	A	Was it? Yes. I think at odds, maybe it's just worth explaining what I had in mind with that
31		terminology, because it's difficult to try and convey what is really quite a difficult
32		assessment within a few words.
33	Q	Yes.
	I	

- 1 Α I think the 80 point is there because I think there is a large degree of consensus that the 2 waterbed is not complete, and I think our preceding discussion really indicates that it would 3 not be sensible to expect 100 per cent waterbed purely from theoretical considerations 4 alone, even without going to any real world situation. I think, given that degree of 5 consensus, you know, what does that mean? Ninety-nine is practically the same as 100, so, I mean, we have to identify something which is in some way — were that the waterbed, the 6 7 fact that it is 100 is falsifiable, given that assumption. So, I think that's why I put 80 there, 8 and that's something where at least one might have a fighting chance of discriminating 9 between 80 and 100 and actually have some practical impact. I think the other end of it, the 10 third, is really there because I think, you know, anything above that, one needs to go back 11 and start to interpret and look at what the CC is doing in terms of leakage calculations; so 12 there's work to be done, yes.
- 13 Q Well, I would like to, because you do rely upon the CC's views in 2009, and I just want to take you if I mean to the CC's 2009 determination.
- 15 A Yes.
- Q Put away all the bundles that are in front of you, apart from your witness statement, and CAT bundle 26.
- 18 A So, you will not need the determination.
- 19 Q No.
- 20 A Sorry, could you give me the bundle again?
- 21 Q It is bundle 26. CAT 26, tab.11.16.
- 22 A Yes, okay.
- 23 Q The CC's determination. Before we go into this, can I just put some proposals to you,
 24 because you have obviously looked at this in order to make the statements that you have
 25 made in your witness statement.
- 26 A Yes.
- 27 Q And, you would agree that in 2009 what the Competition Commission was considering, the
 28 Competition Commission was considering the waterbed effect in this determination in the
 29 context of considering whether or not it was necessary to continue to include network
 30 externality surcharge in the MNOs termination charges.
- 31 A Yes, I think I specifically mention this point because I think this is where we have to do a
 32 bit of extra work because, you know, the primary concern of the CC here is about whether
 33 or not providing an MTR surcharge will be effective in inducing marginal customers on to
 34 mobile networks.

1 Q I see. 2 A Which is not really the issue at hand, which is, kind of, hence my discussion of a few pages 3 within my report. 4 Q That is what I would like to look at. Can we turn first to p.141 of the Competition 5 Commission's report. Paragraphs 4.3 to 4.6 describe the network externality surcharge. It 6 might be useful if you just read that to yourself. You are probably familiar with it. It will 7 give the Tribunal an opportunity to read it as well. (After a pause) You talked about, I 8 think, the distinction between the waterbed effect and the issue of leakage? 9 A Yes. 10 O And the fact that there is a difference between those two concepts, I think you would agree, 11 is fundamental in this report. Let me just to put to you what I think is pretty uncontroversial 12 from the face of the report, and we can take you to the relevant paragraphs, if necessary. 13 When they were talking about the waterbed effect in this report, the Commission was 14 concerned with the question about whether increased revenue for a mobile operator from 15 one service, in this case the mobile termination rate, would feed into lower prices for other 16 services within the calling package. So, as they put it, in para.4.6 17 "... expected to result in willingness by MNOs to offer subscribers more 18 attractive terms including a lower price to join or remain on the network". 19 Yes. A 20 Q That was where they were concerned about the waterbed effect. 21 Α I think it is worth just emphasising there that they are not interested in the waterbed effect 22 per se, they are interested in what the effect of an MTR subsidy is on the incentives to 23 attract and retain marginal customers. You may end up with money going to other mobile 24 customers who are non-marginal, but the Competition Commission is not interested in that, 25 because they are obviously trying to look at the effect of this as an instrument. 26 O Yes, exactly, they are looking at the effectiveness of the network externality charge on 27 attracting and retaining what they describe as marginal subscribers ----28 Yes. A 29 Q -- to the network, those people who are described in para.4.4, that they private benefits do 30 not cover the cost of them of becoming a subscriber, even though total welfare would be 31 enhanced if they did, because of the benefits that their joining a mobile network would give 32 to others. So those are what Ofcom described as a "marginal customer". 33 They did. A

Q The leakage issue, I put to you, was about whether or not, given the waterbed effect, the lower service prices that result from the higher mobile call termination rates would benefit these marginal customers, or whether the benefits would leak away to other intra-marginal customers, those people who would have subscribed anyway. We can go to the relevant paragraphs but would you agree that the Competition Commission concluded in this determination that the waterbed effect would be high if the MTR – the mobile termination rates – went up. The effect on lowering other prices for other services would be substantial, close to 100 per cent, but that leakage, a different issue, would also be substantial because the benefits of lower prices would not necessarily go to the marginal customers, it would go to intra-marginal customers in the main, so that the network externality charge which had a specific purpose was no longer justifiable. They did not conclude that the waterbed effect would be between 10 and 34 per cent?

Α

I agree they didn't make specific conclusions on the waterbed, but I think it's a little more nuanced than you are suggesting, because I think the innovation in this analysis done by the CC was actually to identify that. Because they were looking at the leakage question then the issue of what you might call the waterbed effect was moot, because it didn't really matter where the leakage went, whether it went on to other mobile customers or it went into MNO profits. That was irrelevant essentially to this analysis because what they were looking at was the effectiveness on termination in terms of attracting and retaining these customers who would otherwise not be on mobile networks. Remember, this is the days when mobile penetration was not yet full. I agree entirely that they do say that they think the waterbed is strong, but this is not really anything that investigated or challenged, it's sort of moot, because they don't need to. They can just conclude on the basis of leakage alone that this is potentially a very costly way of achieving the objective of increasing mobile penetration. I think this really speaks of this point about price discrimination, because they are issues really that the MNOs cannot target the specific customers who they want to have retained.

I will take you up on that statement, that the level of the waterbed effect might be irrelevant or moot. That cannot be the case, there are two stages to this analysis. The first stage is whether an increase in mobile termination rates would feed through to lower prices for other services in the waterbed effect. The next stage of the analysis is who would those lower prices benefit? Would they benefit the marginal subscribers or would they benefit all subscribers, the intra-marginal subscribers? That is the second stage of the analysis and that is the leakage issue. If the Competition Commission came to the conclusion that the first

1		stage of the analysis, the waterbed effect, was only between 10 per cent and 30 per cent, so
2		that the increase in mobile termination rates would only feed through to that limited extent
3		to lower prices for other services, they could have stopped at that stage, could they not?
4		They need not have gone on to look at the issue of leakage, but that is not what they found.
5	A	I'm not familiar with how they structured their analysis here. What I took from this was
6		really that we have here – if you look at the eventual conclusion, this is quite a striking
7		finding to say that 90 per cent of this MTR subsidy will leak away. In my report I
8		suggested that one way of looking at this was essentially attaching – attach some bounty to
9		customers, golden tickets or whatever you want to say, hand them out and you let the
10		MNOs then compete to try and get that bounty. If you think about MTRs, well, actually
11		how can they do that? People who are ringing MTRs a lot presumably are also – sorry, who
12		are receiving lots of calls may also be making lots of calls. Maybe it's not so difficult by
13		changing call prices to get some of that back. Even in that case the Commission decides
14		that there's a 90 per cent leakage, and I think here with NTS we're looking at a situation
15		where there's far fewer price instruments available potentially to look at. So I think what
16		I've taken from this, and I agree – you'll no doubt put a contrary view to me and I entirely
17		accept that this is a controversial point – that what I take from here really is quite a clear
18		statement on just how limited this targeting potential is.
19	Q	The problem we have with your evidence, Dr. Maldoom, is what you have done, as we see
20		it, is you have effectively taken the figure that you have just bandied about of 90 per cent,
21		which the Competition Commission applied at the second stage of its analysis, the leakage
22		issue, and you have applied that 90 per cent figure to the first stage of the analysis, the
23		waterbed issue, and you have used it to support the very strong statements you make in your
24		witness statement, your expert report, about how strong the waterbed effect might be in the
25		current case. You say it is between 10 and 34 per cent. Can I ask you to look, I think it is
26		important in the light of that that we look at the CC's report, at p.145 of the report,
27		para.4.28. You see there, statement of principle:
28		" the extent to which any increase in MCT rates"
29		mobile call termination rates –
30		" caused by the network externality surcharge will be retained as additional
31		profit"
32		rather than passed on in lower prices –
33		" will depend on the strength of the competition between MNOs for

subscribers (the 'waterbed effect') \dots "

1	So they call it the waterbed effect –
2	" the greater the intensity of retail competition, the more we would expect
3	MCT rate increases to be used to compete for subscribers."
4	So that is the introductory point, and then if I can ask you to turn to p.150, para.4.46, the
5	Competition Commission is here addressing some points made by Vodafone and they say:
6	"We accept Vodafone's argument as a logical description of how one would expect
7	an MNO to behave. We also think it carries with a number of implications that are
8	relevant to considering whether there is a case for the NES and, if so, its
9	effectiveness. In particular, it implies, and there is a first implication which is not
10	relevant to this point, but the second implication:
11	"(b) leakage is likely to be very high given the relative proportions of
12	marginal and non-marginal subscribers, and because MNOs will have no
13	incentive to use additional profits generated by non-marginal subscribers
14	to offer marginal subscribers more attractive terms.
15	4.47 In our view both these implications call into question the case for the
16	inclusion of an NES (network externality surcharge) within the MCT price
17	control."
18	Just finally, before I put the point to you, if you could turn to p.162, para. 4.108. We now
19	descend to the level of figures for the leakage effect.
20	"That implies, assuming that Ofcom's estimate of a number of marginal
21	subscribers is correct, a leakage rate of at least 66 per cent. Some of the parties
22	have presented us with arguments as to why the leakage rate is likely to be
23	significantly higher than this."
24	And then we see that Vodafone, O2 and Orange made various submissions in subparagraph
25	(a), Vodafone in subparagraph (b) and over the page. Then the conclusion of that is at
26	4.109:
27	"Vodafone gave us an estimate of 85 to 88 per cent as the appropriate leakage
28	parameter implied by its analysis. Similarly BT said that leakage will be
29	higher"
30	At 4.110:
31	"We have not found it necessary to come to a final point estimate of what the
32	correct leakage parameter is. However, given the evidence set out above, we have
33	come to the conclusion that leakage is likely to be higher than 66 per cent, and
34	possibly much nearer 90 per cent."

1 So the figures that you cite in your expert report of 66 per cent and 96 per cent are figures 2 for leakage ----3 Α They are indeed, yes. 4 Q -- they are not the waterbed effect? 5 A No, I agree entirely, hopefully that was clear. 6 O Let us look then at what the Competition Commission says about the waterbed effect, if you 7 could turn over to 165, para. 4.120: "Ofcom has said it expects the waterbed effect to be 8 incomplete" and we have heard those words before. 9 "Vodafone cited a figure of 90 per cent from a paper by Genakos and Valletti. We 10 would therefore expect that additional revenue generated by the NES from non-11 marginal subscribers would be largely dissipated in competition for these 12 customers." 13 So I think it is fair to say that the inference I read from that is that the Competition 14 Commission was expecting the waterbed effect as opposed to leakage to be at about these levels ----15 16 A Yes. 17 Q -- of about 90 per cent? 18 Α Leakage, yes. 19 No, the waterbed? Q 20 A Sorry, waterbed, sorry, I apologise. 21 Then if you could look at p.265 just for completeness, para. 8.81, this is a discussion about Q 22 the level of CARS' costs and whether they should be included, it is towards the bottom of 23 that paragraph: "As there has been no dispute that the waterbed effect is strong, even if not 24 complete, we do not think that a CARS' allowance can be justified." So there has been no 25 dispute before the Competition Commission that the waterbed effect is strong, even if not 26 complete, and the same point is made over the page at para. 8.96. 27 "Moreover, in relation to all these arguments, it is important not to allow 28 hypothetical analyses obscure relevant real-world factors. Whilst a consideration 29 of a stand alone termination either can be useful as part of a thought experiment, 30 one cannot ignore the fact that when it comes to MNOs which also operate in the 31 retail market there is a waterbed effect. The waterbed implies that a large 32 proportion of any revenues generated by a CARS allowance will not be retained 33 but will be dissipated in competition leading to an increase in CARS' costs."

- So you would accept that to be, although leakage might be high, that is the benefits of the lower prices might go to intra-marginal customers who would have subscribed anyway rather than marginal customers. The waterbed effect ----
- 4 A CARS' expenditure is not necessarily customer benefit, just to be clear.
 - Q No, I did not suggest that. But you would accept that the CC's conclusion is that although leakage may be high the waterbed effect, the fact that extra revenues obtained from the network externality charge, surcharge, would lead to lower prices overall, was said to be significant, even if not 100 per cent complete?
- 9 A Yes, I am quite aware of that.
- 10 Q Just, if I may, one more question on that and then it might be a good time to break. You noted yesterday, I think, that Ofcom started with a reference case of 100 per cent waterbed?
- 12 A Indeed.

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- And you have also been in court and you have heard the evidence from Mr. Myers for
 Ofcom that its latest view is that the waterbed effect is likely to be strong in this case and, I
 can take you to it if you wish, but the evidence from Dr. Walker in his third expert report is
 that the waterbed effect is likely to be strong and likely to be close to 100 per cent. Do you
 recall that evidence?
- A I think he made a statement to that effect, I wasn't sure whether he was quoting any specific sources for that, or empirical evidence.
- Q He does quote his sources, but I am sure your lawyers can put the questions to him on that if that is an issue.
 - THE CHAIRMAN: Dr. Maldoom, just to follow through on that, going back to para. 43 of your seventh report, you say, basing yourself, I think, on the CC report, that a waterbed of 80 per cent or more is inconceivable. Counsel is very helpfully taking you through the paragraphs she says are relevant to the Competition Commission's approach. Do you still stand by the statement that a waterbed effect of 80 per cent or more is inconceivable?
 - A I do, yes. This is not just based on the CC evidence. I discuss also empirical evidence and also a degree of consensus that this waterbed is not complete, and really the 80 per cent or m ore inconceivable statement is a reflection of that. The CC, I think, is relevant in terms of this question about a third or more. I think this is the much more debatable question to be honest.
- Q Dr. Maldoom, where do you discuss the other material, the empirical material in your report?

I	Α	Okay, I have got – let me just find it – this is dealt with more fully by Professor Dobbs – it	
2		is s.4.3. To be fair I discuss the CC here, and I essentially only take a lower bound from the	
3		CC determination not anything more. Specifically really because of these kinds of concerns	
4		that we have just been discussing, but then the other evidence I particularly included was	
5		the Genakos and Valletti and I believe I have referenced Veronese and Pesendorfer – I am	
6		not sure if I have; maybe I haven't on that.	
7	Q	We will read s.4.3 when we rise, but the question that I will leave hanging about for you to	
8		think about over those five minutes is if your 80 per cent figure does not come from the CC	
9		report, where does it come from?	
10	A	I think I sort of addressed that with Professor Stoneman's question in the sense that that was	
11		meant to be a representation of a degree of consensus about the incompleteness of the	
12		waterbed, so I would take 80 to mean strong yet incomplete, and that is all that 80 was	
13		meant to be doing.	
14	MISS SMITH: The figure of 80 per cent is the figure that you obtained from Mr. Myers' figure 8		
15		by taking out your ruler and measuring	
16	A	Well that is also the case.	
17	Q	The only indication we have is Mr. Myers' figure, which indicates a waterbed effect of 80	
18		per cent or more, and then you go on in 43 to say that that 80 per cent, which I had taken	
19		from Mr. Myers' figure 8 is inconceivable. That is the 80 per cent figure?	
20	A	It is also there, it is there as a number which is sufficiently different from a 100 that I can	
21		differentiate as being incomplete which again also has the convenience of also being a	
22		number which is that implied by the figure. There is no particular magic to these numbers	
23		I will just be absolutely clear here.	
24	THE	CHAIRMAN: Right, five minutes.	
25	MR.	READ: Sir, can I ask for 10 minutes because I want to check with other people what the	
26		time prognosis is for the rest of the evidence, because I am getting a little concerned about	
27		timing at the moment.	
28	THE	CHAIRMAN: Let us say quarter past then, shall we?	
29		(<u>Short break</u>)	
30	MIS	S SMITH: Dr. Maldoom, can I move on to a different aspect of your expert report?	
31	PRO	FESSOR STONEMAN: Just before we go there, we would like to clarify this waterbed issue	
32		as to exactly what it is that we are talking about. Clearly, the waterbed cannot be 100 per	
33		cent or greater than 100 per cent, because it would mean that the tariff rebalancing, in	
34		producing an outcome that was better for the MNOs than before the NCCNs were	

1 introduced, and if that was feasible the assumption of profit maximisation means that the 2 MNOs would have done it previously anyway. So, we then have this situation that we are 3 going to have some outcome that is less than 100 per cent, and the question is by how much 4 less than 100 per cent. The MNOs face an increase in costs which comes through the 5 NCCNs. They have to pay a greater amount for their termination charges, and they have to 6 increase their revenue in order to cover those costs; and the increase in revenue will be 7 generated by tariff rebalancing, basically, an increase in price. So, the question is — to 8 what extent can they cover the increased cost by an increase in revenue? And the increase 9 in revenue that it can generate by increases in price is, given that all of the MNOs are doing 10 this at the same time will depend upon the industry elasticity of demand. And so, if the 11 industry elasticity of demand is greater than 1, which we would expect. We would expect that they would not be able to fully compensate for the increase in costs. Otherwise we 12 13 would have a situation where the industry was one in which as costs went up profits went 14 up, but that is completely contrary to logic. So we would expect some waterbed effect, but 15 the size of that waterbed effect would depend upon the elasticity of demand for the industry, 16 and as we were told yesterday nobody knows what that is. Would you agree with that 17 statement? 18 Α

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Yes. There is some empirical work on this. I think the problem is there is a whole bunch of other complications that get exposed in that empirical work. For example, when you look at MTRs they affect the nature of competition, and particularly the ability of smaller operators to compete with larger operators. The result is that there is not really any strong empirical evidence other than, I think, some work by Professor Valletti which shows that you can maybe identify margins of customers who benefit from this, and that's probably about the long and short of it.

MISS SMITH: Sir, the only point perhaps I should add to that is the evidence that appears in the third expert report of Dr. Mike Walker at para.55, which is the evidence that we rely on in this regard, the MNOs. It is in bundle C2, tab 47. Just for your note, C2, tab 47, para.55, where he gives the evidence that:

"... there is strong evidence for a substantial waterbed effect, although it is not clear whether in the UK it is 100 per cent or not."

He has given it as likely to be close to or at 100 per cent.

"This is consistent with the evidence of Genakos and Valletti (2009) and with the fact that the UK mobile market is competitive."

He gives his references to his first witness statement:

1 "... that the European Commission and Ofcom believe that the UK mobile 2 market is 'very competitive' ... This means that Ofcom was right to consider 3 the MTPE in its decision and that BT's experts cannot assume that any 4 reduction in 08x prices will just reduce MNO profits." 5 That is the evidence that we rely on. 6 A Do I need to put Walker away? 7 O If there are no further questions and no further issues I am moving on from that, so I am 8 very happy for you to put bundle C2 away. All I am looking at the moment is core bundle 9 C1, back to your seventh witness statement. 10 Α Yes, I have that. 11 I am moving to a different point, section 3.1 of your report, which starts on p.33. Here you Q 12 are addressing your case that there are externalities in the market for non-geographic calls, 13 and you say in para.89 of your report: 14 "This market failure is caused by OCPs pricing without regard to their effect on 15 other parties within the NTS system." 16 And your conclusion at the end of para.89: 17 "... [this] means that OCPs will tend to set prices too high." 18 In para.92 what you have called and what Ofcom have called the "vertical externality", at 19 para.93 you refer to the horizontal externality, and I think your case, you will agree, is that 20 prices for the 080 calls are overpriced, prices for the mobile services are underpriced and 21 any rebalancing of prices is likely to be overall welfare beneficial. In a nutshell, that is your 22 case? 23 Absolutely, I think it's the same as Ofcom's analysis. We use slightly different labels as Α 24 this all emerged over time but I think there is actually a very close read-across. 25 Q There is a misalignment of incentives between the OCPs as to the retail prices that they set 26 and the other parties, in particular the SPs with the NTS system? 27 Yes. I think this is perhaps a slightly economic way of looking at it, but I think it's also A 28 useful to see this a contracting problem basically. It arises out of the fact that a simple 29 pence per minute at the wholesale level here is unable to represent the conflicting interests 30 that there are between the upstream and downstream parties, unlike a more conventional 31 market where one does not need to worry about those things. 32 Q I think that is what you are effectively saying in the first sentence of para.90. You say: 33 "This misalignment of incentives arises because NTS calls are a two-sided 34 market."

1 which I think is the point you have just made. 2 A It is, yes. 3 O Can I take you back to your third expert report of 6 April 2010, which is at tab 10 of this 4 bundle. You address the question of the two sided market in paras.27 through to 31, pp.12 5 to 13. 6 A I have it. 7 0 You will see in para.28 of that report that you say: 8 "The key feature of two-sided markets is that changing prices on one side of the 9 market affects the value of the service to the other side." 10 You explain by reference to a couple of examples set out in paras.29 and 30 that the point 11 is, and I think you have just made this point, that setting low prices on one side and so 12 attracting customers on that side, so say internet searchers, might make it more attractive to 13 customers on the other side, advertisers on the internet search engines, and you have used 14 that example in para.30. 15 A Yes. 16 Q You use that analysis to draw the conclusion in para.31 that narrow notions of direct cost 17 causation do not make sense in a two-sided market. As I understand it, you say, in effect, 18 that one might want to set a non-cost based price in a two-sided market. That is what you 19 are saying in para.31? 20 Α Yes, I think I give the, again, slightly whimsical example of a nightclub where women get 21 in for free, which is clearly not cost reflective. 22 Q You have described the internet search one as a whimsical example. 23 A They're all slightly whimsical, but I think the point is fairly clear. 24 Q You then use that analysis or those principles to then address the question in paras.32 to 37 25 of this report under the heading, "Efficient organisation of the NTS platform", and what you 26 are there doing is attacking Ofcom's Principle 1, which is that an OCP should be entitled to 27 recover its costs. As I understand it, essentially the point you are making in 32 through to 28 37 is that an OCP is not entitled to recover its costs in this two-sided market because it may 29 not be economically efficient to set retail prices so to allow it to do so, because narrow 30 notions of direct cost causation may not make sense in a two-sided market? Yes, that's right. 31 A 32 Then at 38 onwards you deal with a different point, what you call the free-riding incentives O 33 of OCPs?

1 Α Yes. There is a switch of gear here, because clearly I get to the specifics of the NTS market 2 and its arrangement from that point. 3 Q What I understand you are dealing with in paras. 38 onwards, is actually the externalities we 4 have just been discussing. 5 Α Yes, that's correct. 6 O You explain at the end of para.40: 7 "... if we look more closely at the pricing incentives of the OCPs we can see 8 that there is a worrying free-rider problem created by the 080 'brand' being 9 collectively created." 10 You say in para.41 that it is this free-rider problem that: 11 "... degrades the overall value of the NTS platform ..." 12 and you explain in the last three sentences of that paragraph: "The 080 'brand' is collectively created by all the OCPs, but can be diluted by 13 14 the actions of one or a few OCPs. Therefore, we have found an externality. An 15 OCP increasing retail price gets all the benefit, but only a share of the overall 16 grief." 17 Yes, I think has Ofcom has used this collective brand term in Simplifying Non-Geographic A 18 Numbers as well. It is essentially this horizontal externality to some degree. 19 You would agree, I hope, that this free-rider problem, as you have characterised it in this Q 20 section of your third report, is not about the relative balance of retail prices against the 21 prices paid by service providers for TCPs for the privilege of hosting services. We are not 22 talking about the same issue that you were talking about with the internet search engines or 23 the nightclub? 24 A No. The original example was really just teeing up the idea of a two-sided market and just 25 bringing that in here. Here this is an externality that is arising because of the specific 26 organisation or structure of the NTS market, and the fact that these number ranges are 27 essentially something that is used by – the prefix has to be meaningful for the industry as a 28 whole if it is going to work for customers, and that then creates, as a consequence, these 29 issues. 30 Q Yes, the free-rider problem, as I understand it, as you describe it here, is about the OCPs' 31 choice of retail prices and whether those retail prices are too high or whether they are varied

too much between the OCPs so that it degrades the brand, it is about the choice of ----

- A Again, you know, this is given the current structure, so with a sort of simple linear per minute price at the wholesale level, without any regulatory interaction, you know, what would happen, and there is this free-rider problem which I identify.
- 4 Q That sort of free-rider problem does not just occur in two-sided markets, it can occur in ordinary vertical supply chains as well, can it not?
- Well, okay hang on, there are externalities of various types can occur in vertical relationships. The details depend on exactly what you are talking about, yes.
- An example, you may have heard me put it I think to Mr. Myers before, is an example in a pure vertical supply chain where a retailer imposed an excessive mark-up on a good with no reference to the impact that that decision will have on the volume of sales by the upstream supplier, the double marginalisation or double mark-up point?
- 12 A Well again, that is case specific because that arises in a situation where the downstream
 13 retailer has some market power, so there is essentially a problem created by that. This is
 14 why I am saying it is quite specific on circumstances if one had a competitive retail sector
 15 which somebody is supplying a wholesale product into there is no issue, there are no
 16 externalities in that case.
- 17 Q That type of externality, the lack of incentive of the retailer in that case to take any account
 18 of its pricing decisions on the impact that might have upstream is a very similar externality
 19 to the one we have here ----
 - A This is a point which I think is actually quite useful, I mean I considered it was useful to draw out, that actually there are a lot of industries which have quite complex vertical contracting relationships exactly because of these incentive problems and actually telecoms in some ways is quite unusually simple in that regard, and the issues I think exposed very clearly by this case, which as an economist is interesting, obviously.
 - Q Let us look at how that sort of externality may be internalised the buyer goes direct to the upstream supplier to cut out the middleman, and I would say that similarly the externality in the present case on NTS calls may be internalised by service providers contracting directly with mobile operators?
- 29 A Yes, if that happened on a large scale that would be a possible way, yes.

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- 30 Q And you are aware that those sort of arrangements have been entered into between service 31 providers and mobile operators particularly in the 080 ----
- A Clearly that is referenced in the determination and also in my discussions with BT they told me about some of these arrangements. My understanding is that they applied to a relatively insignificant volume of calls at present.

- 1 Q You carried out research into that or that is just your general understanding?
- 2 A That is my understanding from speaking to BT.
- 3 Q From speaking to?
- 4 A Speaking to BT. I believe it's in the determination but I can't give you an exact reference,
- 5 I'm sorry.
- 6 Q So that is one way in which this externality may be internalised?
- 7 A Yes.
- 8 Q Another way is that most people, and I will not say all because obviously it is only most
- 9 people, have a fixed line as well as a landline and they can often choose which line they call
- from and avoid the high prices from mobile operators?
- 11 A I wouldn't call that 'internalisation', I think I'd call that a volume problem.
- 12 | Q It is just because it is a point that you make at para. 103 of that expert we are looking at?
- 13 A Which one
- 14 Q 103, p. 33, we are still on your third report, which is at tab 10, para.103. You are talking
- about the nature of the 080 calling decision because I think your third report was in the 080
- 16 appeal?
- 17 A Yes.
- 18 Q "If a customer is faced with a significant charge for a mobile-originated 080 call there is
- 19 always the option of waiting and making this call from a fixed phone." Then you make the
- 20 point which is specific to 080 calls that since this is a free call the caller does not necessarily
- 21 need to use their own 'phone?
- 22 A Yes.
- 23 | Q Any 'phone will do. Maybe I am not getting the jargon completely right, maybe this is not
- an internalisation of the externality, but it is a way in which the externality may be avoided
- and therefore goes to the significance of the externality?
- 26 A Well, not really. The point here is that these calls are being diverted over to fixed, and that
- is an inefficiency that is resulting. The point I think I was making here was actually it is
- 28 relatively easy for these, particularly I think it is the 080 calls, it is actually relatively easy
- for those to bubble off, to evaporate if an MNO raises prices because I could actually use
- somebody else's fixed 'phone to make an 080 call if I know it is going to be free, I don't
- even need to use my 'phone, so there may be quite a lot of alternatives. So then one would
- expect to see quite a strong demand response in the case of 080. I think the problem is
- obviously that has quite significant consequences, because if I am wanting to try and offer a
- service over mobile, which is specifically targeted at people when they are on the move I

have a problem. I think this diversion is not internalisation, it is actually an inefficiency that results.

- An inefficiency I think we have agreed on the retail side of the market. It is also possible, I am sure you would agree that customers, callers, can contact the service providers by a variety of different means if, for example, they want to contact the service centre at their bank, they can contact them on line, or go into the bank face to face, so there are other alternatives over and above the use of a fixed 'phone that one would want to take into account?
- A Oh, absolutely, yes. Circumstances will vary. I mentioned the alternate case just a moment ago, there could be a situation where somebody wants to target mobile customers. Equally, if what you are providing might be more appropriately done over the internet then maybe that's an alternative, that will vary from case to case.
- Q You see why I am putting these points to you is because of what you say in para. 70 of your seventh report, if we go back to that, at tab 14. You say there halfway through the paragraph:

"A service provider as no means to bypass a particular OCP if it sets high call prices. That OCP's customers become inaccessible to the service provider and the OCP has in effect control of bottleneck, therefore the service provider is reliant on reasonable retail pricing of each and every OCP."

As I understand it, what 'bottleneck' means in the technical term, is that there is no other — like a termination bottleneck — there is no other way of terminating, say, a mobile call, except by terminating it with the mobile provider in question, so that is a termination bottleneck. You are suggesting in effect there is an origination bottleneck in this case, and I am saying there is no such origination bottleneck, service providers do have means to bypass particular OCPs if they set high call prices? Do you agree with that?

A I think the issue is actually very similar to MTRs, similarly I could contact somebody through a different route other than ringing their mobile. I might be able to send them an email or do various other things, and I think the alternatives that you are talking about are sort of similar in nature to those alternatives. I think what I had in mind here was a sort of mirror-image nature of the problem here compare MTRs in the sense that, say, I am a service provider wanting to get somebody on a mobile to ring me, I really don't have any option but to accept calls from that network, otherwise I am losing volume, so that is my choice, I either accept that price – I have to accept that pricing really, and obviously losing volume doesn't solve the problem either. So that is the sense in which I am meaning it here,

1 so I think it is not an unreasonable word to use because of the analogy, the quite close 2 analogy that can be drawn with the MTR example. 3 Q So let us just examine that a little more closely if we can. You have agreed that there are 4 alternatives for the caller including making the call from a fixed line? 5 Α Yes, there may be. I think that probably varies by number range and it varies by service, 6 yes. 7 O And there is an alternative for the service provider, they can enter into the direct 8 arrangements with OCPs that we have seen? 9 A Well there may be, these are all questions about degree and materiality, really. 10 Q They are all questions about the facts and materiality, absolutely. 11 Another alternative for the service provider is that they use a geographic number if they are Q 12 particularly concerned about the high prices for mobile operators on the 080 range, they can 13 use a geographic number, we see often on numbers for customer service lines are 14 geographic numbers provided for people calling from overseas. It is also open to service 15 providers, if they are really concerned about the price set by mobile operators for these 16 number ranges, to use a geographic number for their customer service line for example? 17 Well it depends what they are trying to do I think is the answer. Clearly that is not an A 18 alternative for an 080 number, and anything where they're expecting to get a revenue share, 19 that is not necessarily an alternative. It's case-specific, really. 20 Q Of course. 21 A Yes. 22 Q What I am seeking to challenge is your statement that an SP has no means to bypass a 23 particular OCP if it sets high call prices and the OCPs' customers become inaccessible. 24 A Yes. 25 And the OCP has in effect control of the bottleneck - you understand the point. Q 26 A I understand the point. I think what I'm referring to here is really the calling relationship, 27 yes. 28 Moving from that, I'd like to move back to a point that we were discussing perhaps at the Q 29 beginning of my cross-examination, which is about setting prices for the bundle of services,

and a mobile operator which sets higher prices for 08 calls, we have discussed, may use the

morning, put to you that if the lower prices are not below the incremental cost of providing

revenue obtained from those higher prices to lower the prices for other services. And

I think Mr. Herberg yesterday, towards the end of the day yesterday and first thing this

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1 the services for those lower priced services, that you would not say that those prices are, per 2 is, too low, without any rebalancing. 3 Α Well, okay. I think that was addressed, actually, with the point which Mr. Herberg 4 and I discussed. I think there is a sense in which you can say it's too low. If one looks 5 through the operation of the NTS system to look at what the essentially — to use economics 6 jargon — what the opportunity costs are of that price decrease, yes, of that level of prices, 7 it's not, there's no free lunch here in terms of that lower price. 8 Q Well, as you say I think in para.50 of your seventh witness statement, I think you made the 9 point elsewhere as well: 10 "Consumers will always want to pay less for more, increasing their consumer 11 surplus, but this is not always desirable, as we also need to consider the costs of 12 meeting that demand". 13 It is necessary to consider the resource costs of what is consumed. 14 A Absolutely, yes. 15 So, I just want to address with you, finally, this point about taking a total welfare Q 16 perspective. 17 Sure. A 18 Q Would you agree with me that if one were — and we do not accept that one should in this 19 situation, but that if one were — taking a total welfare perspective, you would need to 20 analyse the total welfare benefits. From setting the balance of prices in a certain way you 21 would need to analyse whether that outweighed externalities in the market. 22 A Absolutely. That's, I believe, what the Ofcom model does by including the MTPE. 23 I believe that feature is there. 24 Q This is where perhaps our views diverge. 25 A Right. 26 Q Because, if you were going to carry out a proper full total welfare analysis you would not 27 just take into account those externalities which are consistent with the policy preference, 28 you would have to take into account externalities arising from other matters such as the 29 higher prices that might result for other mobile services from increased termination rates, 30 any externalities or changes in volume, for example, that might result from that part of the 31 rebalancing across the platform, would you not? 32 A I don't believe it's correct to call a rebalancing effect an externality, to be absolutely clear. 33 It is not what an economist would call an externality.

- Q Right. Well, I am afraid that is the first time ever in my career I have ever used the word "externality" in a court!
- 3 A I am happy to take it slowly!

- Yes, but you would agree that, if one were taking a total welfare approach, a cost benefit analysis approach, you would want to work out what the optimal retail price is by reference to all the possible costs and benefits associated with different prices and then compare the actual retail price with what you have determined to be the optimal retail price, would you not?
- A I don't think that's the case. I mean, this has been a matter of some debate where I think Ofcom and BT eventually agree where, actually, optimisation of this system is not the relevant standard. You know, it's not about perfection, it's about improvement.
- Q That may be Ofcom's position. The problem is when we are looking at your analysis, the total welfare analysis, as I understand it you say one should look across the whole platform, and one needs to take into account all the costs and benefits regardless of where they fall, whether they fall on BT's profits, that is a benefit one should take into account, one needs to look across the whole platform. And we are simply saying that if you are going to carry out a proper total welfare analysis you need to consider all costs and benefits; you need to consider the resource costs that you mentioned in para.50 of your witness statement; you need to carry out, in effect, a quantitative assessment of the extent to which the current prices diverge from the economically efficient prices; and you need to take into account all the costs and benefits if you are going to carry out that sort of analysis.
- A Okay. In my belief the framework here does include all costs and benefits. I mean, the MTP E looks specifically at what the implications would be for mobile customers. I think the issue, I don't have any disagreement with Ofcom about really what the list of effects might be. I mean, we have very significant disagreements about how we weigh them up and where we eventually get to the end answer, but I don't think I have a problem whatsoever with the identification of those effects. Equally, I don't think Ofcom has a problem with me about how I've set about identifying effects. It really does come down to issues of weighting and such like.
- 30 Q I will put the point I think I have already made to you again.
- 31 A Sure.
- Q If you are going to carry out that sort of weighing exercise, you have to quantify. You have to have a quantitative assessment of the different externalities costs and benefits that arise

from the current system of pricing and compare that — carry out a quantitative assessment of the current system of pricing compared to what optimal pricing might be.

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I'm not sure you do, to be absolutely honest. I think the issue here, at least partly, is how one divides up the costs and benefits because, clearly, if one fragments those in a way which makes things difficult to compare and to add up, then it becomes exceedingly important to start quantifying things, to basically reassemble effects that are difficult to compare. I think there is, you know, there are alternative ways of looking at this, and hopefully a flavour of this at least is in some of my reports — in that if one takes a slightly more conventional sort of approach to economic welfare and just looks at, you know, total welfare in the first instance. Apart from, for a moment, whether that is reasonable or not, let us take a "reference case" as it were, to use the terminology that Ofcom has adopted of a total welfare standard, here one can identify a predominant externality which is the issue about free riding and the brand dilution effects, the quantity implications that has for the service providers in terms of their not being accessible to the people they want to make themselves accessible to. And that really is the predominant consideration. So, one can immediately consider without even turning to a calculator or measuring anything, that there is a welfare failure and bringing those prices down as a result of this free riding problem between OCPs, bringing those OCP prices down would be unambiguously welfare improving, okay. Now, I think the issue then is, if one takes that as a reference case without using any data whatsoever, how does one modulate that to deal with other issues? Now, I think Ofcom has a particular view about what should be in that welfare assessment. What we could do is take my starting position, modulate it in Ofcom's direction and then some empirical data becomes relevant in a sense in what the effect of that change is. But actually only a relatively small amount of data. I mean, the primary issue is around how one treats service providers and to a much smaller degree the strength of the waterbed. But that is actually, relatively speaking a comparatively less important matter in the assessment. So, I don't agree that this requires, you know, an incredibly complex model. I actually think a quite traditional policy analysis approach can actually get quite a long way.

You refer to "the predominant externality" and you are effectively, I think, assuming that that, you say, because it is the one that Ofcom is concerned about, it outweighs other costs and externalities. You cannot make that assertion without having quantified the extent of that externality. We have discussed questions such as how SPs make work around the externality, how they may internalise the externality — all of which go to the substantiality of that externality, all of which go to how strong or otherwise, how weighty or otherwise,

- that externality is. You have got to quantify that externality and then you have got to balance it against other costs that might arise as a result of the rebalancing, other externalities that might arise as a result of the rebalancing, other costs, such as the resource costs that you mention in para.50 of your witness statement. You would have to balance up all those sort of costs and benefits, you would have to quantify the externality you are concerned about, not just say, "This is the externality that is consistent with Ofcom's policy preference, therefore it outweighs everything else", you have to carry out a proper quantification and balancing exercise.
- A Okay. I don't believe that is necessary, because I don't believe that there's any other significant externalities that have been identified. There haven't been any competitive particularly significant competitive failures identified here other than those which are related with the externality and free-riding problems for the OCPs. So essentially the only deviation away from a proper way, as it were, market outcome here is that which is created by the free-riding externality. So I think, therefore, it follows we are not providing an Goss* plan style solution here. What we are trying to identify is where normal market disciplines have failed and then to provide some correction. I think that is what the NCCNs do. That's what Ofcom believes that it's proposed interventions and simplifying NGNs would do. They are, as it were, trying to correct this particular the heart of the problem and then consequences flow from that to find normal processes of competition, I think.
- Q I think you would agree with me that you have not, in fact, carried out such a quantification or such an analysis?
- As I say, I think that actually careful argument and weighing of these factors can get you a very large way to knowing the directionality, and indeed to some degree the materiality and size of these effects.
- Q I think you have been in court the whole time. You will recall Mr. Myers' evidence in response to my cross-examination that carrying out such a quantitative analysis would be fearsomely difficult?
- 28 A Oh, I completely agree, yes difficult, yes, and I think marginally futile and probably unnecessary.
- 30 MISS SMITH: Thank you, those are all my questions.
- 31 | THE CHAIRMAN: Thank you very much, Miss Smith. Mr. Ward?
- MR. WARD: Sir, I see it is ten to one. I have got possibly more than ten minutes, but less than 20 minutes.
- 34 THE CHAIRMAN: Let us see how we go.

1		Cross-examined by Mr. WARD
2	Q	Dr. Maldoom, I wanted to return to the question of indirect effects. It might be helpful, just
3		by way of reminder, to look at paras.143 and 144 of your seventh report, which Mr. Herberg
4		began with yesterday. It p.53. Just to remind you, you say at the end of para.143:
5		"Therefore, these funds will flow through TCPs to SPs due to the operation of
6		inter-TCP competition.
7		What then do SPs do with these funds? This is less clear."
8		Then you talk about the question of competition.
9	A	Yes.
10	Q	When Mr. Herberg raised these paragraphs with you yesterday you accepted that this
11		second stage pass-through in particular was uncertain?
12	A	Yes, I think I spoke at some length this morning about unpacking the SP box and the
13		uncertainties that are within there, yes.
14	Q	What I would like to do, Mr. Herberg really focused on features of competition as a source
15		of that uncertainty. What I want to do is to suggest to you to you some additional factors
16		essentially derived from the question of timescale.
17	A	Sure.
18	Q	Can we start with the pass-through by BT to the SPs, which is, of course, the essential pre-
19		requisite of anything that we are talking about, we do have some empirical facts to go on,
20		perhaps rather unusually in this case. Firstly, we know that in December 2005 BT was held
21		to have SMP in NTS call termination and hosting, and that is the NCCN 500 document and
22		for the Tribunal's note that is bundle 3, tab 37, para.5.164. We know, of course, that things
23		have in some respects at least moved on. It is useful to look at the timescale on which they
24		moved on. What I would like to do is just show you briefly the determination in 080,
25		because at that stage Ofcom thought there was no relevant competitive pressure on BT and
26		other TCPs.
27	A	Yes, I am aware of the fact that there is a change in the determinations, yes.
28	Q	It may be that it is not necessary to turn the document up, but again, just for the Tribunal's
29		note, the 080 determination was in February 2010, and at that stage Ofcom thought there
30		was no incentive upon TCPs such as BT to pass the funds on, and the paragraph us are 5.91
31		and 6.9. That was February 2010. Then there was a change which we entirely accept in
32		August 2010, which was the date of the 0845/0870 determination. By that stage, Ofcom
33		accepted there was now at least the means for competition at the TCP level to allow the
34		potential for pass-through. Again, for the Tribunal's note, it is bundle B1, tab 1, paras.9.33

- and 9.34. So what we have is essentially a new development triggered by a change in BT's billing processes essentially. What I respectfully suggest is that that raises at least a question about how powerful and immediate the forces of competition will be that have been unleashed by that change. You are nodding, and for the benefit of the transcript?
- A Yes, yes, I understand where you are going, yes.

- Of course, the other ingredient in this is that any pass-through by BT, and of course it is BT that we are immediately concerned with, will require a commercial response by BT. In other words, there has to be a contractual response. What I would like to do is show you, and indeed the Tribunal, what BT has said about that. That is at volume 23, tab 8.1. The Tribunal will recall this document from some stage during the relatively distant past in the opening of these proceedings. There are a number of documents, and I think I do not need anything confidential, even though some of this confidential. I am afraid it is a little bit of a mess. At least my tab contains a number of documents behind 8.1. The one I want to show you is text which is questions and answers from BT. There are some numerical tables that I do not need. There is a document headed, "In confidence, BT Wholesale Community Only", which I do not need. The one I want is headed, "The Questions below refer to both the 0845 and 0870 number ranges", and it is text.
- 18 PROFESSOR STONEMAN: It I the first one.
- MR. WARD: It may be in yours, sir, I really do not know. I was certainly somewhere else when this was being discussed last time.
- THE CHAIRMAN: "The questions set out below refer to both the 0845 and 0870 number ranges." BT's response, looking at the bottom of the page, is 19.04.10.
- MR. WARD: It is exactly that, yes, and these were the answers given by BT when they were questioned by Ofcom under Ofcom's compulsory powers.
- 25 | THE CHAIRMAN: Do you have that, Dr. Maldoom?
- 26 A I've found it, yes.
- MR. WARD: I am very grateful. What I wanted to do was just show you the answers given by
 BT to question 3 on the second page. Mr. Read, I think there is nothing here marked
 confidential, but given the trouble we have had I would be grateful if you could confirm. If
 necessary, we could always pause there, sir. I do not think I am going to show him any
 numbers.
- MR. READ: Sir, it may be that there is a bit of confusion, so it may be that would be the point to rise and start at five to two.

1 THE CHAIRMAN: All right. I certainly would not want material to be leaked out to those who 2 should not hear it. How are we doing on timing? 3 MR. WARD: I have got another ten to 15 minutes after this with this witness. 4 THE CHAIRMAN: In terms of the broader picture? 5 MR. READ: Obviously the conversation I had, I think it is very unlikely we are going to finish 6 Professor Dobbs today, so we will be into tomorrow with Professor Dobbs. I suppose the 7 core issue is, and what I was trying to ascertain, is whether it is likely that Professor Dobbs 8 is going to take most of tomorrow, or a shorter period tomorrow. I think, from what I have 9 been told by the other counsel, that we should be getting rid of Professor Dobbs around 10 about lunchtime tomorrow, which by my calculation, certainly on my cross-examination, 11 because obviously the last three witnesses are effectively are going to be driven primarily 12 by Ofcom and my cross-examination, means that I think we should get them finished 13 relatively by the end of Friday. Obviously I want to ensure that we do reach that stage 14 because it would be very bad news if we have to trickle over into Monday with any more evidence. 15 16 THE CHAIRMAN: That was very much our thinking. Their praises are often not sung, but the 17 shorthand writers – I have spoken to them – are, I would not say content, able to assist us by 18 sitting a little longer both today, and we propose to finish at five o'clock today, rather than 19 half past four, and to carry that regime through by sitting at ten tomorrow, again finishing at 20 five, and again, if we need to, although we can always review this, on Friday from ten to 21 five. As I am sure we are all agreed, for the evidence to trickle over to next week would be 22 most unsatisfactory. 23 MR. READ: It may be, sir, that in fact doing that we finish slightly earlier on Friday, but I should 24 think the shorthand writers will appreciate that rather than find that as a problem. 25 THE CHAIRMAN: Yes, that may be so, but better safe than sorry, I think. 26 MR. READ: Exactly, sir. 27 THE CHAIRMAN: We will say five to two. 28 (Adjourned for a short time) 29 THE CHAIRMAN: "The best laid plans of mice and men"! One point has been made clear to me 30 over the short adjournment, whilst my offer of closing at 5 o'clock on Friday stands, it is 31 very much the last option and certainly Mr. Clayton, who has a flight which he would have 32 to change, would very much rather we finished at half past four or before on a Friday. Mr.

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Ward?

- MR. WARD: Thank you, sir. I see it is exactly 2 o'clock, so no harm done. Dr. Maldoom, we were talking about the sources of uncertainty in the indirect effect, and I invited you to look at a BT document, where BT answered questions about its plans for revenue sharing with SPs going forward. Mr. Read has confirmed that this particular section I want to refer to is not confidential, and the gist of this is that it shows that there are real doubts about how quickly or comprehensively BT itself would move towards revenue sharing with the service providers. What I would suggest is that when BT is considering what to do it is going to face some of the same kind of issues we have been talking about under the MTPE in that it would obviously like to retain the revenue if it could by way of profit maximisation. I think you indicated 'yes'?
- 11 A Yes, I have read the relevant questions, yes.

- Q So there is at least a question about how strong the pass-through would be or how immediately it would take effect?
- 14 Yes, I think obviously the question is what BT's competitors do. If there is no competitive response why would BT do anything, and I think these questions really just underline that.

 16 presumably the mechanism here for revenue pass-through is to do with replication of similar tariffs by other TCPs. It's probably worth saying that that goes to the indirect effect as defined by Ofcom which is the revenue transfer effect, I mean clearly there is volume effect which does not require BT to do anything.
 - Q uite, so that is the first layer, if you like, that is required to get any pass through into the hands of callers at the end of the chain, and the second layer is, of course, service providers, and there again, if they receive any benefits from BT, the question then becomes how strong the competitive pressure is upon them to pass any benefits from that through to their own customers?
- Yes, I have had an extensive discussion with Mr. Herberg about that this morning, I think you know my view which is, in brief, I do not think we should open that box if we do then I think we don't have any particular view to think it's uncompetitive and we also need to think about innovation.
- Q So the picture is essentially one of uncertainty when one comes to look at the indirect effect?
- 31 A I think there are clearly uncertainties, yes.
- I want to focus now on the question of timeline. If there are going to be beneficial effects how quickly they might be felt. That is not something you have explicitly expressed a view on, I think?

1 Α No, and indeed, I have no idea what the usual contractual arrangements are in this market in 2 terms of lengths and so on, so I don't know. 3 Q But we do know, of course, and I know you have been in court for much of this hearing, 4 that Ofcom has published its draft proposals, and intends to publish final proposals later this 5 year, I think we heard it, it slipped back to September from Mr. Myers? 6 A Yes. I heard that. 7 O And we also know that those draft proposals which no doubt are still subject to consultation 8 and on which no doubt Ofcom retains an open mind, nevertheless contain nothing that 9 remotely resembles the NCCNs? 10 Α In what regard? 11 I am sorry, let me be more specific, what they are proposing are essentially retail price Q 12 controls, and the de-linking of 0845 and 0870 from geographic numbers? 13 Clearly some aspects of the proposals have got nothing to do with what we have been Α 14 talking about, on other aspects maybe the effects are not dissimilar. 15 Q The facts may not be similar but the mechanism is something completely different? 16 A Indeed, this is a contractual market mechanism rather than a regulatory intervention with the 17 NCCNs. 18 Q Just for the Tribunal's note, in case it is necessary those proposals are summarised in bundle 19 13, tab 3.1 p.10. What we are going to end up with if Ofcom acts on its proposal is 20 something very, very different, direct retail price controls, and what this means then is that 21 even if one allows for a period of implementation which, no doubt, will be necessary, BT's 22 proposals will only be in effect at best for a fairly short time, even if they win this case? 23 Α That seems very difficult to know, I don't have a particularly strong opinion about this, 24 because I don't know what exactly might happen with this consultation process, I presume 25 there could be objections to what is proposed and, indeed, litigation around that. 26 Q That cannot be ruled out. 27 I have no idea what the time frame might be as a result of all of that. A 28 What we have in front of us, in fact, is in a sense a claim for reimbursement by BT if Q 29 successful from the period of the judgment back to the past, where we know there has been 30 no pass-through of course because the MNOs contested the changes and successfully raised 31

the dispute with Ofcom?

Yes, I suppose that is probably true.

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- And if BT obtains a payment at the end of the litigation there is really no reason to suppose that is going to result in any particularly direct benefits to consumers via the service providers?
- A I have no idea how service providers have responded to the NCCNs being proposed, clearly they would have to take a view about what they think the outcome of this process we are here today conducting, I mean if they take different views about the likely different judgments from the Tribunal then presumably they may or may not have done different
 - Provided the puzzle in terms of just looking at the factual uncertainty is that even if BT wins this case, and even if there is no regulatory action, and if the MNOs want to comply with what is said to be the incentive structure of these NCCNs, they will need to do some significant work in order to be able to do so. That evidence is in a statement of Mr. Bowey of Vodafone which, if it is of assistance I can show you, but the gist of it is essentially considerable systems' work would be needed in order to do so. All I want to put to you is there are therefore very real practical reasons to doubt whether these consumer benefits through the indirect effect will ever, in fact, materialise?
- 17 A In a sense you put to me a lot of uncertainties ----

things in anticipating that. I really don't know.

18 Q Yes.

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- A -- but within those there are scenarios these would have effect. Clearly, there is the possibility the proposal in simplifying NGNs become bogged down and, indeed, if something like this kind of ladder pricing arrangement were implemented, I don't know, maybe that may prove sufficiently successful in addressing these problems that that changes the need to intervene over the period between now and when any intervention might become likely. That is a possibility. I wouldn't like to put any probability on that.
- Q I am certainly not asking you to, I think we are agreed that all one can say with any confidence is the picture is uncertain?
- 27 A I couldn't disagree with you on that.
- Q Thank you. I want to just move on to one further final topic which I can also deal with very briefly. There have been a lot of questions today about the mobile tariff package effect?
- 30 A Yes.
- I am not going to reopen any of the issues that have already been discussed. I want to ask you about one specific aspect of your evidence on that.
- 33 A Sure.
- Which I think has been only touched on, and that is paras.135-136 of your seventh report.

1 Α Sorry, 135 and 136. 2 Q Yes, pp.50-51 under the heading "Materiality". 3 Α Yes. Right. 4 Q I just remind you, if I may, or try and summarise the gist of what you are saying. You said: 5 "In Maldoom 5 I raised the obvious point that any impact on the pricing of other 6 services must be small, as 08X origination makes only a small contribution to an 7 MNOs' revenue base". 8 And then you give some estimated percentages. And then, again, you make the same point, 9 at 136, this is where you are in a sense debating Mr. Myers' evidence. 10 Α Yes. 11 Q "Mr. Myers has not disputed the smallness of any price increase caused to other 12 mobile services" 13 Now, it is right, is it not, that the numbers we are talking about here are relatively small as 14 compared to the bulk of mobile business because, of course, these are a relatively small 15 feature of the mobile call picture. 16 Α Yes. I think, you know, proportion of revenue is probably the easiest way to look at that. 17 Q Yes. But, of course, what we have been looking at in this case is two sides of an equation, 18 in other words, where the balance of costs and benefits will lie. And just as the detriment, if 19 you like, in this form of, on this side of the equation may be quite small, then so, too, the 20 benefits on the other side will reflect that as well. 21 Α What, smallness? 22 Q Rather there is a sort of comparability of size that applies on both sides of the equation. 23 Α Okay, let's just be clear here. You've got the NTS call market, you've got the service 24 provider market. I mean, those are roughly comparable. And then we have this ancillary 25 market which is other mobile services which is massively larger than either of those two 26 things. So, I think it may be sensible to think about rough balance in terms of service 27 providers versus NTS callers, but clearly that is a minnow compared to the mobile sector as 28 a whole. 29 Q Then the effects on both sides are going to be comparably modest when one compares them 30 to, say, the scale of the geographic call business. 31 Α For a mobile operator's perspective, yes. From a service provider's perspective, no. 32 I mean, it's presumably quite a big deal for them.

2		sums are too small, too significant, rather, to be just ignored. Would it be helpful if I just
3		showed you?
4	A	Yes. I'm not familiar with that.
5	Q	Mr. Stone's witness statement, which is in bundle C2 at tab.41, firstly, if I could ask you
6		just to turn up para.13. He talks about:
7		"Vodafone's revenue and margin targets heavily influence the formulation of pricing
8		propositions. For this purpose, the relevant margin is a gross margin — that is, revenues
9		less outpayments to third parties",
10		And then over the page to para.14, in the fourth and fifth line he talks about how separate
11		targets are applied for the various business segments. And then, in his witness statement, he
12		essentially discusses Vodafone's likely response to this proposal.
13	A	Yes.
14	Q	And at para.29, if I can just show you that:
15		"In the first instance, it is important to understand that the retail revenues
16		generated by calls to 080 number ranges in the post-pay segment of [the] customer
17		base are material".
18		Then he gives certain figures, which are of course confidential. And, just for the Tribunal's
19		note, the comparable paragraph in Mr. Stone's second witness statement is para.40, which
20		gives the relevant figures for 0845. And the Tribunal has seen this but, Dr. Maldoom, you
21		may not have. Then, at the end of the paragraph he says, just over the page, a certain
22		confidential figure, and it is the last three lines:
23		" can be the difference between positive and negative revenue growth".
24		Then he contemplates three choices.
25		(i) do nothing;
26		(ii) reduce its retail prices; three, increase its retail prices for other services.
27		(iii) increase its retail prices for other services.
28		Then he talks about his various potential lines of action. And then, going to para.32:
29		"The first of the courses of action [ie do nothing] is simply not feasible because of
30		the potential impact on Vodafone's margins For reasons that I have described
31		earlier, revenue and margin targets are significant commercial objectives for both
32		internal and external stakeholders. Given that the BT charging structure would
33		represent a significant revenue and margin challenge, I would be expected by

And you have seen, or I can show you if necessary, that Vodafone's evidence is that these

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1 Vodafone's senior management to develop a response to mitigate Vodafone's 2 exposure to the charging arrangements". 3 And then he talks about the other two options. 4 Yes. A 5 O Reducing retail prices or increasing, and in para.33 he talks about tariff rebalancing. In the 6 fourth to seventh line: 7 "I would need to consider making compensating adjustments to other elements of 8 the overall [package]". 9 And then he talks about how tariff rebalancing could take a number of forms, and he gives a 10 number of examples: per pence per minute charging; increasing monthly charges; 11 increasing handset charges. 12 "The use of pence per minute charging would effectively cause customers to fall 13 outside their bundle more quickly Previous internal analysis indicates that 14 [some confidential information]". 15 And then he says: 16 "Since other mobile operators would be facing a similar challenge following the 17 introduction of the BT charging structure, I would expect them to be looking to 18 adjust their pricing too, and I would therefore not be inhibited from contemplating 19 an increase in ... charges". 20 So what we have there, of course, is evidence from the horse's mouth that the mobile tariff 21 package effect is a reality. I do not want to re-visit the argument about how effective it 22 would be. 23 Α Yes. 24 Q But, one can see immediately that Vodafone would certainly be going after it. 25 Yes. I don't dispute that there is likely to be a rebalancing effect. Α 26 O And what he indicates there is that, even though the sum may not be vast by the standards of the eye-watering numbers that we are used to in mobile telephony cases, they would want 27 28 to recoup this sum however. And there are various ways he gives, purely by way of 29 example, as to how that might be done. So, I really want to put two points to you. One is, it 30 cannot be dismissed as so small as to be immaterial from the perspective of the MNOs. 31 Secondly, there is, of course a danger that the effect of tariff rebalancing will be to make 32 consumers pay more for other services they actually care more about than these 08X 33 numbers. Would you accept that? 34 Maybe if I just deal with the second point first. A

Q Sure.

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A I think the position is one where the margins that are being earned on 08 calls, those margins are excessive in the sense that they are the result of this free riding problem and the externality problems that we have been discussing; so in that sense there already is a waterbed in operation, in that other prices may have been pushed down by those rents earned on NTS calls. So, in a sense, this is just the re-balancing issue again. I mean, if one eliminates those rents, then inevitably that's going to cause some dislocation, clearly, and for your client undoubtedly would have some pain to go through in deciding what to do and what to change. But, in a sense, it is eliminating an inefficiency, a problem that's already there.

On the first point, on this materiality point, I think, this has gone back and forth between myself and Mr. Myers a little bit, and I think it is probably worth just going over the history of that a little. I think the issue there is really, it's about the price change, which is probably quite small, versus the quantity it applies to, which is really quite large. I think the reason that Mr. Myers and I kind of batted this backwards and forwards is that, in my way of looking at welfare effects, I'm not that bothered about the higher revenue for customers because I find a corresponding benefit, whereas Mr. Myers is.

- 18 Q It must be the difference between the total and the partial welfare analysis.
- 19 A Indeed. So I think that is how that issue has arisen, and why I have brought this point up.
- Q But, if one accepts the partial welfare analysis, recognising that is ultimately a legal question.
- 22 A Indeed.
- Q If one accepts it for the purposes of this discussion then there is a prospect that consumer welfare could, in fact, be damaged by the adjustments within the bundle that we are talking about?
- 26 A I don't see it that way, because I see this as removing a current inefficiency.
- 27 | Q It tackles an efficiency on the one hand, but that comes at a cost on the other?
- 28 A Yes, but the inefficiency itself already considers costs, as it were. So I think we can see a net benefit in removing that.
- There may be a net detriment in so far as consumers are getting the opportunity to pay less for the 08X calls that they do not much value at the cost of paying more for other types of call, or other types of features of the basket, that they are more concerned about?
- A I don't think we have any reason to think that customers don't value making those calls.

 They're quite a large volume, if you look on the fixed side.

1	Q	It is a question of what they are willing to pay to have those calls. Can I just show you very
2		briefly the Ofcom survey evidence. I am not sure if you have seen it before. It is in bundle
3		B2, and it is at the very back of tab 23. At the front of that tab is Vodafone's skeleton
4		argument, and it is an annex to that skeleton argument.
5	A	I have Vodafone's skeleton argument, but nothing behind it.
6	Q	Does someone have a copy to hand to the witness. Could you try B1, tab 13, it is in a
7		different place in my bundle.
8	A	Yes.
9	Q	Hopefully the front page is "Non-Geographic Call Services Review Research Document,
10		October 2010".
11	A	Yes, it is. I've not seen that before.
12	Q	Let me show you what it is about. If we look at the first substantive page, "Introduction":
13		"Ofcom is undertaking a strategic review of NGCS and commissioned research
14		to support this.
15		The overall aims of the research were to:
16		* gain a better understanding of consumers' awareness understanding, use and
17		perception of non-geographic numbers – among both fixed line and mobile
18		users; and
19		* assess whether NGCS have any impact on consumers' decision making and
20		calling behaviour."
21		Then under 1.2 you will see there was a qualitative phase of a small focus group and then a
22		quantitative phase with a much larger sample.
23	A	Yes.
24	Q	I would just like to show you three of the questions that they were asked, starting at p.22 of
25		the survey result. Question 39:
26		"If all calls to 0800 numbers were free from mobiles, there would be a cost to
27		the operator. If your total bill stayed the same would you like to have 0800
28		numbers free from your mobile even if other calls (or the line rental)became
29		more expensive?"
30		A large number of people said no, both among mobile with fixed and mobile only. A point
31		I just mention as Mr. Herberg emphasised it on behalf of Ofcom is that some people
32		obviously misunderstood the question because they said under the qualitative answers, "I
33		don't care if there's a cost to the operator, there's nothing in it for us". But of course it is

not talking about a cost to the operator, it is talking about, "If your bill stayed the same",

- that was the premise of the question. Several thought the question lacked credibility, "How can my bill be the same if I don't call them very often?" Α That would be seem a reasonable objection. Q So there is some confusion about the question undoubtedly, but then the next question, question 40 over the page: "If all calls to 0845 and 0870 numbers cost the same as a call to a standard geographic number, there would be a cost to the operator. If your total bill stayed the same, would you like 0845 and 0870 numbers to be priced in this way, even if other calls (or line rental) became more expensive." "No" again is the answer. Then finally on the next page, question 42: "Which would you prefer? To keep the costs of the 08 and 09 calls the same as they are now or reduce the costs of these calls and increase the cost of local and national calls?" The answer again was, "Keep costs the same". Obviously this is just survey evidence and one can quibble about what it means. It at least raises the question as to whether there could be a cost in terms of consumer welfare if one adjusts within the bundle, away from the position that the MNOs have reached, through competition?
 - A Yes, absolutely.

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- Q So what we are left with, I suggest, is the question that Ofcom has been grappling with throughout, which is whether the benefits will be net benefits to consumers overall or a net detriment, and that, I suggest, is the question that remains entirely uncertain.
 - Okay. In some ways I'm quite sympathetic to your point in that competition between mobile operators clearly can be expected to try and do good by their customers. So, in a sense, if they have some rent somewhere one might expect that to turn up in customer benefit somewhere else. That does not have to be a complete effect that there can be some pass-through. So I think it is not impossible that rebalancing made some customers worse off. I think there are other considerations though. There are also distributional equity considerations. I think we can see from simplifying NGNs that there are actually mobile only households that are disproportionately poor. I think that is a legitimate concern for Ofcom to have. Then the other side of this is really, even if factoring that in, there may be some small adverse effect from rebalancing. The reason that this is being done is to actually achieve efficiency between the two sides of the market and actually ensure that the NTS system in providing a conduit to those customers works properly. So we actually have a whole side of customer benefits and indeed caller benefits through the services which

1		were being made available, and that is not represented in this question whatsoever. So I
2		don't think this really informs – it's something which in any case I think is a possibility
3		within the welfare analysis framework that both I and Ofcom have adopted.
4	Q	So just a possibility of course and only part of the picture of course, but I simply suggest
5		that it is just a further source of uncertainty about whether the net outcome will be positive
6		for consumers?
7	A	I don't see that as a significant source of uncertainty. Everything is uncertain.
8	MR.	WARD: Thank you very much, I have no further questions.
9	THE	CHAIRMAN: Thank you very much, Mr. Ward. Mr. O'Donoghue?
10	MR.	O'DONOGHUE: Sir, I have no questions.
11	THE	CHAIRMAN: Thank you. Mr. Read?
12		Re-examined by Mr. READ
13	Q	Just three or four questions in re-examination, Dr. Maldoom, and then your time in the
14		witness box, subject to the Tribunal, whether they have any questions, will be over. Can I
15		ask you, first of all, about figure 8. You were asked a series of questions yesterday about
16		figure 8, and you said at one point – perhaps it might be useful if you turned up figure 8.
17	A	That's Mr. Myers' figure 8 and my figure 2.
18	Q	It is your figure 2.
19	A	I have it.
20	Q	You were asked a series of questions yesterday by Mr. Herberg about this, and you were
21		asked in particular about whether it was fair to draw any inferences from this. You said,
22		and this is on the transcript at day 8, p.77, line 18:
23		"Well, I consider that Mr. Myers invited these comparisons to be made."
24		Can I ask you to take bundle C2, and turn to Mr. Myers' statement, which can be found in
25		that bundle at tab 28, and can I ask you to go to p.82.
26	A	Yes, I have it.
27	Q	Can I ask you to look at para.267:
28		"There is a substantial measure of agreement between Ofcom and Maldoom 5
29		about the analysis of the Dire and Indirect effects, if taken together. Thee are
30		benefits if the post-NCCN price of 0845/0870 calls is lower than the current
31		price (and detriments, if the price is higher). The size of the Direct effect in
32		Figure 8 reflects the greater weight placed on it by Ofcom relative to the Mobile
33		tariff package effect, because of the policy preference in the externalities."
34		Now, what did you glean from that?

Α I mean clearly there is a question about how weight might be reflected in the figure. Essentially weights is an issue of the units one might measure something in, so I took from that that the direct effect was larger in that figure but obviously there is what does one compare this against because if this figure only shows the direct effect then that would not be a meaningful statement; it had to be bigger than something of which the natural comparator in my mind would be to look at the MTPE (Mobile Tariff Package Effect) at a corresponding price, in particular the full reduction case is the natural comparison to make, in that the waterbed part of it gets transferred across – I am going to ignore consumer surplus issues and quantity changes, but to a rough approximation, to the first order of approximation one can say that the waterbed part of the MTPE goes over to the direct effect and then one would mark that up with the externalities that are there, which is essentially the sort of backward reverse engineering which did in my report, because one has to try and understand how to make that comparison because it is obviously not immediately obvious. Did you consider it is possible to carry out a welfare analysis without any assessment of the Q

- Q Did you consider it is possible to carry out a welfare analysis without any assessment of the various sizes, the direct effect and the MTPE?
- A Not really, I mean you wouldn't be able to really reach any conclusion unless one did that.

 The diagram is a helpful diagram in a sense, I mean one can actually place a lot of the
 discussion which we have had today around this diagram, because essentially it is showing
 those three effects and they should be commensurate and one should be able to total them.
- 20 Q You were asked earlier on this morning by Mr. Herberg if the service providers were consumers of hosting services, and I understood the answer you gave was "yes"?
- 22 A I did, yes.

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- 23 Q Are they consumers of anything else at all?
- 24 A They may well be, yes.
- 25 Q Is that your answer, or do you want to elaborate any further?
 - A The way that the value chain operates, if I want to put up an 080 number, say, I need to basically have a hosting arrangement and I need to have an arrangement with a TCP. Now exactly how that is achieved will depend on arrangements, it may be that the hosting and the TCP provider are one and the same, it may not be, so the exact arrangements with who needs to procure what will vary, but the service provider needs to get those services.
 - You were asked by Miss Smith a series of questions about internalising the externality. Can I just ask you to take up volume B1, and at tab 1 there is the final determination in the 0845 case. Can I ask you to go to p.38 in my bundle, it is around about para. 4.7 or 4.6, which may be p.37 in your bundle?

A I have it.

Q And within para. 4.6(i) there is a footnote 70, and footnote 70 indicates:

"In other words, there is an externality effect between the OCP and the SP. In some circumstances, this externality could be internalised through arrangements between SPs and MNOs, although we understand that this does not currently happen."

Do you have any information that suggests that the contrary is true at all?

- A I don't, no, I mean I think I mentioned the zero rating DWP example, I can't quite remember my answer to Miss Smith. My understanding was that was a sort of initiative rather than a negotiated internalisation, but apart from that I am not aware of any other arrangements.
- MR. READ: Thank you, Dr. Maldoom. I do not know whether the Tribunal has any further questions?
 - PROFESSOR STONEMAN: Was it this morning we were talking about Ramsey pricing, and the suggestion from EE is that the mobile operators undertake Ramsey pricing, and my understanding of Ramsey pricing is it is a way of pricing the various products in your portfolio in order to cover the overheads in a market that has increasing returns to scale, and therefore you cannot price at marginal cost because you would never cover the overheads if you priced at marginal cost, and the prediction is from Ramsey pricing, if you undertake Ramsey pricing the price of each product in the absence of any spill-overs will be equal to a multiple times the inverse of the demand elasticity, the demand elasticity to the firm, that is. So you would have the price cost margin, price minus marginal cost over price is equal to some factor K over the elasticity of demand?
- 24 A Mmm.
- 25 | Q Is that a reasonable summary of Ramsey pricing?
 - A It is a reasonable summary, I think it is worth just emphasising that the classic Ramsey pricing model is one of optimality, so it is looking at how to optimally recover cost from a social welfare perspective. The issue with the mobile operators is a slightly different one because they are obviously competing with other mobile operators, so in that sense they are not Ramsey pricing by the kind of classic 1930 Ramsey pricing paper by Frank Ramsey. What they are doing is looking at trying to recover their fixed costs subject to the disciplines of competition which obviously means they may not even recover their fixed costs depending on what the situation is.
 - Q That competition should show up in the demand elasticity on the bottom line?

2 Q So my statement is correct? 3 It is correct because the trade-offs they face in trying to recover that fixed cost are Α 4 equivalent to those in the classic Ramsey pricing model. 5 Q It is what it said in Wikipedia the other day! (Laughter) 6 Α No, you had the essence of it! 7 O The connection I want to make is to something that Mr. Pratt raised yesterday about the 8 Lerner Condition. The Lerner Condition is a basic plank in Ian Dobbs' evidence and is a 9 means by which one ties together marginal costs, elasticity of demand, and the other factors 10 one needs to calculate the impact upon prices of the change in the NCCN? 11 A Indeed. 12 What I am worried about is whether that Lerner Condition has any meaning at all in a world Q 13 in which mobile operators Ramsey price, or whether there is a term missing? 14 Α I think it has just as much validity as it always has I think is the easy answer, but one needs 15 to interpret things quite carefully. You could think about mobile competition as being 16 essentially monopolistic competition amongst a number of firms who are multi product 17 pricing. If you do that one can do the mathematics and one gets an optimal pricing 18 condition which looks a bit like the Lerner index condition, except it is a lot more complex 19 in that it has to consider what the implications are of changing the price of one product are 20 on the demand for other products. 21 Q Forget spill-overs, so there are no spill-overs? 22 A If there are no spill-overs then there is not really any revision of the Lerner index term. 23 But there is a K term because under Ramsey pricing the price cost margins equalled K over Q 24 the elasticity of demand instead of 1 of the elasticity of demand? 25 Okay, this goes back to my original point about the difference between a welfare optimising A 26 model and a competitive model. If one looks at a welfare optimising model clearly one has 27 this, as you said a "K" term or whatever, which is essentially the shadow price of the 28 constraint that there are zero profits because you have to look at a distortion from marginal 29 cost pricing to achieve the zero profit condition. That has an associated shadow of price, 30 that constraint, and it has to be reflected in the optimality conditions. If you go to a 31 competing mobile operator, there is no constraint that they make zero profit, they can make 32 positive profits, they can make negative profits. The point is what they do if they multi-33 product price against the demand that they face as an individual firm, so essentially one gets

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It would, yes, indeed.

1 then a set of Lerner Conditions which you don't have any shadow price associated with a 2 profit constraint in there. It is actually the operation of competition itself that will then end 3 up with, hopefully, a close to zero ... (Both speaking at once). 4 Q We had quite a lot of ... that the mobile operators are not making excess profits. 5 Α Yes. I mean, the UK mobile industry is thought to be amongst the most competitive in 6 Europe, there's no doubt about that. 7 Q So that that argument does not apply, surely. 8 The argument that —? A 9 Q That the Ramsey prices that are being claimed are non optimal, or the K does not exist. 10 Α The problem is that the — okay, each individual firm, essentially, you could model their 11 pricing as essentially a multi product pricing learner condition without needing to worry about a constraint to zero profit. That is an equilibrium emergent behaviour that comes 12 13 from competition, okay. On the other hand the Ramsay pricing model clearly looks at kind 14 of efficiently recovering those costs. Now, they are not the same thing because it depends 15 on — they are not exactly the same thing because it depends on the mode of competition. 16 I think there is a perfectly reasonable argument to say that they are not that different. So, 17 one would hope that competition amongst mobile operators would produce a sort of 18 simulacrum of something close to Ramsay pricing. But there's absolutely no guarantee that 19 they end up the same, because they're two different questions. 20 Q All right. Thank you. 21 A Thanks. 22 Q Thank you very much, Dr. Maldoom. 23 A Thank you. 24 MR. READ: Sir, my next witness if Professor Dobbs 25 IAN DOBBS, Sworn Examined by Mr. READ 26 27 28 Q You are Professor Ian Dobbs, and I think your address, it can be your business address for 29 these purposes, is Newcastle University. Is that right? 30 Yes. Α 31 O Can I ask you to take bundle C1, and go to tab.1, and there is a paper prepared by you in the 32 course, not of the any of the appeals themselves, but in the course of actually providing 33 evidence to Ofcom. Although you have not got a signature on it, insofar as it is relevant, do you stand by the evidence in this paper? 34

- 1 A I do, yes.
- 2 Q And, at tab.2 there is a follow up paper of February 2010. Likewise, there is not a signature
- at the end of that but, again, insofar as it is relevant, you stand by the evidence in that paper.
- 4 A Yes, I do.
- 5 Q At tab.3 we have the first of your expert reports, which was prepared for the purposes of the
- appeal in the 080 matter, and if we go to p.10 of that report there is, I hope, in your bundle,
- 7 a signature at the end of it.
- 8 A Yes.
- 9 Q Is that your signature?
- 10 A Yes, it is indeed.
- 11 Q And do you adopt that report as your evidence in this case?
- 12 A I do.
- 13 Q Yes. And at tab.4 there is the paper that you submitted to Ofcom after the draft
- determination the 0845 dispute, prior to the supplementary consultation. Again, it is not
- signed, but it is dealing primarily I think with the spill-over effect. Insofar as necessary, do
- you adopt the evidence in that paper as your evidence in this case?
- 17 A Yes, I do.
- 18 Q At tab.5 there is a paper that I think you submitted after the supplementary consultation that
- came out in the 0845/0870 matter before the final determination, again which does not have
- a signature. Again, do you adopt that material as your evidence in this case?
- 21 A Yes, I do.
- 22 | Q At tab.6 there is the expert report served with the notice of appeal in the 0845/0870 matter,
- and if one goes to p.40, I think it is, in the bundle I hope your bundle has a signed version of
- 24 your statement. That is your signature there, is it?
- 25 A It is.
- 26 Q And do you adopt that as your evidence in the case?
- 27 A Yes, I do.
- 28 | Q Finally, at tab.7, there is the expert's report that was served with the reply, and if you go to
- 29 p.46 there is a signature. Is that your signature? And, again, do you adopt that report as
- 30 your evidence in this matter?
- 31 A Yes it is. And, yes, I do.
- 32 | Q I just want to ask you one question in chief. I think you were in the Tribunal yesterday to
- hear the evidence of Mr. Pratt. Is that right?
- 34 A That's correct.

- Q Do you also have, perhaps I ought to also introduce, do you also have there, and I am not 2 quite sure where it will have actually ended up in the bundle, but I think perhaps we ought 3 to just adduce it and refer to it, the note of your meeting between Professor Valletti and yourself. Is that there as a separate document up there? I am not sure it has made it into the 4 5 bundle, so it may be a separate document in itself. We ought to actually find a place to put 6 this in the bundle. Can I suggest that perhaps it ought to go at the end of bundle C1 at a 7 new tab.25 after Mr. Martin's statement. I think that would probably be the best place to 8 put it in the bundles.
- 9 THE CHAIRMAN: That seems very sensible. Let us do that.
- 10 MR. WARD: So, hereafter that is going to be referred to as "C1, tab.25".
- 11 Yes. I have it before me. Α
- 12 And just so we are clear about this, is the one that you have there signed solely by yourself? Q
- 13 Α It is, yes.

- 14 The reason it has not been signed by Professor Valletti is that he has obviously been away O 15 out of the country.
- 16 THE CHAIRMAN: Yes, we saw the covering letter that accompanied that.
- 17 MR. READ: I just wanted to make sure we were talking about the right version there. (To the 18 witness) And, does this note form your agreement with Professor Valletti over the material, 19 including the three notes that are actually attached to that document?
- 20 Α Yes.
- 21 Could I ask you look very briefly, then, at note C there. Do you have note C attached to it? Q
- 22 PROFESSOR STONEMAN: The bottom of the page —
- 23 The bottom of the page? Α
- 24 MR. READ: No, sir, I was actually referring to note C itself. I had hoped that that document 25 actually had the material with it, but obviously not.
- 26 A No, this is just the account of the meeting.
- 27 Let me try and do this another way round. Let me ask you to take out CAT bundle 13. Q
- 28 Sir, I think probably the three notes that are actually referred to in the agreed note ought 29 also to go into that —
- 30 THE CHAIRMAN: Into tab.25.
- 31 MR. READ: I will try and make sure that my solicitors organise that after today.
- 32 THE CHAIRMAN: Very grateful.
- 33 MR. READ (To the witness): Can I ask you, then to go to I think para. A291, this is
- 34 CAT bundle 13, tab.3.1. Would you go to para.A.2.91, which is p.149. Do you have it?

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- Q Professor Dobbs, I should say that if you have any trouble actually following any of the material in the bundles, so that we can actually help you. If one looks at para.A2.91, we see a table beneath it, Tab A2.9, which sets out various figures. Those various figures are, although I do not think you have a copy of it up there, referred to in note C. From that you make certain deductions about the relative elasticity of demand, certainly in the case of DWPs' pricing being reduced to zero?
- A That's correct.
 - Q As I said, you were in the Tribunal yesterday when Mr. Pratt was asked about it and he came up with some reasons why he thought this was not particularly helpful for dealing with the question of elasticity or otherwise. Do you have any comments on that?
 - If I recall, I think he said that the data ought to be viewed with caution. I suppose what I infer from that would be that this is an example where prices for all MNOs are reduced to zero, and one could make the argument that that is fairly transparent to customers. Therefore, that may not be indicative of the response one would get if a single MNO reduced its price from whatever its current price was to zero. That is a question – I think that it's a reasonable point to make. The issue seems to me to be one of price transparency to the customers. Clearly if an individual MNO reduced its price to zero and nobody knew, I don't suppose many customers would, in the short run at least, react very much. I would expect that in so far as the MNO advertised its pricing change, in so far as time passed and customers noticed their announcements as they make the call as to what the price is, and so on, the information would come to them. Therefore, in the case where it was as transparent then these figures are relevant. They are indicative of the fact that the right hand point of demand at a minimum indicates an arc elasticity of, I think it is, about minus 2.5, that's at a minimum, because we are looking at the week ending 5th March, 43 per cent; week ending 4th June, 52 per cent. The figure is climbing. I wouldn't like to put too much weight on particular weeks and particular numbers, but it's certainly indicative of that fact. Also, in the calculation that I undertook, I made the assumption that all of the effect was one of substitution from fixed to mobile. There is the possibility of actually expansion in the total number of calls as a consequence of the fall in price. So for all these reasons I think these figures are certainly, at a minimum, of some interest.
 - Q I think you also mention the question of vulnerable consumers as well. Does that have any impact at all on your view of the figures?

- A Not really. As far as I understand it, we are concerned primarily about the aggregate
 demand effects, where it comes from and who respond and who do not is at the moment, in
 terms of this particular issue, an issue. Obviously the issue of vulnerable consumers is
 something that may crop up at various points, and there may be concerns and Ofcom has
 expressed concerns in particular areas of the particular thing that we are talking about, but
 here I don't think it is particularly relevant.
- 7 MR. READ: Thank you, Professor Dobbs, if you would just like to wait there you will be asked some more questions.
- 9 THE CHAIRMAN: It is Mr. O'Donoghue, I think.
- 10 MR. HERBERG: I am going to first, but leaving certain sections to the MNOs.
- 11 THE CHAIRMAN: I understand.

Cross-examined by Mr. HERBERG

- Q Good afternoon, Professor Dobbs, I am sure you have worked out that I appear for Ofcom.
 I am going to focus mainly on section 4 of your seventh report, measuring overall benefits,
 and counsel for the interveners will then ask you questions on other parts of your evidence.
- 16 A Section IV?

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- Q Section IV of your seventh report. It might be worth having that open, which is tab 7 of bundle C1. What I would like to start by doing is clarifying with you the welfare approach that you are advocating in your report. Your preferred position ----
- 20 A Could I cut in and say that I don't particularly advocate total welfare without any qualification.
 - Your preferred position, as I understand it, is, indeed I was about to suggest a variant on a straightforward total welfare approach. These are not particularly technical terms, I am just speaking as a plain lawyer. Under what one might think of as a straightforward total welfare approach, you would be summing producer welfare or consumer welfare without distinguishing them, except possibly as to weight, but leaving that aside for now you are not, as I understand it, suggesting that. Indeed you say that you accept I think this is para.134 that Ofcom does not have to value £1 to one individual as to £1 to another individual. It might be a good or bad approach but it does not have to do that. Your approach is that different sources of benefit to the same individual should be valued equally. Is that right so far?
 - A I think there is a good case for making that point, yes.

- Ofcom, in principle, could, therefore, going along with that approach, decide to value benefits going to producers much less highly or not at all, subject to valuing all sources of benefits to individuals equally. Of course we are going to see where that leads us. That may lead us back to a very similar position, but that is the approach you are taking, is it not?
 - A In so far as producers can be differentiated from consumers. I think that's an open question as to whether one can.
 - Q You say that for an individual who is a BT employee or shareholder, for example, and who also has a BT fixed line or is a BT mobile customer, Ofcom ought to value equally every £1 he or she receives, whether as salary, dividends or discount off his phone bill?
- I am making the point that to the individual they will value those £1s the same, and I ask the question of Ofcom why they would choose to value them differently.
 - Q Yes, but you are not just noting how the individual might value them, you are taking from that a normative proposition as to how Ofcom ought to have approached this case, are you not?
 - A What I am doing is saying that in the final analysis one can almost make value judgments about the weighting that one wishes to put on monies going to different individuals, and indeed weightings on the different sources of money. It's possible to do that, but, in my opinion, if money goes into an individual's pocket it is quite hard to make a distinction as to the source, unless they could have a footnote somewhere saying that perhaps the individuals themselves might actually value £1 differently depending on its sources because of, for example, moral considerations like I mentioned blood diamonds or cocaine smuggling, or something like that. If money was coming to the person illegally, or whatever, then possibly they, themselves, would not value it the same. Indeed, a regulator or somebody else might not value these things the same either, but putting that all to one side, money into a person's pocket, £1, £1, dividend, or pension provision, or whatever, reduction in the price for mobile phones or whatever I consider it a reasonable proposition that they should be counted equally.
 - Q So that it is a reasonable proposition that Ofcom ought to value all these separate pounds in the same way as you say the individual themselves would value all these different pounds, that is the step that I have been establishing you are making there, because after all what we are dealing here with is the potential criticisms to Ofcom's approach?
- 32 A It is a criticism of it.

33 Q The next step in your argument, as I understand it, and I think this is at para. 130 is that 34 pretty much all individuals in society are telecom customers, and it follows from that, if

1 your approach is taken that pretty much all individuals have to be brought into account in 2 respect of all the benefits received. That is right, is it not? 3 Α That's what I have written. 4 Q I am not trying to put anything controversial to you, I think I am just trying to identify the 5 steps in your own argument? 6 Α It is a position and it is open to anyone to disagree with it, to take an alternative value 7 judgment, that is true. 8 Because once you bring an individual into account, as Ofcom has done with telecom Q 9 customers, for example, in their analysis you say all their sources of benefit should be 10 valued equally. Even if Ofcom has, as it is entitled to, made a decision to focus on benefits 11 to telecom customers or consumers, it must focus on all the benefits that accrues to them so 12 that in effect one ends up with the same result as the total welfare perspective, does one not? 13 Mmm. A 14 In a society where everyone has phones? Q 15 Well, putting to one side the idea that you may wish to weigh moneys going to less A 16 advantaged citizens more highly. 17 Q Yes, weight considerations. Indeed, you describe your own argument ultimately as a total 18 welfare approach, at 133, although I take the point ----19 My approach, I would describe it as "the approach" ----A 20 Q The approach that you are advocating, if I can put it that way. I do notice that you 21 introduced this argument quite tentatively at para. 124, you say: 22 "There is a powerful case in telecoms' market for taking a total welfare 23 perspective. Indeed, one can argue that taking a telecom customer perspective 24 should be identical to taking a total welfare perspective." 25 And it is that latter argument that you are presumably looking at now. You say: "One can 26 argue ..." would be fair to say that reasonable people could take different views about 27 whether you should take this approach or not, or would you go further than that? 28 It depends on how reasonable they are ----A 29 Q Let me put it another way, is it, would it ---- (*Both speaking at once*) 30 A Individuals can always take a different position because this is a situation where we are 31 talking about value judgments, and it is not possible to say that value judgments are correct, 32 true or false, they are things that we either agree to or disagree over, and the main thrust of 33 what I was trying to put forward here is to say: "I quite like the total welfare perspective, 34 but it makes things simple for one thing, and I have to say I always try to make the point

that a lot of the dispute we have had so far has been over the relative weightings of the benefit going to different types of individual, and whether they should be counted or not and by how much and a lot of the difficulty that has arisen has been down to that point. Now, it seems to me that what I have done in this annex is to point out that this is a fairly conventional approach that economists have. It is true that many regulators do not take this approach, but that does not alter the fact that it has some force, and I was presenting the case for that position

Then one can move to the other, if you like, extreme where one completely discounts

Then one can move to the other, if you like, extreme where one completely discounts producer surplus and look at the consequences of taking that approach and then one can examine whether it makes a big difference to what we conclude about the case before us which of those perspectives one takes, or indeed whether one takes some sort of weighted average of the two.

- Q Indeed, because what is before this Tribunal, and I understand very clearly the way you are putting it about the different approaches, the role of this Tribunal is to decide whether Ofcom has, as it were, gone wrong in its final determination, it has gone wrong on fact or law, or gone wrong on an exercise of judgment of discretion. It is therefore very important for the Tribunal to understand whether you are simply talking about potential different approaches; you, as an expert economist, think it would be more rational and sensible to prefer your approach, but do you accept that many regulators take something akin to Ofcom's approach, and that it is something that reasonable people can disagree about?
- A I would entirely agree with that and that is why the final section of the Dobbs' 7 report looks at the consequences of, if you like, two extreme versions, the one where you take equal weight to produce a surplus from profits, the one where you give no weight to significant chunks of profit, although I do note that implicitly in the Ofcom's analysis there is some weighting to, for example, the business customers ----
- I will come to some of that detail, yes. Can I then pursue the implications of your approach just a little further. Is it the case, if BT makes a lot of money at the expense of mobile customers because of the NCCNs, which is not of course BT's primary case, it says prices will be competed down and they will not retain extra charges. Hypothetically if they do and prices then come all the way down and things stay with BT, if BT then paid a £1 million bonus to its chief executive as a result, Ofcom should treat, as it were, BT's profit, money paid to the chief executive, because he has a telephone, in the same way as benefits to mobile callers?

- A This is the logic of the total welfare, I accept that, and I agreed the point that one can put different weights on different individuals, and if one knew the particular individuals who were making the gains, and one could put different weights on them, that is something that within the total welfare perspective is perfectly acceptable.
- 5 Q That is a way of getting rid of some of the ----
- A Yes, the key point in this hypothetical case where there is no reduction in 08X prices, and money does go to BT for sure it comes out somewhere. It either goes into, just through the budget constraint it comes out through either additional investment, which will lead to future consequences for customers, potentially benefits they're asked to roll out in broadband services, and so on and so forth ----
- 11 Q Yes, of course, I picked a prejudicial example?
- A I am just making a point, yes. It could go to bailing out the substantial pension deficit of BT. Where it goes to one could put weights on all of those individuals.
- And the weights then would become the important issue, because you say at para. 129 that nobody has suggested in this case that distributional concerns are of critical importance to the dispute and by "distributional concerns" you are talking about different weights, are you not?
- 18 A Yes ----
- 19 Q Different weights result from distributional concerns potentially?
- 20 A I don't think the distributional concerns have been made a major plank of the investigation.
- 21 Q No.
- A I think Ofcom have considered the particular customers' issues of this nature as part of their weighting. I don't know quite how they have weighted these things and how they have then added the weight benefits is left obscure, as far as I can see.
- Yes. So, for example, one area where Ofcom has actually taken distributional concerns into account is its treatment of SPs and monies left with SPs, they say, they have given less weight to than monies competed through to benefits to SP customers.
- 28 A Yes.
- 29 Q That would be an example of distributional concern. But, is it not right that, you are right
 30 that, apart from examples such as that, distributional concerns have not been raised as
 31 being of critical importance in the present dispute. But would you agree that that is
 32 precisely because Ofcom have taken a much more narrow consumer welfare approach. If
 33 they adopted Professor Dobbs' total welfare approach, then the issue of distributional
 34 concerns would become immediately very obvious and important, because the sort of

- questions about a frivolous example being the BT executive's bonus but one can multiply a hundred other examples, would then become real and pressing. Is that right?
- A Are you saying that the total welfare approach leads one into having to give weightings to different individuals, whereas the consumer approach does not? Is that what you are saying?
 - Q I am suggesting to you that, yes, distributional concerns become much more important. It is not one or the other. They become much more relevant if you bring into account or, on a total welfare approach, a much wider range of interests in your welfare calculation.
- 9 A I think Mr. Myers made a fairly lengthy contribution in, I think, Myers 2.
- 10 Q Yes. His annexe.

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- Where he discussed the sources that can underpin the case of having unweighted welfare objectives, that is to say where one pound to one individual counts the same as one pound to another individual. And I think, if I recall, he does discuss considerations like the distribution of income and wealth, and if one takes — this is going back some many years, and I have to dig back into my memories because it's interesting — one can construct an argument in which, if one makes the assumption that the distribution of income and wealth has been in some sense optimised, then one can as a consequence formally establish that one pound to one individual should be treated equally with one pound to another individual. Now, no-one, I think, would make a strong case for saying that our current distribution of income and wealth is optimal, but at the same time we have democratic processes; we have governments that make choices about taxation and so on; and income is re-distributed across individuals; and we have seen this increasingly in the last ten years. So, there's an open question as to precisely how much weight you want to put on one individual versus another, but by and large most economists, if you look at most studies that delve into measuring the consequences in markets and the welfare consequences in markets of particular things happening, will treat individuals equally — that is to say the benefits are simply added up, and that it is actually quite unusual to apply differential weights. For one reason, differential weights tend not to get universal assent.
- Q Of course. But, as you yourself said a moment ago when I raised the chief executive example, "Well, it could all go down to a matter of weight". You yourself were suggesting that the apparent oddity of taking that into account could be dealt with by way of different weighting, were you not?
- A No, you were saying that. I was saying that one could.
- 34 Q One could.

- 1 A If one took that view, I would daresay that that individual might disagree with that weighting.
 - Yes. I am sure there would be disagreement about all these issues. Let me put it to you this way if the Tribunal, unlike Ofcom, were going to follow your approach and look at this matter on a total welfare basis, the Tribunal would have to consider very carefully a series of complicated questions about what weight should be given, if any differential weights should be given, to a range of different interests; mobile profits; BT's profits; benefits to callers; benefits to service providers and so forth, would you accept that?
 - A I think that I have made it fairly clear that unless there are good reasons to deviate from it, the simple criterion in which one pound to whomsoever is counted equally is a reasonable welfare criterion to use, and that one should deviate from that. I say should, I mean, common practice in economics is that, although if you go back to, I don't know, Paul Samuelson's foundations in 1947, he queried the value of consumer service, and so on, it is commonly used as a measure of the gain to consumers, and that is aggregate consumer surplus where one pound of gain to one individual is treated equally with one pound of gain to another individual; and I would suggest that this is a very widespread welfare standard.
 - I am sure that may be true in economics terms. What I am going to invite you to look at is this matter slightly through Ofcom's eyes and in the view of Ofcom's remit. I am not going to ask you a question of law, but I want to focus on potential problems of your approach, looking at it from the role that Ofcom has to play.
- 21 A Yes.

- Q Because your underlying assumption is that all, let us focus on BT, BT produce a surplus, eventually works its way through, one way or another, to individuals who are telecoms customers, ie people on whom Ofcom has chosen to focus, because pretty much everyone has a phone, and that is the way they all come into account. That is what you say at 132A.
- 26 A Yes. According to that argument, yes.
- Q When you wrote that section, did you consider that not all of BT's employees work in the UK, or even in the European Union?
- 29 A I'm sure that is correct.
- 30 Q BT claims to operate in over 170 countries (its annual report says).
- 31 A I'm sure that is correct.
- About one-fifth of its employees work outside the UK its annual report says. Do you say that Ofcom, when it is considering consumer welfare, ought to be considering some sort of worldwide consumer welfare approach? Or would you accept that actually Ofcom's

1 statutory duties require it to focus on the much narrower geographical range of consumer 2 welfare? 3 Α In the UK. 4 Q Indeed, or it might have arguments about the European Union — let us say at least at the 5 widest European Union. 6 Α Okay. I'm not an expert on the statutes that govern Ofcom's remit. As I understand it, it is 7 UK citizens, I think that is the phrase that I have seen which, in principle, allows one to put 8 a zero rate on individuals outside of that geographic boundary. 9 Q Indeed, you would have to, would you not? You would have to, otherwise Ofcom would be 10 considering people it should not be considering. 11 I think this is a matter of, it's a matter of law. The thing is, that it's difficult for me to Α 12 comment on it because, as a matter of economic welfare I'm not comfortable with the idea 13 that one should totally ignore the rest of the world's population when thinking about making 14 any kind of social adjustment. 15 Q I can certainly see that from a philosophical perspective, Professor Dobbs, but we may have 16 a narrower problem in this case. Of course, not all BT's shareholders are in the UK either. 17 BT has American depository shares listed on the New York Stock Exchange, holdings 18 there. Investors around the world have exposure to BT shares. BT's largest institutional 19 shareholder is JP Morgan Chase. Now these people, if you are looking at a total welfare 20 analysis, cannot come in, can they, on Ofcom's remit? 21 Under the criteria that you've mentioned, that's correct. A 22 Q Now, you criticise Ofcom's approach, obviously, partly for not following the approach that 23 you have outlined. But also you have specific concerns even looking at what you call 24 "partial welfare", and what Ofcom might prefer to call "consumer welfare". In particular 25 one criticism you make at para. 136 is that, you say Ofcom is ignoring — 26 Α Sorry, this is —? 27 Sorry, I am always talking about your seventh report, unless I say otherwise. It is para.136 Q 28 in the tab that I think is open in front of you. And you say that if Ofcom is going to ignore 29 BT's producer surplus, that it should also ignore producer surplus of MNO business 30 customers. 31 Well, in so far as MNOs' business customers are also large organisations. A 32 O Exactly. That is your point, and that is what you say at para.136. 33 Α But Ofcom does not.

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I beg your pardon?

1 A Ofcom does not.

- Q I know. Would you wait until I ask you a question, Professor Dobbs, then we might get on, because I have not asked you a question yet.
- 4 MR. READ: I think that the witness must be allowed, if he is talking, to actually finish what he is saying before the question is re-put.
 - MR. HERBERG: On that occasion I had not asked a question yet, and I am afraid we are under time pressure and there are some very long answers being given, so I am trying to exercise some control in the questions I ask.
- 9 THE CHAIRMAN: I think there is something for both. Professor Dobbs, if you could wait for a question, and, Mr. Herberg, I know you will wait for the answer to be given.
 - MR. HERBERG: I will, sir. (To the witness) All I was doing was identifying what you say in 136, and now let me ask you a question about it. If you assume that Parliament has told Ofcom to further the interests of consumers and has defined "consumer" in such a way as to include MNO business customer, that would defeat your criticism, would it not?
- 15 A That would be my criticism? Sorry, could you repeat the question?
 - Q That would defeat your criticism. If it were the case, and I am not asking you to pronounce on as a matter of law, that Parliament has effectively instructed Ofcom through its statutory duties to further the interests of consumers, and has defined "consumer" in such a way as to include an MNO business customer, then you would not have an objection to Ofcom doing what they have done?
- 21 A That's correct.
 - Q If you confine your perspective to the communications market for a moment, which is what Ofcom is regulating, MNO business customers, when they are using mobile phones are not producers in the relevant sense, are they? They are consuming mobile calls in the same way as any other residential caller?
 - A Well, I would disagree. I would say that, as employees, the consequence of individual employees having mobile phones, is that it promotes the efficiency in the organisation of operations of the business, and that translates into consequences for the business in terms of its profitability, its operational profits. It may translate into price effects to its customers, and so on, and in so far as it translates into profitability, and so on, and bearing in mind that many of these businesses are, as you were mentioning about BT, large organisations which transcend geographic boundaries, the benefits are going to people who are all over the world. So the idea that not counting any of BT profit, because some individuals, shareholders, are from overseas does not hold, does it? You have to say, "We want to count

1		at least some of it", and likewise, for the mobile network operators, given that many of the
2		largest organisations with registered offices in this country, as we have already said, have
3		employees elsewhere, the report profits elsewhere. There are all sorts of things going on.
4		Benefits are spilling out all round the world. Again, they are being counted as though they
5		are just the same as retail customers.
6	Q	Can I ask you again to focus on the question I am asking. I was asking you about MNO
7		business customers, people calling on mobile phones. I am not asking you about profits of
8		MNOs or profits of BT. I was asking you about MNO business customers. Those will not
9		typically, they might be, be telecoms firms. The results of their calls may be feeding
10		through to the profits of the businesses. At that stage it is not a telecoms issue. They will
11		be consuming phone calls in the same way as a residential consumer – consuming them in
12		that sense?
13	A	The point is this surely: the retail customer, whether making a call of receiving a call, gets
14		the benefit from the call. Perhaps they're calling their mother or their son, or whatever, and
15		they get benefits that one can clearly say. They do have some personal satisfaction from it.
16		The employee of the business may also get some pleasure out of talking to colleagues, but
17		the primary function of those calls is the promotion of more efficient operations within the
18		business.
19	Q	Thank you. Can I ask you about a completely different subject. I assume, Professor Dobbs,
20		that when you wrote your reports in this case you took the approach in accordance with
21		your professional duties as an expert witness that it was your obligation to give your honest
22		opinion on the matters which you were instructed to consider – is that right?
23	A	Yes.
24	Q	I ask that, because at para.141 to seek to co-opt Professor Valletti to your cause by
25		suggesting that
26	A	Sorry, this is paragraph?
27	Q	Paragraph 141. You do that on the basis of saying that "one", and I assume that means you:
28		" feels bound to observe that if Professor Valletti had disagreed with my
29		position on this point, he would not have missed the opportunity to remark upon
30		it."
31		You explicitly accept that the issue which you are talking about there was outside his remit?
32	A	Outside his remit.
33	Q	Outside his remit.
34	A	I would agree with that.

- You are right, it is outside his remit. Are you saying that you would expect him, contrary to what you have just said is your conception of your professional duties, to include in his report an issue on which he was not asked to opine on?
- Well, perhaps it was ill-advised of me to make that comment, but in deciding the remit it's normally a two way process. What an expert is asked to respond to is a matter between the party with whom they are agreeing that remit, and very often the issues that are contained within the remit are those on which one substantive points to make.
- Q Professor Valletti has given a witness statement on the very same issue which he assisted
 Ofcom with at the time of the final determination. His scope has not effectively changed
 since then. He has not designed a remit to answer your report, has he?
- 11 A No.
- Q Would you accept that it perhaps not a reasonable inference to draw that Professor Valletti does not disagree with your comments?
- A I would say that one can draw no conclusions about Professor Valletti's views on the matter.
- 16 Q Thank you. Can I ask you to look at another topic with me, the treatment of mobile
 17 operators and BT producer profits and the flowing through of those profits. Can I ask you
 18 to look at figure 4 in your seventh report, which is on p.39. It is a very helpful diagram
 19 showing all the impacts flowing through. You say it is unclear whether Ofcom ignored
 20 benefit to mobile ----
- A Could I just make a small interjection? I think the red lines at the very top of the diagram are going from SPs up to shareholders. I intended that to be orange.
- 23 | Q This is part of my question. You intended it to be orange in other words, unclear?
- 24 A Unclear, yes, I apologise.
- Q It was unclear to me whether it was orange or red, I was going to ask you that. Can I ask you on that basis: you are saying then that it is unclear whether Ofcom ignored benefits to mobile shareholders and employees? I am starting with the bottom line actually.
- 28 A I agree, because I found it very difficult to discern whether they did or not.
- Q I am putting to you your view rather than putting to you that that is the case. I am saying that what you said and you are agreeing with that?
- 31 A That is my view of what I felt Ofcom it was unclear as to whether Ofcom, what weight, if any, they were putting on those stakeholders.
- You heard Mr. Myers give evidence. Would you now accept, if he is right as representing what was in the report, that you can change the orange line at the bottom to red dots in

1 other words, you have given evidence that they have not taken into account, first of all, the 2 very bottom line ----3 Α I think that's probably true. 4 Q -- flow through to MNO shareholders? 5 Α That's probably true. 6 O You say that Ofcom ignored or heavily discounted the pass-through of benefits from BT to 7 its customers. We are now going to move up into the middle of the diagram? 8 Α Yes. 9 Q This is the so-called fixed tariff package effect, is it not? 10 Α Yes, I think I regarded it as largely discounted. 11 I think Ofcom would say that it did not ignore it, it accepted it I principle? Q 12 A No, no, we discussed it ----13 It made a finding that it did not think there really would be any – that is para. 7.46, 7.54 of Q 14 the final determination? 15 A Yes. 16 O I think you also do not seriously challenge Ofcom's finding, do you? You say in footnote 17 13 on p.13 "a debate can be had about the fixed tariff package effect" but I do not think you 18 engage in detail in that debate? 19 No, I do not. A 20 Q Then I think you suggest that it is unclear, and now we are getting to the top of the diagram 21 and the point that you just mentioned. You suggest that it is unclear and I think therefore 22 orange rather than red, whether Ofcom counts benefits to service providers to the extent that 23 they are being treated as profit rather than passed on? 24 A When I wrote this report that was my view. 25 Yes, and that was at para. 19. Indeed, at para. 19 you go rather further than that I think, and Q 26 there you positively assert that Ofcom has placed no weight on distribution to service 27 providers, slightly in contradiction – I do not think it really matters ----28 Yes, yes. A -- but you do say in para. 19 in the second bullet point, the second sentence: "Thus, for 29 Q example, no weight is placed on any distribution of money to SPs"? 30 31 Α Yes. 32 O In the diagram it is orange, but I would suggest to you that in the light of Mr. Myers' 33 evidence, and I do not think we need to go through the archaeology of this, you accept, do

you not, that Ofcom's case is that they did in the final determination take SPs interest into

1 account even where those interests were not passed through to customers, but they gave 2 them less weight? 3 Α Yes, I think that's correct. 4 Q Can I then ask you some questions about the use that you have made about Mr. Myers' 5 famous diagram? You say at para. 145 that it is a trivial matter to sum-up the totals, but of 6 course that assumes in a way that the diagram is supposed to be to scale, and you fairly 7 accept at para. 146 that it may be merely illustrative? 8 A Well it is in one sense illustrative and in another sense there is some not quantitative, but 9 qualitative information contained within the diagram, in particular at the current price or 10 pre-NCCN price it's a matter of I should say common agreement that the direct effect, the 11 benefits to that must be zero, that's the definite point. 12 Yes, at the pre-NCCN price, yes? Q 13 Α And it's a matter of, I think, agreement between Ofcom and perhaps not all parties but most 14 parties, that at the point of let us say 12.5ppm, i.e. when the price falls to the bottom 15 step ----16 O Yes? 17 -- that the size of the direct effect is larger than the size of the mobile tariff effect. A 18 Q Yes? 19 The things that we have in this diagram, the relevant magnitudes are relevant. The actual A 20 shapes of the curves I would agree, and I am sure that Mr. Myers would agree with me, that 21 we don't really know the precise shapes of the curves for sure, we don't even know for sure 22 that the mobile tariff package effect is a flat line, but I chose not to dispute those numbers. 23 What I wanted to bring out was the idea that actually this diagram is very helpful for 24 discussing what is at issue, and the key point is that the diagram indicates there must be a 25 break-even point where welfare is just balanced. That is the first point we can make. The 26 diagram makes clear that there must be a break even point. The second point we can say is 27 that break even point must lie between the pre-NCCN price and 12.5ppm. 28 Can I just ask you a question about that before you go on to the next stage? You heard Mr. Q 29 Myers give evidence about how he had drawn up this diagram did you not? You heard 30 what he had to say? 31 My recall is not that good, but yes, I did. A 32 Q You were here and you heard him ----

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I was here, yes.

- I just wanted to be sure that you heard what he said. I absolutely accept everything you say and, indeed, one does not even need the diagram, it is logic Ofcom accepts BT's case that if prices fall to the lowest rung and one obviously starts at the other end with no change of welfare, so thus far there is no difficulty and the diagram, as you say, illustrates that. What I would like to ask you in particular is do you accept, in the light of Mr. Myers' evidence, and there is no criticism attached to whether or not one should have inferred that before, I am not after that point, but in the light of Mr. Myers' evidence do you accept that you cannot seek to quantify relative magnitudes from his diagram and, in particular, you cannot use it to derive a figure like 14.6ppm as you do in para. 153 from the diagram?
- A I would suggest that one can say that. The left hand side, the relative magnitudes of the direct effect, and the mobile tariff package effect, one is greater than the other. We can debate the size of the indirect effect and therefore we can debate the point of intersection. One of the benefits of my added curve, the one that nobody seems to want to actually take account of is the one where we add up the three curves and get the overall assessment I am not claiming that this is the answer ----
- Q Well I am ----

- A Let me just finish. I'm merely saying that it is actually quite beneficial to go through this as thought experiment or a process, because without adding things up you really don't know where you are, and I would like to make reference to Dr. Walker's report (Walker 3) where he produces the same diagram and says: "Oh well, we can change the magnitudes radically" and nothing is changed. But actually when you look at it the reason he can say that is because he has not added the three things together. In fact, when one looks at the overall welfare you see that the intersection point, the break even point has moved radically to the right and that means that things are very different ----
- Q Professor Dobbs, I am ----
- A Let me just finish because we are primarily debating whether the direct effect takes us down to 12.5ppm or 17.5ppm, these are the two steps that are critical, and when one changes the sizes of these things one pushes in pretty much every case the break even point further and further to the right. If one disputes the size of the mobile tariff package effect then it pushes it to the right. If one puts greater weight on the externalities, the benefits of reducing prices to a common price that pushes it to the right. If one puts greater weight on the indirect effect that pushes it to the right and, by the way, if one assumes that the pre-NCCN price is further to the right that also pushes the break even point to the right. So in all the circumstances I find this diagram very helpful, because what it tells us is that when

- we look at different ways of weighting welfare, and we have been through this, and you have been critical of the total welfare measure, if we go from the two extreme cases: no weight to profits, some weight to profits through to full weight to profits, we find that the break even point moves in general to the right.
- Q Professor Dobbs, that was a very full answer, but it very conspicuously did not even try to answer the question that I asked you. Can I ask you now to try and listen very carefully to what you are asked and answer the question that you are asked, not the answer that you would like to give to the Tribunal, you will have plenty of time if necessary in reexamination with your own counsel for making any points you feel that you have not been asked that are relevant to be put to you, but I am afraid I must ask you to concentrate on the question that you are asked. I asked you a specific question about whether you can derive from this diagram in the light of what Mr. Myers told you about the way it was written, whether the figure of 14.6ppm which you purport to derive in para. 153, can fairly be derived, in the light of what you heard, and I am afraid you did not begin to answer that.
- Q I think I did. I think I said that one cannot ----

- MR. READ: I really must object, sir, because he did answer that question and then he moved on for the explanation afterwards. And if we are going to have a debate about what he did or he did not actually say, then we will have to go back to the transcript and actually see what is on the transcript. I do not think it is right for Mr. Herberg to be putting to this witness that he did not answer the question when on this side we believe he did answer the question and gave an extension to it.
- MR. HERBERG: I am afraid I cannot be stopped from putting to him that he did not answer the question because Mr. Read happens to believe he did. I do not want to get into, can I ask him to —
- THE CHAIRMAN: No, no. Ask the question again, Mr. Herberg.
- MR. HERBERG: Thank you. Can I ask you, because I certainly did not understand, if it was answered, whether you do maintain the proposition that you can derive a figure of 14.6ppm from Mr. Myers' diagram, given what you have heard about the way it was compiled?
- A One cannot derive a break-even point for sure, without drawing the curves in a particular way, and one can have more curvature and therefore a different intersection point. The intersection point always lies between 12.5 and, in this particular case, 20.5 pence. One cannot infer that precisely 14.5 per cent is the break even point, I agree with that.
- Q Pence per minute, yes. You cannot derive 14.6ppm. You cannot derive any specific points per minute, can you.

- Q You can derive it from the diagram. Whether one puts any great weight on that is another matter.
- THE CHAIRMAN: Professor Dobbs, perhaps I can ask this. Normally a graph is an illustration of data in a table, the graph in a sense is derived from that data and it is presented visually because it is easier to understand. Here, we do not have any such data, and it would be wrong, do you agree, to go back to the cross-examination of Dr. Maldoom to take out a rule and to seek to identify a precise and specific price from the graph, because one simply does not have the data to do that. What you are saying is that this is a helpful graph in a rather more general sense.
- A Yes, that's correct. And I believe that one of the great difficulties we have in this case is understanding how different effects are weighed and measured; and in particular that they are never added up except in somebody's head. And that's why I find, at least to discuss the possible range of outcomes, it is useful to have a graph that doesn't tell us the answer, but at least gives a little bit of a handle on orders of magnitude and directions of effect.
- Q I understand exactly what you are saying in terms of accumulating, as it were, the different effects. But you would accept that that cumulation will suffer from precisely the same frailties, if I label them as such, as the original lines in the Myers graph.
- 18 A Well, I suppose, if I was pressed, I would suggest that we know for sure that the break-even 19 point cannot be that close to 12.5p because it would require quite a lot of curvature in these 20 benefit functions and so on, to induce a break-even point very far to the left. But I do take 21 the point.
- Q Indeed that was actually a very helpful illustration of the difficulties that we are all grappling with.
- 24 A Yes.

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- 25 Q Because one does not have the empirical data, one is driven to saying the point of
 26 intersection may be here, it is more likely to be further away for whatever particular reason
 27 you may advance. But one cannot say by reference to this particular data, "I am drawing
 28 the point of intersection here".
- 29 A Yes, I would think this is correct. Of course, if one changes the welfare measure, one gets a rather different picture.
- 31 | Q That, I completely understand. Can I ask perhaps one more question before we break?
- 32 THE CHAIRMAN: Yes, of course, Mr. Herberg.
- 33 MR. HERBERG (To the witness): Just one other question about the graph, Professor Dobbs.
- You, I think, say that your work in any event is premised on the assumption that Mr. Myers'

1		diagram was based on the reference case, in other words 100 per cent waterbed, zero price
2		elasticity. There is nothing actually to suggest that his graph was based on that, is there?
3	A	I understood it to be that it was based on reference. Actually not a lot hangs on the issue of
4		what particular case it was, because what this diagram illustrates is a sort of general
5		structure, a general tendency which is to say that — as I have said before, and I will just
6		repeat it very quickly — that the direct effect is greater than the mobile tariff package effect
7		at the bottom step, and the direct effect goes to zero — it achieves zero. So I think that is
8		still useful information. It contains information.
9	Q	Yes. Thank you. Sir, I have got one more topic for this witness, but it might be convenient
10		to pause at this point.
11	THE	E CHAIRMAN: We will rise for five minutes.
12		(<u>Short break</u>)
13	THE	E CHAIRMAN: Mr. Herberg?
14	MR	HERBERG: Professor Dobbs, what I would like to do now is explore with you a little how
15		the welfare analysis, on your total welfare analysis, applying it to the facts of this case. Can
16		I start off with your report at paras.155 to 156. I am going to go through these carefully
17		because they are quite important. You say in para.155:
18		"I first consider the case where a 'total welfare' measure is used. The essential
19		argument here is that where there is no change in the post-NCCN retail price
20		
21		so this is the no reduction scenario –
22		" the money that is taken from the MNO is water-bedded, and manifest itself
23		as the harm to MNO customers via the MTPE, but the money goes to BT
24		stakeholders (and SPs) and now is valued fully."
25		"now" meaning on the total welfare analysis –
26		"This means that, putting efficiency concerns to one side, the welfare benefit
27		when the post-NCCN price is the same as the pre-NCCN price is equal to the
28		MTPE impact. At the other extreme, when the post NCCN price falls to zero,
29		because the revenue raised is zero, so too is the benefit arising from the indirect
30		effect. Figure 6 illustrates this case.
31	A	Yes.
32	Q	Then para.156:
33		"Under the total welfare measure, the benefits of the direct effect fall away as
34		the post-NCCN retail price gets nearer the pre-NCCN price level, but this

1 reduction is offset by the fact that, as the retail price gets closer to the pre-2 NCCN level, the benefits arising from the indirect effect get larger. Because the 3 benefits of the direct effect include those associated with reducing the 08x 4 pricing externality, the overall sum turns out to be always positive and always 5 increasing the greater the retail price reduction." 6 So effectively, and tell me if I am fairly summarising your two paragraphs, what you say is 7 that the picture is very simple on a total welfare analysis. The benefits post-NCCN are essentially the same, differently distributed, but, and importantly, there is a welfare gain 8 9 because, as at least Ofcom and BT agree, any fall in price addresses the externalities, at 10 least to some extent, so the welfare calculation is always positive. Is that a fair summary? 11 It is a bit crude, but that applies on the no reduction and the full reduction. 12 A Yes. 13 Q It is effectively a zero sum gain but you have got the improvement of the ----14 Externalities. Α 15 O -- externalities and redressing market failure at least to some extent. 16 Α Yes. 17 Q But of course that is, and this might be described as perhaps the small print, putting 18 efficiency concerns to one side. It is that qualification that I want to explore a little with 19 you. You have that same proviso I think at para.149, if you could just go back a page, 20 where you say in the second sentence: 21 "... under a 'total welfare perspective', the extent of the waterbed does not 22 matter because the division of the impact between customers and MNO does 23 not matter if these are simply summed." 24 Again, it is distribution, but you got footnote 25 there and that says: 25 "Note I am being consistent with Mr. Myers' approach here, in taking the 26 Ofcom reference case and reckoning the business without worrying about the 27 efficiency (volume aspects) that arise when prices change." 28 So again, to be absolutely fair to you, you are making it plain that you are disregarding 29 efficiency effects in what you are saying there. I think the same at 161 finally, if I could 30 just show the other place where you make the same assertion about the waterbed. You say in the first sentence: 31 32 "... it is important to note that, under the 'total welfare' measure, the MTPE impact is unaffected by the extent to which there is a waterbed." 33

- Again, I think at 161 you are still operating under the qualification which you put in 155, which is putting efficiency effects to one side?
 - A I think the reason for that was that I was at least the way I read Mr. Myers' witness statement, that was what I thought his diagram was representing, so I was just making it clear that I was making the same kinds of assumptions because I have drawn the same curves, and the only difference I've done in figure 6 is to increase the size of the indirect effect.
 - Q I am not criticising what you have done, I just want to explore what happens if we ----
 - A Just, for example, if in Mr. Myers' case these were to include other effects then it would still be the case that the only thing that I'm doing relative to his original case is to increase the weight on the indirect effect.
 - Mr. Myers might, as a matter of fact, dispute that he was acting on his reference case, but that does not matter for my purposes, and no one is trying to argue about who should have spotted what. It is purely a matter of conceptual understanding. What I would like to do is look at the propositions that you have given and then see how they change when you do consider efficiency concerns. To do that it might be helpful to go back to Mr. Read's coloured boxes diagram, if that is available in the witness box. Do you have a copy?
- 18 A It is, yes.

- What I would like to do is consider the partial reduction scenario and try and bring back in those efficiency measures which you were ignoring for the purposes of that part of your report, still looking at it from a total welfare perspective. We need to focus, do we not, I think on boxes B and the equivalent waterbed at X. To the extent that termination charges rise because, on a partial reduction, *ex hypothesi*, the MNOs are above the lowest step, so there will be at least some rise in termination charges?
- 25 A That's correct, yes.
 - Q Those additional revenues represented by the rise in termination rates sit in box B, do they not, or they start in box B, and they may just be kept by British Telecom, BT, or they may be kept by the SPs. In either of those case there are no immediate efficiency consequences, are there, they potentially are profit in the hands of either of those, subject to what they do with them?
- 31 A That is correct.
- 32 Q Another possibility of course is that they might pass them through. SPs might pass them on to customers to improve services, and that potentially could lead to efficiency gains?
- 34 A That's correct.

- 1 Q But certainly on Ofcom's case it does not think that that is going to be the ultimate 2 destination of those funds or the majority of them? 3 Yes, as I've just said, that's correct. A 4 Q If we look at, as it were, the negative side of that part of the equation, so we now move to 5 box X, which is a counterbalancing one and how counterbalancing depends on the strength 6 of the waterbed, and we will leave that for now. If we look at what is in box X, in that box 7 prices for other mobile services are going up, so there there is a downward effect on 8 volumes and there is a negative effect on efficiency? 9 A Yes. 10 Q That is right, is it not? 11 Α Yes. 12 So overall unless ----Q 13 Α Well, I accept that. 14 So overall, unless there is a significant amount of pass through all the way through to SP Q 15 customers on the other side you are going to have a clear negative impact on efficiency as a 16 consequence of the BX equation? 17 I think that is reflected in the figure – is this the argument that the mobile tariff package A 18 effect would actually not be flat-lining, but would actually be shifting as we move from left 19 to right. 20 Q I do not want to get into that tangle because I know there may be counter balances from the 21 other half of it.? 22 A Exactly. 23 Q I am just looking at the argument on its own terms. If we look at boxes B and X what one 24 can see overall one has a potential negative – not a potential, an actual negative efficiency 25 effect. I am not looking at the whole picture, I am looking at that part ----26 A I understand what you are saying and I agree with you. 27 Q So if that is right, then once one takes account of these efficiency concerns, the statement 28 that you quite properly made without taking into account efficiency that the size of the 29 waterbed is irrelevant no longer holds, does it, because now taking into account efficiency 30 the larger the waterbed the larger this potentially negative efficiency defect? 31 Α Well this is a question of the structure of the impact in the diagram which is drawn as flat-

When you said "welfare considerations" did you mean efficiency considerations?

lining in Mr. Myers' diagram. What you are proposing is that perhaps there may be, if one

was to include welfare considerations as well, that this curve may no longer be a flat line.

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- A I would suggest that the word "efficiency" can be used in several sentences. Economists
 often use the word "efficiency" by which they often mean "economic efficiency", meaning
 that if there is an increase in economic efficiency there is an increase in economic welfare.
- 4 Q I was not questioning your meaning ----
- 5 A Let me just finish.
- 6 Q Of course.

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- 7 A The other meaning of the word "efficiency" is perhaps the more commonsense word to non-8 economists is to think of cost efficiency and reduction in efficiency in the production of 9 services and so on. Does that help?
 - I only asked that question because I thought you might have accidentally used the wrong word when you said about the table, you may have said: "welfare" consequences when you meant "efficiency", but I may have got that wrong. Let me just ask the question again so there is no confusion. All I am asking you about is do you accept when you do not put efficiency concerns to one side, as you did in 155, does it not then become the case that the size of the waterbed is no longer irrelevant on the total welfare analysis, instead it is a relevant consideration because the bigger the waterbed the bigger the potential negative efficiency consequence that we have identified. That just follows the logic, does it not?
 - A That is certainly true. It is also certainly true that it affects the magnitude of the direct effect as well because you can look at just the simple amount of revenue that is shifting, but you can also add in the consumer surplus gains that are in addition, so that as you move from right to left reducing the MNOs 08X retail price consumer surplus is increasing within the direct effects as well.
- 23 Q I was just going to go on to that.
 - What it means is that we are back to the uncertainty in terms of the position of these three curves, but we are not in doubt, I think, about the fact that at 12.5ppm the value, if we take this as total welfare, including consumer surplus, when we take the value of that we say that is larger because we include in the externality effects and so on, than the size of the mobile tariff package effect, which includes the consumer surplus component, and that in this diagram it is still the case that the direct effect curve goes down to zero as we go to the right. Perhaps the mobile tariff package effect, the position of that curve and the shape of the curve could be debated, but it is still down there at some point, and therefore it is also true that the indirect effect would also include insofar as there are benefits flowing through, quality impacts and so on, they would flow into consumer surplus, benefits to customers. That would also be pushed upwards. But in a sense it gives us still the same kind of picture

in which we have the idea that somewhere between 12.5ppm and 20.5ppm in this particular case there will be a break even and it may be that if you wish to make the case that the mobile tariff package effect is sufficiently shifted down at the right end, that the break even point starts to move slightly to the left from the one which we have at the moment, which is the break even point is actually at the pre-NCCN price, that's possible. I am not going to say it's impossible, but what I am going to say is that if one were to take a qualitative view of the overall impact you are going to get an intersection point which is very much more to the right, even including what people are calling "efficiency" gains, i.e. when one takes into account consumer surplus effects.

- I am going to bring you back to the boxes in Mr. Reid's diagram, because that is what I am focusing on. We have looked at boxes B and X, and we have examined the overall potential negative efficiency effect just between those two, but if one is looking at the total picture it is rather more complicated than that. We also need to consider the balance between boxes A and W (the other half of the waterbed effect). Box A is 08 prices are going down, potentially a volume effect, m ore 08 calls, and therefore there is potentially more efficiency out of that box, is there not?
- 17 A When the MNO reduces prices that is a benefit to customers.
- Q Exactly, and against that you have box W, and again that is a waterbed effect on other mobile calls, a potential negative effect, that is the obverse, depending on the size of the waterbed?
- 21 A Yes, I agree.

- Q It will also, of course, depend, apart from the strength of the waterbed, potentially on the relative sensitivity of 08 calls and other mobile calls to price increases and decreases, that would be a relevant factor when you were working it out?
- A It would be, and of course those price sensitivities are likely to be indigenous, that is to say they are a function of the prices that the English MNOs choose.
 - Indeed, so you would have to do that in each case if you were really trying to look at the effects, you could look at them individually MNO by MNO. Then of course, we would also, on top of that, have to decide how much extra weight to give the direct effect, in other words, the 'green' side of that balance, to take account of the positive effect on the externalities by the element of rebalancing. It has already been suggested in this case, and can I shortly suggest it to you that in a partial reduction scenario, the effects of some of the rebalancing element may be quite small depending on where you are on the line between the existing price and the lowest step. So it is certainly the case that MNOs will still be

1 charging varying prices for 08 calls, albeit some reduction from the present level. That is 2 right, is it not? 3 Α I am not sure I understand the question. 4 Q I am sorry, it may be a little complicated. I think it is a fairly obvious point. We are 5 looking at the partial reduction scenario ----6 Α Yes, I understand that. 7 Q -- so prices are going to be coming down some way from the existing price ----8 Α Mmmh. 9 Q -- but you are still going to have significant price disparities, first of all between mobile 10 retail prices and fixed prices, obviously. 11 Yes, that's correct. Α 12 And it's still the case therefore, that you will not have a clear message sent to consumers, no Q 13 obvious mechanism for the NCCNs therefore to make a huge impact on over-estimation or 14 price confusion. 15 I would agree that obviously there will be, remain, some dispersion of prices, and one can A 16 only say that insofar as all MNOs are incentivised to reduce to the same step. And then at 17 least they will be setting the same price; and that's the prediction, well, that's the prediction 18 of my models, which is that they will be incentivised to move to one of the steps, either the 19 17.5p step or the 12.5p step in the case of 0845. I don't want to digress on to which step is 20 the more likely at the moment, I'm sure you will bring me back to that point, but it's still 21 true that they will be incentivised to go to a particular step and they will be having the same 22 price. It is very likely that they will have the same price. 23 Q When you say the same price, you mean the same charge, obviously the same termination 24 charge, but retail prices may still be very different. I think you agreed with Professor 25 Valletti that some retail prices might even go up. 26 Α You are talking about, yes, I understand the question now. What you are suggesting is that 27 the MNOs may offer a range of different prices. 28 Yes. Q 29 A For 08X services and that the overall impact of the WTS, that's the wholesale price 30 schedule, will be to incentivise the average price to go to 17.5 or 12.5p, and I'm just trying 31 to understand the question. 32 Yes, exactly. Q 33 Α And what you are saying is that that would or could include different prices at different

price points; and I would have to agree with that point.

- Yes, because that is the significance for the effect on callers, if there is price confusion that is what we need to look at.
- 3 A Yes.
- 4 Q And so that would affect the extent of brand improvement, Mr. Read's box K, and —
- A To the extent, I am sorry, to the extent that there is this price dispersion, different price points for the same 08 service, I would have to agree with that point.
- Finally on this point, if consumers are more conscious of their package prices or headline mobile bill, than they are the price of 08 calls, then in the partial reduction scenario you could therefore get an efficiency loss from the mobile tariff package effect without necessarily doing much to address the externalities. In other words I am not trying, obviously to go to any specific weighing.
- 12 A No.
- 13 Q But, just let me finish my question before you answer. What I am really asking you is
 14 whether or not you accept that a debate can be had, therefore, as to how big the efficiency
 15 loss from the mobile tariff package is, compared to the gain that you get from the
 16 externality that might be quite contested in the partial reduction scenario.
- 17 A I would agree with that.
- 18 Q Yes. And then, finally, Professor Dodds, all these points that I have been suggesting to you apply with even more force, do they not, if one moves from your total welfare analysis to a consumer welfare standard. The position gets more difficult from BT's perspective, does it not, if one moves to a consumer welfare standard. Things come into the equation that make it harder for BT.
- 23 A It makes the, obviously, the benefits that arise from the indirect effect will be reduced.
- 24 Q Yes, some of them jump, come out of the equation.
- What I have also at the same time argued, is that the consistent application of that particular welfare standard would also include consideration of the size of the mobile tariff package effect because in this case the size of that tariff package effect matters. The point is that insofar as the package effect is less than 100 per cent, the closer it is to zero, in a sense, the further up the graph we move this curve. Therefore, in terms of my intersection point, the further to the right we move. I am sure that we'll have a debate about the empirical evidence on waterbed effects.
- 32 Q I am sure you will. Not with me, happily.
- 33 A No, okay.

- 1 Q But, just the point, and of course the point you are making is that the smaller the waterbed, 2 the less there is and less to that negative mobile package tariff—
- A The point is that in the total welfare case, you add in the profits that the MNOs gather in and do not distribute as well as the damage to customers. So, you add the two together as a harm. The point is that when you move to the consumer surplus focus, if the tariff package effect is small, that means that most of the money is being held by the MNOs for profit and therefore that doesn't count.
- 8 Q That does not count.
- 9 A Yes.
- 10 Q Exactly.
- And therefore it moves that, wherever that curve is, it moves upwards.
- Q So, on the consumer welfare analysis, what is not counted, money retained by BT as profit, goes out of the window. Money retained by the MNOs goes out of the window. So, it the waterbed is small, then that has a significant effect.
- 15 A That's correct.
- Q Monies retained by the service providers are given less weight, not no weight, but less weight.
- 18 A Yes.

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- Q And only if the monies find their way through to the callers through service improvements does it remain fully valued, as it were, that part of the effect remains the same.
- 21 A That is Ofcom's approach, yes.
- 22 Q So, Professor Dobbs, I put it to you overall that, once you begin to look at the real world
 23 effect and bring in all these efficiency considerations, what you suggest is a simple welfare
 24 calculus, even on the total welfare view, dissolves into what is effectively a mass of
 25 competing and conflicting effects that you have to weigh. That is fair, is it not?
 - A I would agree absolutely that weighing, first of all, weighting of the benefits and costs that arise, the first thing is you have to measure those things, and the second thing is you have to weight them. And then I think that in somebody's head, when they make a decision, they have to add those magnitudes weighted appropriately and I think that it's helpful to actually put these things on a diagram as we have here. And then the other thing that's missing from the diagram is, of course, the probability of the actual magnitude of the price reduction. But I'm sure we'll come to that later.

- Q Of course. And, of course, to do any of that one has to be able actually to put magnitudes on these different effects, and that is something which never mind whether one can do it from Mr. Myers' diagram or not, it is extremely difficult to do, is it not?
- A I would agree that it' difficult to do. I would also argue that one can say something about the two extreme points, that is to say the 12.5p point and the other point.
- 6 Q Yes.

- A So, we do know something about relative magnitudes. We don't know a lot, but we know something. We can say that, you know "This is significantly larger than that". By how much? That can be debated.
- 10 Q Yes. Thank you, Professor Dobbs.
- 11 THE CHAIRMAN: Thank you Mr. Herberg. Mr. Donohue.
 - MR. DONOHUE: Mr. Dobbs, good afternoon, I am counsel for O2. You can put to the back of your mind, subject to one point, what Mr. Herberg has put to you, I want to come back to you on your comments on Walker 3, as I do not think you have been entirely fair to Dr. Walker in that regard. Before we start, Professor Dobbs, we have been treated in this case to huge intellectual outpourings from BT. I think we have 20 reports at the latest count. And the question that Dr. Walker has posed three times, and it is a question my wife has posed to me when I am stuck late at work reading these papers is, it would in my submission have been a very easy thing for BT to devise a wholesale tariff structure that would unambiguously lead to retail price reductions, and that the extent there is any uncertainty in these proceedings, it is one that is entirely self imposed by the way BT has gone about that. Do you accept that as a starting point?
- 23 A Yes, I do.
 - Q So it is therefore fair to say that if indeed the objective was to reduce retail prices down to a certain level this was a pretty negligent attempt by BT to do so?
 - A Well, perhaps I ought to qualify my previous answer by saying "easy for some", perhaps easy for Dr. Walker, perhaps less easy for others. One of the things with innovations in pricing is that in the first instance when they're first introduced, they're not necessarily going to hit the nail on the head. I think to some degree one could say this may well be the case here. What one can say is that in the market place decision makers tend to improve their decisions, particularly when you have got something new as this. This ladder pricing is quite innovative in my opinion, it's the first time I've ever seen it, it's not surprising actually that there was a most of the issues. Let me retrench slightly. Most of the issues arise because the step function flattens off. Once it was understood that this was something

- that caused, in a sense, much of this outpouring of effort, new proposals for new ladders have been issued, and one of the things that you find in the market price is that structures do evolve to make things more emphatic. I think if you look at the I had a brief look at the proposal NCCN 1007, and I can say that in that case that satisfies Dr. Walker's observations that it would be easy to incentivise price reductions.
- Q Let us try and unpick that a bit. If indeed the objective was to reduce retail prices down to a certain level, why start with something fiendishly complicated. Why not have a simple continuous wholesale tariff that would effectively act as a simple benign margin squeeze on the retailers? Why not do that, and trial and error on that?
- Well, I'll repeat my answer that I gave earlier, it's an innovative pricing structure. I cannot say what was in the minds of the individuals that designed that pricing structure. We see what we see. All I can say is that over time one might expect that prices in general will adjust. If a firm sets a particular price schedule and then decides, "That didn't go down well", they will then adjust that price schedule. In this particular case I think that the schedule does the job. It is not emphatically and absolutely clear cut that it does the job. That's why I, personally, have spent a significant amount of time analysing that particular case, but if you ask me why didn't they solve the problem in the first place, I have no answer to that because that was in the minds of whoever designed the tariff in the first place.
- Q You say, Professor Dobbs, that you do not know what was in the minds of those who decided the tariffs. Are you saying that you did not endeavour to discuss with them what the likely range of parameters behind their intentions were at the particular time?
- A It may seem surprising, but I have never discussed that with the individuals involved. I don't even know for sure who those individuals are.
- 25 Q Professor Dobbs, given the level of complexity and detail, I would suggest that that would have been a natural starting point to try and understand?
- A For me to find out well, I was given the remit of examining whether in this particular case what were the incentive properties of the schedule that had been issued. That was the limit of my remit.
- Q I understand. Let us move on in that case. Can we then turn to some of the contemporaneous and other evidence of how BT and the MNOs think about pricing. Can I ask you turn up first CAT bundle 3 and go to tab 27.2. Have you found that Professor Dobbs? It is a response from BT.
- 34 A Yes.

1 Q What I want to focus on in particular is question 12, and I want to double-check with 2 Mr. Read that there is no issue with question 12. I do not think there is because the 3 information was published, but I want to check that. 4 MR. READ: Sir, can we ask Professor Dobbs just to say if there is anything marked in his copy 5 of the version that is marked "confidential", because I think this may short-circuit it? This is the letter marked 25th November 2009? 6 Α MR. O'DONOGHUE: Yes, the attachment to that. 7 8 Α The attachment to that is? 9 Q It is a response to a series of Ofcom questions. 10 THE CHAIRMAN: Can you refer to pp.5 of 6 under the heading "Threshold"? 11 Yes. Would it be marked as "confidential"? There's nothing marked. 12 MR. READ: (No microphone) I am told that that bundle will certainly be ... 13 THE CHAIRMAN: Thank you, Mr. Read. 14 MR. O'DONOGHUE: What I want to focus on, Professor Dobbs, is question 12. Let me read it 15 to you. It is BT response to the dispute where it states: 16 "... 'The threshold level of 8.49ppm is sufficient to enable an efficient (mobile) 17 call originator to continue to recover it cost of retailing and originating the call 18 (if any) and obtain a margin'. Explain how BT calculated this 8.49ppm threshold." 19 20 Then you will see the response. What BT says is: 21 "There was no formal calculation of the threshold, BT assessed that 8.5p allows 22 for some margin for call origination given what BT understands to be the end-23 user charge and a view of the cost origination using Target Average Charge 24 'TAC' as a proxy for origination costs." 25 To be clear, this is the bottom rung in the 080 ladder? 26 A That's correct. 27 Q You will correct me if I am wrong, but essentially what BT is saying is that there was no 28 formal calculation, this was a sort of rudimentary back of cigarette packet calculation. Is 29 that a fair comment? 30 A On the basis of this document, which is the first time I've seen this document, that would 31 appear to be the case, but I've no knowledge. 32 If that is the case, would you agree, Professor Dobbs, that that lack of formal calculation is 0

poles apart from the sophistication that we see set out in your various reports?

This is quite a large question. It is one which economists have to address because many models in economic analysis are complex. The way that I like to explain the apparent tension between people do and the way economists try to describe what they do is to give an analogy of the snooker player – I hope everybody is familiar with that game – in which, if you ask a very good physicist or engineer to produce a mathematical model of how a cue strikes a ball, strikes another ball, that ball then goes in the pocket and the first ball moves to a particular place on the table I would suggest to describe that mathematically would take a very complex set of equations. However, the snooker player just gets it right most of the time, that is to say he applies the angles, forces, takes into account frictions and so on – how does he do it? Does he solve the equations? No, he does not. He does it because he has tried and done it many times before – practise, in a sense, makes perfect. The analogy, insofar as it goes to businesses and business decisions is that decision makers do not necessarily know anything about economic concepts like elasticity, marginal revenue, marginal cost, things like this. They go about their business of setting prices and aiming to do whatever they do in terms of profitability and so on, and the argument is they get it about right.

Q You said Professor Dobbs, that this was the first time that BT had ever done this?

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- A Yes, and this is why in the case of something new you would expect there may be a process of adjustment, because in the first instance when something is novel people can make mistakes. The whole process I have just described in which business decision makers adjust prices and so on, is one in which they learn by experience, and if they do not learn by and large they disappear from the market.
- Q Can I put it this way, would you accept that it would be an extraordinary coincidence if this lack of formal calculation happened to correspond exactly with all of your very complex economic modelling and led to pricing falling to the bottom rung. That strikes me as an extraordinary coincidence?
- A The complexity of the modelling varies from model to model. The Dobbs 3 model, for example, is a relatively simple model and involves just a single variable. You would expect an individual decision maker to be able, by a process of iteration, to get to something approximating the optimal solution in that case.
- Q But your primary economic evidence is that there is no process of iteration, the bottom rung of the ladder is where it starts and where it finishes. You say it would be irrational economically to assume otherwise?

- What we are looking at is at the moment the mobile market is fairly mature, tariff packages no doubt get tweaked and adjusted from month to month, day to day and so on, but the structures that we see are relatively stable, the menus of tariffs that operators offer they have had several years of time in which to adjust those tariffs. I would accept that when you introduce in this case a wholesale tariff which in a sense perturbs the equilibrium, it may take some time for the mobile network operators to decide on what is their best response to that, I would agree with that. But ultimately I would argue they will find their best answer.
- 8 Q Can you give the Tribunal some indication of how long you think this would take, this learning ----
- 10 A The learning curve? I think it is very difficult to make any judgment about that. What one could perhaps say is that the process of getting in the ball park may be relatively quick because if you do not get into the ball park relatively quick you do suffer significant profit loss and you leave a lot of money on the table. Getting to the exact optimum, if such a thing can be so described, may take longer.
- Q Let us leave BT there and look at my client, O2. Can I ask you to turn to C2, tab 39, please? Professor Dobbs, some of this is confidential ----
- 17 A Yes.
- 18 Q -- so be careful not to blurt it out.
- 19 A Actually I can't because it is blanked out in this.
- Q All the better! To be clear, Professor Dobbs, and to be fair to you, here my client is discussing how they would react to an increase in termination payments?
- 22 A Yes.
- 23 Q It goes through various parameters of pricing?
- 24 A Yes.
- 25 | Q Can you read paras. 25 and 26 to yourself, please?
- 26 A I can, yes. (After a pause): Okay.
- 27 Q Again, Professor Dobbs, this is an actual MNO explaining the pricing dialectic. Again, it is
 28 obvious look at subscription charges, call charges, change in bundle sizes, acquisition
 29 costs, rejection costs, they would have to look at what the others are doing and again, I am
 30 not sure you disagree with this, but there is a huge gulf between these sorts of more basic
 31 pricing parameters and the complexity we see exponentially in your modelling. There is a
 32 huge disconnect I would say to you?
- 33 A Well obviously as we have been stimulated to increase the complexity of the models to take 34 account of criticism that they have over simplified the models in the initial case, the final

models do take into account any level of complexity of the type described here. I think what you are saying to me is: "How can it be that one can optimise over all of these different parameters and get the right answer.

I was, to be fair, making a sort of different point, because what I am trying to say is that to the extent there is uncertainty in this case, your modelling in the MNOs maybe it is at cross

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I was, to be fair, making a sort of different point, because what I am trying to say is that to the extent there is uncertainty in this case, your modelling in the MNOs maybe it is at cross purposes, because it may be that they go about the exercise in somewhat different ways and it does not necessarily mean that they are wrong and they are right, or vice versa. So in other words my client might say to me: "You may well be right, but you are completely wrong in the sense in which they make pricing decisions". Is that a fair comment?

I am not sure as I would agree. These comments (i) to (v), if you were to ask the question A of a particular MNO like O2 in the absence of the wholesale price schedule, in other words, at their pre-NCCN prices, whether any of these things would get them more money, then I'd be inclined to say: "Not a lot" because I would expect them, over several years, to have adjusted all of these items such that they are kind of reasonably well set. You then introduce the wholesale tariff schedule which, broadly speaking, shifts the whole profit function and what our analytical approaches show is that it should, incentivised a reduction in the average price. Clearly, what those models do not argue for is that every individual parameter within the mobile network operator's offering, for example if it was a price point, then all price points would go down, and what the mathematical modelling shows is that on the average the price will go down. Whether an individual MNO will react in that way, that is the question you are asking. Clearly, MNOs might say: "If you take some money from, us we want some more money from somewhere else, we will put up a price somewhere else". One of the things that I would say is they have already done so to some degree, and the only way in which things will change are largely through what are called waterbed effects of the type that have been discussed extensively in this court, and I do not want to go over it unless you specifically ask me a question about it, but there are obviously, there will be adjustments, but the idea that one can just do cost passed through is true only in the case where, for example, if you have a vertically integrated, sorry, a vertical chain in which you have simple uniform pricing upstream, simple uniform pricing downstream, then there is an inefficiency. But, we are not talking about that here, we are talking about the fact that we have complex pricing downstream and we have a non-linear tariff being proposed upstream. And the impact of the upstream pricing is actually to reduce, in effect, the marginal cost to the MNO, and that's what the logic of the price step function does. Therefore it seems to me that they have a fairly clear incentive to adjust their packages in order that they get their

1 average price reduced. They may claim that they might wish to increase their prices, but 2 I do not think they have an incentive to do so. 3 Q Well, let me clarify, I think Mr. Read said in opening, that the issue of uncertainty was 4 confined "within the model" if I can put it like that. What I am saying to you is that there 5 may also be uncertainty as to whether your modelling approximate with what business 6 people rightly or wrongly do in the real world. So, it is a different type of uncertainty, is the 7 point. 8 Α I cannot say that the individual business decision makers are as good as the best snooker 9 players. What I will say is that one would expect players in a competitive market to do a 10 reasonable job of adjusting the menus of tariff packages that they offer in order to maximise 11 the returns that they can get. 12 Let us move on, in that case. Now, Professor Dobbs, I think you were here early in the trial, Q 13 when Miss Smith and Mr. Ward put some of the contemporaneous BT business documents 14 as to the rationale to BT's factual witnesses. 15 No, I wasn't, actually. A 16 0 Okay, well, all the more reason for me to turn them up. I think it's sufficient, sir, if we look 17 at 1, because we are aware of the pages, if we look at these documents any more, and 18 hopefully it is the last occasion when we have to, to turn to these. Can I start with 080, 19 which is CAT bundle 3, 27.2.1. 20 A Could you repeat the tab? 21 O It is 27.2.1. And again, Mr. Read will correct me, but I think this is confidential. (After a 22 pause) Have you got that, Professor Dobbs? 23 Α I think so, yes. 24 Q It is headed "CP NTS paper". 25 Α 26 O I will not read out the figures, but I want to put the points to you. Now, you will see in the 27 summary: 28 "This paper outlines a proposal to increase the charges for BT terminating 0800 29 services to those Communication Providers (CPs) who charge their end users to 30 access a free to caller service. The charging mechanism proposed will improve 31 margin and revenue by X per annum", 32 and then it gives a full year figure. Now, you will see, Professor Dobbs, that at least in this

paper the language is not qualified. It says, "will improve margin and revenue" by the

amount stated. You will then see, Professor Dobbs, further down the page at the bottom,

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- that what BT has done is take, for example, my client's then retail charge, multiply that by

 I think the number of projected minutes, which was based on the pre NCCN minutes, and

 applied that strictly on the basis of the ladder as set out in NCCN 956.
- 4 A Yes.

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- Now, there may be interpretative questions around this document, but you would accept on its face that, far from showing reductions to the bottom rung, this assumes no change in MNO retail pricing behaviour.
- 8 A That would appear so, yes.
- MR. READ: I do not mind my learned friend putting the point about that he says that that is the case, but I think probably this witness cannot answer a question about a document that he has not actually had an involvement in. So, I am quite happy to accept the premise, but I am not sure whether it helps actually asking this witness whether it is the premise or not.

 I think my learned friend can move on to the next stage is in other words, what I am saying.
 - THE CHAIRMAN: Yes, these points were **not put by Mr. Ward of a BT witness, but do go on, Mr. Donohue.
 - MR. DONOHUE: Well, sir, it is simply the point that there is night and day between what Professor Dobbs posits in his reports and what was said *ex ante* and to that extent it is relevant to the weight and credibility to be attached to those reports, no more, no less, in our submission. (To the witness) Professor Dobbs, I will not take you to the equivalent document in 0845 and 0870, but in fairness and for the record it should be noted that there is some dispute as to what these words "up to" mean in that document, but broadly speaking it is a similar document.
- 23 A Can I comment?
- 24 Q If you wish.
- A I assume that this is the assumption that, if the MNOs made no response, this is the revenue transfers that would occur. As a matter of factual observation there is nothing to remark upon.
- Q Well, let us go on, because I think there is other evidence which suggests that it was not only for this period. Can I ask you to turn up CAT bundle 15. It is at tab.14, Professor Dobbs.
- 31 A Thank you.
- Q Professor Dobbs, this is a minute of an NTS focus group meeting on 18th March 2010, but I think by this stage we had already received Dobbs 1 and 2 and Maldoom 1 and 2, and can

1 you please turn to p.204 under the heading, "Agenda item 3". You will see the sentence 2 starting "Sean Hartley". 3 Α Yes. 4 Q Do you know who Sean Hartley is? 5 A No, I do not. Well, you will see in the start he is a BT, on the first page, he is a BT employee. And 6 O 7 Mr. Read will correct me if I am wrong, but I think he is the NTS Product Manager within 8 BT, or at least was at the time. And it says: 9 "Sean Hartley took the Focus Group through the previously circulated slide (see 10 attached) [it is not attached] in relation to BT's ladder pricing. From BT's 11 perspective, it is the terminator which is setting up the number and driving value, therefore the money should flow through to the Service Provider. BT does not 12 13 believe that this is happening and as a result it has introduced ladder pricing 14 (variable wholesale charges accordingly to the level of retail charge) through the 15 NCCNs listed above". 16 Again, Professor Dobbs, by this stage you had been engaged, as had Dr. Maldoom. This was dated — 17 A The 18th March 2010. And we had had four reports from you and Dr. Maldoom, and BT 18 O was telling, still telling the whole world this was about revenue flows from the MNOs to 19 20 BT. Do you have any comment to add on that? 21 A No. I'm not aware of this document, and indeed I would have had no dealings with BT 22 retail whatsoever at this time. I'd only had dealings with the economists in BT regulatory 23 affairs, and they had given me the schedule of the wholesale price schedule, the **step 24 function, and asked me to have a look at it, and that's what I did in Dobbs 1, Dobbs 2 and 25 Dobbs 3. 26 Q Indeed. Well, can we now turn to Cable & Wireless's view of these charges. Cable & 27 Wireless, you will understand, is BT's largest rival in this particular market. And you will 28 find that in the same bundle, tab.6. 29 A Tab.6. This is a letter dated 27th October 2009. My pages are not numbered, but I think it is about 30 Q six pages in, a section headed, number 4. Sir, my document is not marked confidential. I 31 32 do not know if anybody from Cable & Wireless is here, whether they can speak to that. It 33 seems, on the face of it, to have some quite sensitive information.

THE CHAIRMAN: Let us try and avoid the figures, if we can.

- MR. O'DONOGHUE: I do not think I need to refer to the figures. Again, Professor Dobbs, if you could have a quick read through section 4, and in particular I am interested in the opposite page, the paragraph under the tables.
- A (After a pause) Just that page, yes, or do you want me to read on?
- I think I am right in saying, but I will be corrected if I am not, that the problem they have identified was because BT was effectively on a customer facing side with the MNOs, putting forward the Cable & Wireless services. Because Cable & Wireless at that time did not have a ladder pricing arrangement, if BT charged on the basis of NCCNs there would be an arbitrage between the lower Cable & Wireless figure and the potentially higher BT figure. What I want to focus on is Cable & Wireless's complaint that through this arbitrage BT is able to generate a substantial windfall in additional revenue through the inequalities of the differential. Such a substantial sum allows BT the option to use the money aggressively in the market place in order to gain market share, etc, etc. Again, Professor Dobbs, it was not just BT that understood that these charges would lead to revenue flow payments. BT's biggest rival, Cable & Wireless, understood exactly the same thing. Do you accept that?
 - A I accept the description as before me. I think it is interesting because whether the if we just take BT ladder pricing whether it induces MNOs to reduce prices for use of BT as a TCP or whether it leads BT to require revenue because there is no change in MNO pricing. They see that there is a competitive problem and that has led to, as I understand it from Mr. Myers' comments, not exactly a replication but ladder pricing has proliferated in the market. That is what you would expect as a competitive reaction. The consequence of more TCPs adopt ladder pricing is that the incentives for the MNOs to reduce their prices becomes more and more emphatic.
- 25 Q I think, with respect, Professor Dobbs, you are jumping a step.
- 26 A Perhaps.

- Q At this point Cable & Wireless did not have ladder pricing and they were simply observing that BT's ladder pricing would generate a substantial revenue windfall. That is simply the point I want to put to you?
- A Certainly I accept that. If all that this document provides is a suggestion that if there are no changes by the MNOs in their pricing structures, there will be a substantial revenue, that is as a matter of fact.
- In opening, Mr. Read described your modelling as leading a confident conclusion and increasingly so through the iterations. What I want to put to you is that, given what we have

seen in the documents, given what was said by Mr. Hartley after we had Dobbs 1 and 2, Maldoom 1 and 2, and given what BT's largest rival said as regards a substantial windfall, how can it be said that your modelling represents a confident conclusion if the market actors on the ground disagreed, we would say fundamentally disagreed, with what you are positing?

- A I think my response to that is whenever something is innovative people have views about what the consequences will be. In the course of time they will realise the errors of their ways and will adjust their offerings, and so on, to make the most of their opportunities. The fact that perhaps at its original inception BT whatever was in their minds, as I said, I had no party to, so I do not know I have no party to what is in the minds of Cable & Wireless, what you are presenting me with are two documents in which it appears that they have not taken into account the possible reactions of MNOs. When they see the reactions of MNOs, which is what is predicted by the economic models that we have presented, they will have incentives to respond to those. In the first instance, if we take the NCCNs as a given I would expect the MNOs to understand their incentives and not to take too long to understand their incentives. The fact that whether or not Cable & Wireless and BT understand what they are going to get out of it, they may be surprised too, and it may take a little while for them to realise what happens. In the market place I would expect that consequences will flow and people will learn how to play the game.
- Q You are not seriously suggesting that the views of the Cable & Wireless business executives and the BT business executives are completely irrelevant in this context?
- A I am saying that, on the basis of these two documents, which are the only documents that I have seen, and only briefly, it would appear that they have not taken into account the incentives that these schedules put before the MNOs. Whether these are the only documents and whether this is the only thinking on their parts, I have no absolutely no idea.
- Mr. Read can assist you on that front. Professor Dobbs, you teach in a business school, as I understand it. Let us suppose your star student comes to you and say, "Professor Dobbs, I've done modelling on these wholesale tariff schedules, I have a very confident conclusion that they will reduce prices to the bottom rung, people instructing me have the opposite conclusion, they assume no change in revenues, their biggest rival assumes a substantial windfall for BT", you would genuinely say to that student that that is a confident conclusion and that there is no uncertainty around that conclusion?
- A There is always uncertainty. For one thing, all economic models are abstractions from reality. That is certainly the case in the ones that we have before us today. When you say,

am I absolutely confident without a shadow of a doubt, no, I'm not absolutely confident, but on the other hand I do feel that, having spent quite some considerable time with these schedules, that they do actually provide quite strong incentives towards price reductions, and I would expect mobile network operators to find that point too.

Q One last question, Professor Dobbs, I see the time. You say that all models are abstractions from reality. The point I am putting to you is that your particular models based on a business executive's view are a very poor abstraction from reality, of at least there is uncertainty as to whether they are a good abstraction from reality. Do you accept that?

- A All I can say is that the original models were quite simple in the sense that we abstracted from the dispersion in price points or at least I did anyway I abstracted from the dispersion in price points, particularly in Dobbs 3, to try to present a clear cut exposition that would be relatively easy to understand. We were aware of these price dispersions that manifest in the menus of tariffs that mobile network operators offer. However, the key point is that the wholesale price schedule operates on the average price and what shows through no matter how much complexity one adds to the model in terms of what variables firms have control over and actively choose, it makes no difference to the incentive properties of the WTS. What I am getting at is that, for example, you have these complex menus of tariffs, but let us suppose that actually the mobile operators have no idea what they are doing and they just think: "Well, we are going to put up the levels of everything" or "We are going to put down the levels of everything", it still shows through in the models that whatever the level of abstraction that you want to put in there it does not really alter the incentives that are generated by the wholesale tariff schedule.
- Sir, one last question if I may for today. Professor Dobbs, standing back from this and using commonsense, the upshot of what you are saying is that BT is a profit maximising hard nose business. It set up a series of schedules, the only economically rational interpretation of those or the most likely one is that there would be zero out payments by the MNOs to BT. You were suggesting that a hardnosed business would forego the possibility of the substantial revenues we see mentioned in the board paper for what I would submit is the remote possibility of brand enhancement leading to some upswing in volume that exceeded the loss of the increased revenues. As a matter of commonsense that strikes me as difficult to swallow?
- A First of all, I am not sure it is quite correct to say that if the MNO prices fall to the floor, 12.5ppm average price, that there is no movement of moneys, because there are the pre-existing fixed charges on I am trying to remember now what they are they vary by time

1	of day and so on, and I would have to look them up. It could be a matter of correction, a
2	matter of information, but I am fairly sure there are still charges. As I said before,
3	sometimes with a schedule like this you may not get exactly what you expect, this is an
4	innovative pricing schedule, and the consequences for BT were perhaps not fully envisaged
5	by BT when they first came up with the idea.
6	MR. O'DONOGHUE: Sir, in terms of timing, I think an hour in the morning should see me done
7	THE CHAIRMAN: That is helpful.
8	MR. O'DONOGHUE: Subject to elaboration by Professor Dobbs.
9	THE CHAIRMAN: The usual caveats apply. Professor Dobbs, you have probably been told this
10	but overnight you are in purdah, please do not talk to anyone about your evidence. We will
11	resume tomorrow morning at 10 o'clock.
12	(Adjourned until 10.a.m. on Thursday, 14 th April, 2011)