IN THE COMPETITION APPEAL TRIBUNAL Case No: 1381/7/7/21

Salisbury Square House
8 Salisbury Square
London EC4Y 8AP

Monday 29th January – Friday 22nd March 2024

Before:
The Honourable Mr Justice Waksman

Eamonn Doran

Derek Ridyard

(Sitting as a Tribunal in England and Wales)

BETWEEN:

Justin Le Patourel **Class Representative**

v

BT Group PLC **Respondent**

A P P E A R AN C E S

Ronit Kreisberger KC, Derek Spitz, Michael Armitage, Jack Williams and Matthew Barry (On behalf of Justin Le Patourel)

Daniel Beard KC, Sarah Love, Daisy Mackersie, Natalie Nguyen and Ali Al-Karim (On behalf of BT Group PLC)

Jennifer MacLeod (On behalf of the Competiton & Markets Authority)

Monday, 12 February 2024

(10.30 am)

THE CHAIRMAN: Good morning. Some of you are joining us live stream on our website, so I must start, therefore, with the customary warning: an official recording is being made and an authorised transcript will be produced, but it is strictly prohibited for anyone else to make an unauthorised recording, whether audio or visual, of the proceedings, and breach of that provision is punishable as a contempt of court.

We propose to go straight to the hot tub. We have received and read Dr Jenkins' third report dealing with the matters with Mr Parker's fifth report. We have also seen the correspondence arising out of Mr Cackett's evidence in relation to any possible allocation of costs, which is essentially a limb 1 issue. If there is anything that needs to be said about that, we will deal with that at the end of the day but not now.

MS KREISBERGER: Sir, I am grateful. I think the only thing I should say is that the internal BT documents that we circulated on Friday, that is the PowerPoint slide and the spreadsheet, those are documents which the experts will refer to in the hot tub over the course of the next few days in relation to market definition, so I was going to make a few brief points on those, just to

explain how those documents have been identified.
THE CHAIRMAN: Well, do we need to know how -- they are there, and you have them, and the experts have seen them. I am not sure we need to hear anything more about it --
MR KREISBERGER: Well, we received a letter --
MR BEARD: They have come out of disclosure. We are not objecting to them being available. The point we make in relation to them is one has to have real concern in relation to documents which raise matters that are being put for the first time to experts, when they were not put to factual witnesses, so that they could be put in context or questions asked about them.
THE CHAIRMAN: I understand the point that is being made there, and that may be largely a matter for submissions at the end of the day. If there is something more specific that the Tribunal is being asked to do, we can deal with that at the end of the day, but in any event, it appears to be common ground that, firstly, the experts can look at them and we can look at them, and, secondly, the experts apparently have looked at them.
MS KREISBERGER: We are content with that.
THE CHAIRMAN: We will see where they go in terms of the points that are made by way of the experts in the hot tub. That may or may not cause us to ask some more

questions, or it may be something that can be left to cross-examination.

MS KREISBERGER: I am very grateful.

THE CHAIRMAN: Right. Good. Thank you very much indeed.

Can we then have the experts sworn or give their affirmations, please.

MR MARTIN DUCKWORTH (affirmed)

MR DAVID PARKER (affirmed)

DR HELEN JENKINS (affirmed)

THE CHAIRMAN: Thank you all very much indeed. You have had the list of questions and you will see, from the protocol, the way in which we are going to proceed in relation to each section is that Mr Ridyard will lead the questions, then Mr Doran and/or myself will come in at appropriate moments.

MR BEARD: Sorry, sir, it is a triviality, perhaps, but the experts have not actually sworn -- testified to their expert reports. If we can take that as read on the part of all of them, I think we have no objection that they are treating them as true to the best of their knowledge and belief.

There is, I understand from Dr Jenkins, one correction she wanted to make to a report. I think we can leave it for the moment, it does not need to break up the flow of questions, but obviously formally all of those reports --

THE CHAIRMAN: We might need to get them formally to depose to it, but let us get started and we can tidy it up later.

MS KREISBERGER: We have some very minor corrections which can also be addressed at a later point on the joint statement.

THE CHAIRMAN: Right, I think -- actually, just let me ...

(Pause)

I think what we are going to do is we will actually take the more conventional course. What I will ask, starting with you, Ms Kreisberger, is just to get both Mr Duckworth and Mr Parker to confirm their reports and deal with any corrections, whether they are in there or in the joint statement, and then I will get Mr Beard to do the same for Dr Jenkins.

MS KREISBERGER: I am very grateful. Thank you, sir.

THE CHAIRMAN: Then we have got it out of the way.

Examination-in-chief by MS KREISBERGER

MS KREISBERGER: Starting then with Mr Duckworth, if I may. I realise the positioning is a little awkward as I am speaking to the back of Mr Duckworth's head, but Mr Duckworth, you should see there a bundle E, folder 2. It is labelled "Tab 6-12.1". Mr Duckworth, do you see your report there behind tab 6?

MR DUCKWORTH: Yes, I do.
MS KREISBERGER: Is that the front page of your report?
MR DUCKWORTH: Yes, it is.
MS KREISBERGER: If I could ask you to turn to page 144 of that document. That is the Opus numbering. No, I am sorry, that is the wrong document. Sorry, we are just trying to -- there we go, it is page 95 of that document. Mr Duckworth, is that your signature there?
MR DUCKWORTH: Yes, that is my signature.
MS KREISBERGER: Mr Duckworth, the contents of the report, do they represent your true and complete view at the time you wrote it?
MR DUCKWORTH: Yes, they do.
MS KREISBERGER: If I could then ask you to turn to the next tab, tab 7. Is that your reply report there, Mr Duckworth?
MR DUCKWORTH: Yes, it is. {E/7/1}
MS KREISBERGER: Could I ask you to turn to page {E/7/77} of the document.
MR DUCKWORTH: Yes.
MS KREISBERGER: Is that your signature, Mr Duckworth?
MR DUCKWORTH: Yes, it is.
MS KREISBERGER: Are the contents of this report your true and complete view at the time you wrote it?
MR DUCKWORTH: Yes, it is.

MS KREISBERGER: Thank you, Mr Duckworth. If I could ask you to turn up the joint statement, that is at {OR-E/49/1}. Mr Duckworth, what is recorded there under your name in the joint statement, does that represent your true and honest view at the time the statement was settled?

MR DUCKWORTH: Yes, it does.

MS KREISBERGER: Thank you very much, Mr Duckworth.

If I could move to Mr Parker.

Mr Parker, you should have there bundle E, folder 1, marked "Tabs 1-5". If I could ask you to move forward to tab {E/3/1}.

MR PARKER: Yes.

MS KREISBERGER: Is that your report, Mr Parker, for trial?

MR PARKER: Yes, it is.

MS KREISBERGER: If I could ask you to turn to page 267, please. {E/3/267}

MR PARKER: Yes.

MS KREISBERGER: Is that your signature, Mr Parker?

MR PARKER: Yes.

MS KREISBERGER: Do the contents of this report represent your true and complete view at the time you wrote it?

MR PARKER: Yes.

MS KREISBERGER: Could I ask you, Mr Parker, to turn to the next tab, tab {E/4/1}.

MR PARKER: Yes.
MS KREISBERGER: You see there "Corrigendum to Parker 3".
MR PARKER: Yes.
MS KREISBERGER: Could I ask you to turn to page 4 at the back of that tab. Is that your signature, Mr Parker?
MR PARKER: Yes.
MS KREISBERGER: Does this corrigendum represent your true and complete view at the time you wrote it?
MR PARKER: Yes.
MS KREISBERGER: Mr Parker, could you turn to tab {E/5/1}, please. Is that your reply report dated 10 November 2023?
MR PARKER: Yes, it is.
MS KREISBERGER: Could I ask you to turn to page {E/5/189}, please.
MR PARKER: Yes.
MS KREISBERGER: Is that your signature, Mr Parker?
MR PARKER: Yes, it is.
MS KREISBERGER: Dated 10 November 2023?
MR PARKER: Yes.
MS KREISBERGER: Do the contents of that report represent your true and complete view at the time you wrote it?
MR PARKER: Yes.
MS KREISBERGER: Thank you. Can I ask you lastly to turn up the joint statement. {E/49/1}

MR PARKER: Yes.

MS KREISBERGER: Mr Parker -- ah, Mr Parker, we have some corrections so I will take you through those first, if I may.

MR PARKER: Yes.

MS KREISBERGER: I believe you have a correction at paragraph 5.2.19(e). That is page 75 of the Opus bundle. {E/49/75}

MR PARKER: Yes, that is right. So in the first paragraph, where I refer to BT commitments being "the single largest price increase", that should say "price change". So to replace "increase" with "change".

MS KREISBERGER: Thank you, Mr Parker.

We are going to go back, I believe, to 3.1.1 on page {E/49/7}.

MR PARKER: Yes. Yes, where I say:

"There is also no evidence to support the suggestion that BT's pricing ... was intended to encourage the take-up of bundled services by customers."

It should replace "There is also no evidence to ..." with "The data does not suggest that BT's pricing ..."

THE CHAIRMAN: Can we have that again, please?

MR PARKER: I am sorry. It should replace "There is also no evidence to support the suggestion that ..." with "The data does not suggest that ..."

MS KREISBERGER: Mr Parker, I think that just tracks through to paragraph 6.2.3 on page 89?

MR PARKER: Yes, that is right. At the bottom of page 89:

"The data does not suggest that ..."

MS KREISBERGER: Lastly, paragraph 7.1.1 on page {E/49/115}. (Pause) I think is it the last paragraph there under your name.

MR PARKER: Do you mean 7.3.1? No.

MS KREISBERGER: I have got -- I think it is on page 115, the last paragraph under your name. That should be 7.1.6, I think.

MR PARKER: Yes, that is right. So in the second line I replace "evidence" with data".

MS KREISBERGER: Thank you, Mr Parker.

MR PARKER: Thank you.

MS KREISBERGER: Subject to those corrections, what is recorded in the joint statement under your name, does that represent your true and complete input in response to those propositions?

MR PARKER: Yes.

MS KREISBERGER: Thank you very much, Mr Parker.

Examination-in-chief by MR BEARD

MR BEARD: So Dr Jenkins, I am just going to take you to the references to what I understand are your reports. So first report, {IR-E/17/1}, dated 29 September 2023. If

we could jump forward to {IR-E/17/332}. So Dr Jenkins, is that your signature?
DR JENKINS: Yes, it is.
MR BEARD: Is this your first report?
DR JENKINS: It is my first report.
MR BEARD: Subject to one correction, is it true to best of your knowledge and belief?
DR JENKINS: Yes, it is.
MR BEARD: Thank you. Dr Jenkins, let me take you to the second report before I come back to the correction, so that is in {IR-E/18/1}. So this is a report dated 10 November 2023, and if we skip through to page 234, {IR-E/18/234}, is that your signature?
DR JENKINS: It is.
MR BEARD: Is this your second report?
DR JENKINS: Yes, it is.
MR BEARD: Is it true to the best of your knowledge and belief?
DR JENKINS: It is.
MR BEARD: We have also got the joint statement, so if we could go to -- I am sorry, I should perhaps deal with the third report that you have just lodged, {E/18.1/1}, please. So this is dated 11 February. If we go to page {E/18.1/16}, is that your signature?
DR JENKINS: Yes, it is.

MR BEARD: Is this third report true to best of your knowledge and belief?

DR JENKINS: It is.

MR BEARD: Thank you. If we could just go to the joint expert statement, so that is at {OR-E/49/1}. If we go down to page 16 in this. I am hoping I have got that right. No, I have not {E/18.1/6}. Is that your signature, Dr Jenkins?

DR JENKINS: Yes, it is.

MR BEARD: Are your contributions to this joint expert report true to the best of your knowledge and belief?

DR JENKINS: Save for one correction I will make, but yes.

MR BEARD: So you indicated there was one correction in relation to the first report that you had, and I understand it is in relation to figure 5.19.

DR JENKINS: Yes, that is correct.

MR BEARD: That is {IR-E/17/155}. So this is a table that was shown in the course of proceedings already. Could you just explain what the correction is in relation to it, please, Dr Jenkins?

DR JENKINS: Yes. In the process of preparing some of the data schedules that the chairman requested at the beginning of proceedings, we, my team, detected a spreadsheet error that affected the proportion of losses to BT where -- of people leaving SFV to competitors, so we have updated that, and the corrected figure has been -- I think will be supplied to the Tribunal in the data pack that you will get, because I think that was one of the questions was around this, can we also prepare a reversion of this, but it will be -- the corrected version will appear in the submission we made.

There is also a correction I want to make to paragraph 5.83 which I think is on the next page, {IR-E/17/156}.

MR BEARD: No, I think it is further down the same page.

THE CHAIRMAN: Sorry, to interrupt, Dr Jenkins, but does that mean a change to your figure 5.19?

DR JENKINS: Yes, I am going to tell you what the summary effect of that is, which is in the text just below, and then you will see the year-by-year changes, but I think -- it is not a big change, but ...

THE CHAIRMAN: But you are going to provide a new version of the table?

DR JENKINS: In the document I think you are going to receive, which will hopefully be agreed, which has all the data, so you will receive that there.

THE CHAIRMAN: Thank you.

I am sorry, counsel was taking you to an amendment to 5.83.

MR BEARD: It is just above.

DR JENKINS: So it is the last sentence, the last full sentence, which starts "At the same time ..." Instead "of 8.8%" of BT's SFV base on average, it should read:

"10.4%" of BT's SFV base on average over the same period left BT for one of its competitors."

THE CHAIRMAN: Just a moment. At the same time ... Yes.

DR JENKINS: 10.4%.

THE CHAIRMAN: Thank you.

MR BEARD: Dr Jenkins, you mentioned a correction in relation to the joint expert report. Was that a concomitant change to that?

DR JENKINS: No, that is a different transcription error.

MR BEARD: Could you indicate which paragraph?

DR JENKINS: Yes, so it is page 249 of the joint statements.

MR BEARD: So that is {OR-E/49/249}. Is that the right place?

DR JENKINS: That is the right one. So this is in the line of table 1, which is "Recapture rate in HJ2", which you can see there. Second from the bottom of that table. In transcribing from that, the results in HJ2 to this table, the wrong cells were picked up, so there are some minor half a percent error in those numbers. I can tell you the corrected numbers or I can direct you to where the correct numbers are in HJ2.

MR BEARD: Perhaps if you could do the latter and then we can simply read across from HJ2.

DR JENKINS: Yes.

MR BEARD: Thank you.

DR JENKINS: So they should be the numbers from HJ2, Figure 3.5.

MR BEARD: So that will be 48, I think?

I think maybe page 54, let us try that. {IR-E/18/54}.

DR JENKINS: Yes, 54 bundle reference. There we go. Yes. So we see the numbers above the line there, the 50%, 47.8, 44.2, 37.3, those are the numbers that should be in that line of that table. They are not very different, so I do not think it changes any of the conclusions, but just to have the correct data references.

MR BEARD: I am grateful. I understand, Dr Jenkins, you do not have any other corrections in relation to those matters?

DR JENKINS: No. That is it.

MR BEARD: I think there is one issue, it may be that Ms Kreisberger is about to stand to deal with it, but I am not sure that Mr Parker was actually sworn in when --

MS KREISBERGER: Yes. Mr Parker points this out to me. He is doing my job for me. So if we could go to

Mr Parker's fifth report. Mr Parker I think you have it there in hard copy.

MR PARKER: Yes.

MS KREISBERGER: Is that your fifth report?

MR PARKER: Yes, it is.

MS KREISBERGER: Could I ask you to go to the last page, page 23, {E/5.1/23}. Is that your signature, Mr Parker?

MR PARKER: Yes, it is.

MS KREISBERGER: Does that report represent a true and complete account of your views at the time of signing?

MR PARKER: Yes.

MS KREISBERGER: Many thanks, Mr Parker.

THE CHAIRMAN: Thank you. With those matters complete, before Mr Ridyard starts the questioning, as I think you all know, you will, after the relevant hot tub sessions, be released from your purdah prior to cross-examination. Subject to that, when we have breaks, and we will have a break mid-morning and mid-afternoon, you of course are not released and you must not discuss the case or your evidence until you reach the point when you are released. Thank you very much.

Can I invite Mr Ridyard to start then, please.

Questions by THE TRIBUNAL

MR RIDYARD: Before we start on the questions, just a couple of brief introductory comments. As you know, I am going to be posing the questions in the first instance, and, it is obvious, but make sure your responses are to all three of the panel members, because obviously we are all very much involved in analysing the evidence.

The second one is that we are going to go sort of sequentially, when we go through the questions, as to who goes first, so we will go BT and Class Representative more or less alternating, but there are one or two places where it makes sense to start with one particular individual.

The third point I just make is that, as you know, your primary duty as experts is to assist the court, and we definitely need assistance, so we will be taking that duty very seriously and we expect you to be doing the same.

So the first set of questions are quite a broad set of questions but we thought it would be useful to start off -- we do not want to go into tremendous detail on this first area, but we do want to ask some very general questions, just to sort of situate some of what is going to come later on, so that was the purpose of the first set of questions, and it is just to try and understand how these products that we are talking about fit together with the other products which are involved in the relevant markets.

So I think maybe Mr Parker, you might go first here. Can you just -- we are interested in what are common costs and what are not common costs essentially here. First of all, what is the significance of the fact that broadband and voice are provided through the same physical connection to the household when we start to look at the economics of these cases?

MR PARKER: Yes, so I think actually the best place to start is with Dr Jenkins' report, so I think the key question is whether the provision of the access product by Openreach is a joint provision which can be used for voice or broadband, or whether it is a single provision that can be used for voice and a single provision that can be used for broadband.

My understanding, and actually I bow somewhat to Mr Duckworth who will be much more informed about this, is that BT use a single product for voice, also line rental, and a single product for broadband, which is called shared metallic path facility. Rivals to BT use something called local loop unbundling, I think they also refer to it as MPF, which was a joint product, but BT basically purchased two separate products from Openreach, BT Consumer, and that led -- leads to an incremental cost, access cost, of providing broadband if you are BT.

Then there are other incremental costs to providing broadband, and perhaps we could go to Dr Jenkins' report at figure 5.5, which is on internal reference 134 I believe.

THE CHAIRMAN: Is this the first report?

MR PARKER: This is HJ1 at 134 {E/17/134}. You can see there the yellow line on Figure 5.5, and there are similar lines on Figure 5.6, and, if you go over the page, 5.7. But on Figure 5.5, the yellow line is BT's direct broadband costs. So that is £10 a month, rising a little bit, so £120 a year. You get -- this is I think smoothed across all broadband products, but that is the incremental cost to BT, direct cost, not indirect incremental, but just direct cost of providing broadband.

You can see, if you go back to 131, {E/17/131}, at the bottom of the page, footnote 204. If you can go to footnote 204, which is quite small text, but if you could blow that up a little bit, we have there got the reference to BT relying on wholesale line rental and SMPF to provide services, whereas Sky and TalkTalk, for example, provide -- were operating under LLU, so ...

Then there is a similar reference at footnote 225 but we probably do not need to turn that one up.

So I think, if you like, the significance of the fact that they are provided through the same line is actually there is not much of a significance, because broadband incurs an additional access cost, and broadband incurs additional direct costs which I understand are things like the Home Hub thing you get, or the ...

MR RIDYARD: Of course, yes. But the actual -- you are saying the line itself is an additional incremental cost? If you are trading up from voice to a voice and broadband bundle, there is an extra physical line that ...

MR PARKER: There may not be an extra physical line, but it is an extra product from Openreach incurring an extra cost. Mr Duckworth will be able to give you a bit more chapter and verse on that.

MR RIDYARD: Maybe Dr Jenkins, you could respond to that, and we will come back to Mr Duckworth.

DR JENKINS: Yes. So I think Mr Parker has accurately described how BT chose to purchase those wholesale inputs from Openreach, however, the prevailing way in which those products were supplied by rivals to BT was through using LLU, or over time what was known as VULA, when the fibre network was laid down.

So for the rivals in the market, they were purchasing predominantly a wholesale product that enabled them to sell both voice and broadband and other services over that connection, and so from the perspective of how the market was evolving, the fact that you had a connection that enabled you to supply multiple products over that line, and indeed at the time I think at various points the LLU option became cheaper than a WLR option, so if you were looking as to what was a sensible way in which to run that business when you are not part of that overall group, you purchased an LLU or VULA product, which was therefore a joint -- allowed for the joint offering of voice in bundles or voice standalone or other products that would meet customers' needs.

MR RIDYARD: But for BT, if we are looking at the costs rather than the market it has to meet, it was an additional cost because of the way they chose to do it. There were two separate costs of voice and then broadband.

DR JENKINS: That is right, and I have identified those separately in the -- all the analysis. The direct costs of the voice product, which is not just standalone fixed voice but all voice, the revenue that BT attributed to all voice would attract the WLR component, then the broadband element, which would then be added in when customers purchased a bundle, which included voice and broadband, then the direct costs would be captured through the SMPF, and then the other direct costs.

Similarly, for voice, there were other direct costs on top of WLR that mostly related to call costs.

MR RIDYARD: Yes.

Mr Duckworth, do you want to add anything on that, or there is no ...

MR DUCKWORTH: Just a few clarifications. Openreach provided, as Dr Jenkins and Mr Parker said, two ways of providing -- well, three ways actually of providing broadband and voice services. So there was the option of purchasing WLR and then SMPF which would allow a local loop unbundling operator or BT to provide a broadband over that same line that was provisioned for wholesale line rental. That would require additional equipment. So when you look at the direct costs of sales of broadband, that is not only the SMPF charge but also the equipment used by other divisions of BT, in this case, to provide that broadband service to BT Consumer.

In terms of MPF, Dr Jenkins said at times the MPF charge was lower than the WLR charge. That also reflects the fact that MPF charge is only paying for the copper line, whereas the WLR charge includes the cost of the voice equipment which is required to provide a service over that copper line. So when a provider such as TalkTalk and Sky wanted to provide either a voice service or a broadband service or a combination over that MPF line, they were required to install their own active equipment in BT exchanges. So the differential between WLR and MPF needs to take into account the fact that in order to provide a sort of comparable service to WLR, you would also need to provide some equipment in the exchange to do that.

The final sort of clarification is during the claim period, there was a migration from what is called standard broadband provided over SMPF or over MPF to superfast broadband provided over VULA, and in that case Openreach set separate charges for VULA which provided the broadband component, and that needed to be purchased either with a WLR service which provided the voice service, or in some cases you could purchase an MPF service and use that to provide the voice service but not the broadband service. So rivals who wanted to deliver superfast broadband were required to purchase separate services to provide, or separate wholesale services, one providing the voice component and one providing the broadband component.

THE CHAIRMAN: Sorry, can I just ask a clarification of that. Dr Jenkins said that in time the LLU became cheaper, but can I just be clear about it, that if you are BT, then if you have a bundle, you are providing a bundle, you are buying WLR to service the voice element.

MR DUCKWORTH: Yes, that is right.

THE CHAIRMAN: What is the product you are buying to service the broadband element from Openreach?

MR DUCKWORTH: The service provided by Openreach is either an SMPF service or a VULA service. However, that service on its own is not enough -- that wholesale service on its own is not enough to provide an end-to-end broadband service, and so other divisions of BT, who are not Openreach, would need to provide active equipment and transmission from -- because both VULA and MPF effectively are from the customer premises to the exchange, and you need to provide sort of onward transmission from the exchange to the core network.

THE CHAIRMAN: Right. But the distinction that was being made between what BT have to pay for in terms of costs and what its rivals have to pay for, its rivals are using not WLR by itself. We were told it was one joint product, effectively, wholesale product.

MR DUCKWORTH: Rivals did also use wholesale line rental to provide a voice service, so they did not exclusively use MPF to provide services.

THE CHAIRMAN: But the MPF is providing voice and broadband?

MR DUCKWORTH: It allows provision for both.

THE CHAIRMAN: Even though it is not everything, because you said there is some other ...

MR RIDYARD: But they had to augment that with some kit that they put into the ...

MR DUCKWORTH: Exactly.

THE CHAIRMAN: Thank you.

MR RIDYARD: So if we now step more broadly back, and we are interested in getting an idea of what are the common costs, not in sort of detail in terms of monetary amounts, but just to understand what are the common costs and what are not the common costs.

Maybe, Dr Jenkins, can you give us an overview of which considerations you think fall in the common cost bracket as opposed to costs which obviously can be causally linked to one or other of the two services that we are mostly talking about?

DR JENKINS: The common costs that I have identified actually come from the SG&A and D&A groupings for BT Retail. We could turn to annex 7 of my first report to go through --

MR RIDYARD: But in general, it is a matter of the head office costs and the marketing and sales and so forth.

DR JENKINS: That is right, so looking at components such as marketing, but seeking to identify from that not the elements of marketing that relate to specific campaigns or specific products, but the general marketing which relates to BT's own brand or its -- what it called non-campaign marketing. It includes what was called re-charges, also became known as TSO, which is the fact that group provided services to the market facing units, and so there was a re-charge of those central office costs. So those are aspects of common costs which are attributed to BT Consumer.

Again, in my analysis I did not seek to attribute all elements of these cost categories from SG&A, but to seek to make some educated estimate from the material that was available of what proportion of those could be assumed to be common for the purposes of this exercise.

MR RIDYARD: Just to go back to the previous question, I mean, did you seek to make any common cost points out of the wholesale costs of line rental?

DR JENKINS: No, I did not, because, as we discussed, the way BT structured it, they were captured as direct costs for voice and direct costs for --

MR RIDYARD: So they are separately identifiable and therefore they were -- yes.

DR JENKINS: They were part of the direct costs which are predominantly agreed between myself and Mr Duckworth.

MR RIDYARD: Yes. Okay.

Mr Parker, do you want to comment on that?

MR PARKER: Could I perhaps pass to Mr Duckworth first, because this is more his --

MR RIDYARD: Certainly, yes.

MR DUCKWORTH: I would say that there are some common costs between voice and broadband services. The question is sort of the significance of those common costs. I think there is disagreement between myself and Dr Jenkins on the kind of the overall size of those fixed and common costs. Clearly some elements, you know, production of a paper bill and kind of postage which is sent to someone buying both broadband and voice services. That is clearly a common cost. It would be incurred whether you were providing just a voice service or the two together and then it does not really vary.

I think the issue is then when you get into some of the costs, even sort of head office costs, to say that those are completely fixed with respect to demand, you know. My view is most of those costs are variable with respect to demand in the long run, I think is the sort of correct way of considering whether costs are fixed and common, is to look at sort of long run variability rather than short run variability. So even things like people working in the finance side of BT, as there has been increasing demand from either voice services or broadband services, the current requirements of BT Consumer for head office staff would change and then that would lead to various costs becoming variable in the long run.

MR RIDYARD: I guess some of those costs might depend on the number of customers and some might depend on what the customers buy --

MR DUCKWORTH: Yes.

MR RIDYARD: -- and ideally you would make a distinction between those two things.

MR DUCKWORTH: Exactly.

MR RIDYARD: Yes, okay. Obviously we understand you disagree with one another about the importance -- the size of the common costs, and that is understood.

Are there any sort of clues or is there any information in the way the products are priced that yields some insights into common costs? Because that would be one thing you might -- if you are looking at a competitive market where there was bundling, you might want to look at the incremental price of one product rather than another, and maybe infer from that the existence of common costs.

Dr Jenkins, do you think that is a fruitful thing for us to do, to try and evaluate the common costs question from the pricing side rather than from the bottom-up costs side?

DR JENKINS: I think the pricing of bundles is a combination of the demand and supply side elements, so I think one can infer something from the ranking of the pricing, but it is also going to be very much related to how these competitive businesses thought customers would react to that pricing. I think what you do see is that standalone list prices for voice or broadband products were higher than the incremental price of each of those products once you looked at the price of the bundle, and that might suggest that there are common costs that are being recovered, because whether someone comes to you just for voice or just for broadband, you have a higher price than when they come to you for the two products together.

I think, as I have set out at various points in my reports, that rationale for bundling, that supply side rationale for bundling is precisely that. Businesses can want to pass on some of the cost benefits that come to them from serving a single customer with two products. We have already discussed the call -- you know, the servicing of that customer in many ways may be cheaper as a result of being able to supply two products to them. The other aspect of bundling is in terms of encouraging customers to take up multiple products with you, and so that aspect of bundling incentives may not fully reflect cost structures.

MR RIDYARD: Right, okay.

Messrs Parker or Duckworth?

MR PARKER: Shall I go first? Yes, I think in principle the pricing of bundles reflects both demand and supply factors, as does the pricing of SFV services.

The other thing that I think I would point to is also potential market power in SFV services in terms of thinking about the incremental broadband price. I mean, if we go back perhaps to the Figure 5.5 of Dr Jenkins' first report, which is page 134, {E/17/134}, we can see there that the incremental starts -- it going into some of the other points we will no doubt come to, but the incremental prices being charged by Sky and TalkTalk are very low, you can see people have free broadband type offers there, prices of SFV or voice component that, in my view, sort of floated up to match BT's price. That allowed them some headroom, and they have used that to offer very aggressive bundle prices. Because they are looking at the combined cost of the bundle and they are selling a combined price for the bundle.

I think what you see is sort of BT trying to be competitive in that market and following the -- you know, using an incremental broadband price, which is actually in this, at least for 5.5, pretty close most of the time to the direct costs of providing broadband, sometimes slightly above, sometimes even slightly below in order to remain I think competitive on the bundle as a whole.

I am sure we will come to the incentive to move people from an SFV product to a bundled product, but I think I would treat the pricing decision for a bundle as being very separate to the pricing decision for fixed voice. I think you look at costs and the market conditions for an SFV in one way, and then you look at the total costs of the dual play product and the total price as a separate issue.

MR RIDYARD: Okay. I will give you a chance to cover that. I would just like to follow up briefly, Mr Parker. I think that is an interesting answer, and one thing which we wondered about was whether there would be some information out of broadband only prices. Because with voice only, obviously we understand the case is about a claim that BT's got market power there, but with broadband only, there is no claim that BT or anyone else has market power there, I do not think.

So does that help us to distinguish between the market power explanation and the efficiencies explanation for the pricing that we see in the market, given that, as I understand it, if I was to call up my provider and say: oh, I do not use my voice line any more, can I no longer have to pay the line rental? I would get the answer of: no, you cannot.

MR DUCKWORTH: Could I interject on that one?

MR RIDYARD: Yes.

MR DUCKWORTH: Openreach had a requirement until recently that if you wanted to enable a broadband service on a line using either SMPF or a VULA service, you were required to also have a wholesale line rental service providing another line. So Openreach effectively said you cannot buy a standalone broadband service on a line without also providing the voice service over a wholesale line rental. What that means is if you rang up TalkTalk and said: I want a broadband -- sorry, if you rang up BT Consumer and said: I only want the broadband service, they would say: well, we have got to provide a WLR service on the line so we will give you the voice service as well.

So until recently it was not possible to buy a standalone broadband service without having the voice line enabled as well, and so the wholesale charges reflected kind of the incremental costs of providing the broadband once wholesale line rental was already there.

The other issue with the standalone broadband services is that as the market was moving to bundles, because from the perspective of someone like TalkTalk and Sky who was using MPF, they did have effectively common costs in order to provide voice and broadband, they were very much incentivised to provide bundles of voice and broadband, and in reaction BT Consumer was also competing largely through providing bundles of services.

So the standalone broadband services which BT was required to provide separately from voice pre-2009, some of those were sort of legacy services that had been provided pre-2009 when BT Consumer was prevented from bundling, and so may not be a perfectly comparable set of broadband services to compare with bundles. So you do need to be careful when saying I am going to come back -- compare the costs of bundle services with the kind of standalone cost of broadband and plus the standalone cost of voice.

MR RIDYARD: But why has Openreach-has Openreach insisted until recently that you must have the voice element?

MR DUCKWORTH: I think you would have to ask Openreach that question. But historically the voice line was the service provided to residential customers, and then when broadband services were introduced, they were introduced as an addition to the existing voice.

MR RIDYARD: Clearly we understand the history, but I just wondered what it tells us about the economics of where things are now.

Dr Jenkins, do you have a thought on that?

DR JENKINS: Yes, a few points to make. Maybe actually going back first to Mr Parker's directing you to Figure 5.5, and I just wanted to clarify that the BT direct broadband costs estimate that I have made there, yes, I think Mr Parker fairly did direct you to some of the footnotes around that. I direct you to the page previously, {E/17/133}, footnote 208. I am not really saying one should read it all now, but basically what that says is that in order to work out the cost of sales for broadband, the information we have is aggregated across all broadband products that BT is using, is supplying, particularly for different speeds, and so the input costs may be different for that.

So when you go to Figure 5.5 again, this -- but when I presented the market prices, which is what I am doing here, I have differentiated by the different speeds. So it is not a perfect match, the broadband costs estimate with the pricing that I have there, and certainly for these lower speeds you might expect the broadband costs, were I able to split them out, would be lower for the lower speed products.

THE CHAIRMAN: Could I just interject one question. The BT pricing there is higher than the Sky and TalkTalk pricing. Are we comparing like with like, and is it the case that their direct broadband costs are going to be different from BT's?

DR JENKINS: A very good question. I was about to make that point.

THE CHAIRMAN: Sorry, I interrupted.

DR JENKINS: So yes, they are like with like. So it is saying what -- based on pure pricing data, so this is the data is showing what are the prices being offered to new customers, there was some discussion about that earlier in the proceedings, and what the bundle price is, including a promotional element of that that has been smoothed over the contract period for that relevant price. So it is trying to get at if you were purchasing a bundle from BT, from Sky or from TalkTalk at the time, what would be the average price over the contract period, and subtracting from that the standalone voice price that was offered at the same time.

THE CHAIRMAN: So when you talk about incremental broadband monthly price, this is a reference to what would the bundle price be for a new bundle customer who is migrating from a voice only contract.

DR JENKINS: Yes, that is right, and it is capturing what that customer, if they were doing the mental maths, would work out was the additional cost they would pay to add broadband to their voice offering from that provider, and they are like for like, based on pure pricing data.

You see that the TalkTalk data stops between 2016 and 2017, and that is because at that point TalkTalk ceased advertising voice only products. You can no longer calculate an incremental price for them.

Then to your point that what we do not know, what is not in evidence is what were the direct costs that those parties would have faced for providing those services and, as we were discussing before, it is very likely that BT's direct broadband costs are not a good measure of that because these parties were very likely purchasing the LLU products, certainly at this early -- the early period. They were incurring the additional costs they would have to incur, but then that access charge that was being paid to BT would be joint between the voice and the incremental broadband product that was being supplied, so their direct costs may be lower than BT's, but there is no evidence to actually get a good estimate of that.

MR RIDYARD: Yes.

DR JENKINS: However, the important point is, as Mr Duckworth said, this is the competitive environment that BT is operating in where it is facing Sky and TalkTalk offering these much cheaper incremental broadband prices at this time.

MR DUCKWORTH: Can I just make one clarification. Dr Jenkins is right in this comparison, which is sort of 10 to 30 megabytes per second. These are services which can be provided over MPF. When we look at the higher speed services, TalkTalk and Sky could not provide those over MPF and would be required to use a VULA service to provide those services, and would have broadly the same direct costs as BT Consumer, because BT Consumer is also required to buy effectively the VULA service.

So for MPF there is a difference in how the service has been provided between BT Consumer and Sky and TalkTalk, but for VULA services or superfast broadband services that difference fell away.

MR RIDYARD: Is that what Figure 5.6 is showing or looking at? Or responsive to, at least?

DR JENKINS: I have got the same broadband cost estimate in each chart because I cannot split it and match it to speeds, but there, yes, you see all the providers are charging higher amounts for that incremental cost. I have done my best to match speeds and pricing through pure pricing information.

MR RIDYARD: Okay. Then we had a question about the ASA ruling in 2016 which has been discussed in quite a bit of the evidence so far.

Dr Jenkins, do you think that changed the way pricing was done, or did it explain anything on these charts that you are showing us here, for example?

DR JENKINS: I think as I pointed out, at that -- basically at that point, that is when TalkTalk actually ceased to advertise a voice only product, perhaps reflecting the fact that it was predominantly targeting attracting customers, line customers to it, and was really only interested in the bundle. So once the ASA prevented it from citing the voice product, it decided to drop even the offer of that product. I think other market participants maintained a voice only product until relatively late in the period.

I mean, whether it had a big impact on consumers, I think there is some -- one of the pieces of evidence I have put forward, which is called the events study, which shows what happened when the BT commitments price came in, and how -- as best I can estimate the behaviour changed between voice only and split purchase customers. There I did -- one of the sensitivity tests I did was testing whether the ASA ruling was an alternative explanation or influenced that, and that shows it did not -- it was not that impactful, which would suggest that consumers were able to do the mental arithmetic, right. So if they could see the line rental price which BT was -- and many of the rivals were advertising, and the bundle price, they could calculate their incremental price even if it was not being headlined any more in the marketing material.

MR RIDYARD: So the rationale for the ASA ruling must have been a concern at least that if you were offering a bundle, you would distort the way you presented the service to make the incremental price of broadband look less than it truly was or should be, and therefore removing that, you know, changing the law on the advertising, if it had an effect, you would expect it to increase the gap between the standalone voice and the broadband price, but you are saying you do not think that really happened?

DR JENKINS: The evidence does not seem to see a big change at that point in time in the pricing behaviour with respect to how incremental broadband prices were set, which I think would suggest that customers could still do that, it is still a meaningful driver of choice by consumers, what the actual incremental cost was, even if firms were no longer able to advertise that headline rate.

MR RIDYARD: Mr Parker, do you have a perspective on that?

MR PARKER: Yes. I think several. Could we maybe turn forward to page {E/17/140} of Dr Jenkins' first report and Figure 5.12, and then there is also Figure 5.13.

So my view on the ASA is it is about how you present -- it is a ruling about how you present what is essentially a combined price. It could be: get broadband for £5 a month if you pay £17.99 in line rental. What the ASA is saying is: we do not like the way that that is being split up, because the £17.99 is kind of hidden in a footnote somewhere, you should just say it is £22.99.

I think if you look at this chart, TalkTalk starts doing something different, but BT and Sky basically seem to do pretty much the same thing throughout, in terms of their standard broadband monthly price. If you go down to 5.13, then I think you see again the same sort of thing. Things go up and down a little bit, but there is not an obvious pattern or structural break as to why things are different.

Similarly, 5.14, {E/17/141}. Again, I mean, it does not really help because the timing is such that you move to a new product. But for me, none of this is suggesting that the ASA ruling had an effect on the real combined price of the bundle. I think it just changes the way the parties labelled different components.

MR RIDYARD: But you think it has changed the way that they have labelled them?

MR PARKER: Well, they were able before to label it £17.99 -- you know, £5 asterisk £17.99, and now they have to say £22.99. So in that sense, yes, but otherwise I think not in a material way.

MR RIDYARD: Yes. Okay.

MR PARKER: Might I just turn back to your previous question on what we can draw from standalone broadband, with apologies.

Could we go to my third report at page 80 {OR-E/3/80}. Do you want to maybe zoom in a bit, if that is all right?

So this is a comparison of the total price paid by a BT split purchase customer which is the red dots with a variety of alternatives for buying the same services, so you have the blue and the blue diamonds and the yellow triangles are standard prices and promotional prices as offered in the market from competitors. So if the bundle market is competitive, that is the sort of competitive price level.

Then you have split purchase, so the red boxes is split purchase which is BT SFV service plus BT standalone broadband. I have also put there TalkTalk standalone broadband price as well. So you can see that for the standard -- this is the standard broadband, so this is a relatively low speed broadband -- you have a gap between the blue, yellow and the green which is due to SFV services. Then there is potentially an additional gap between the green and the red which could be considered to be some additional premium, shall we say, that BT was able to charge for standalone broadband for standard customers.

If we go to Figure 8 which is on the following page, {OR-E/3/81}, then you see the same chart. There you see actually there is much less of a gap between what is in this case the red crosses and the red squares, so there that suggests that this is Virgin Media's price for superfast broadband on a standalone basis. So that is suggesting there that the majority of the difference is in the SFV services price.

I am not sure if that helps get to your question but that is the --

MR RIDYARD: Maybe I am being a bit slow here but just go back to figure 7. To what do you attribute the gap between the red squares and the green dots? That is the difference between buying -- the red dots is if I buy BT voice and then separately buy BT Broadband. Whereas the green one is if I buy BT voice and then TalkTalk broadband.

MR PARKER: Yes.

MR RIDYARD: To what do you attribute -- clearly there is a premium there, to what do you attribute that to?

MR PARKER: It could be that BT was also able to charge a premium on standalone broadband. It is like due to market power.

MR RIDYARD: But I thought there was no allegation --

MR PARKER: It is not part of the claim.

MR RIDYARD: No.

MR PARKER: But I think that could still be the explanation, just has not being part of the claim from the very beginning.

THE CHAIRMAN: The key difference you are drawing out here is the difference between the split purchase red squares and then either the list priced or promotional priced bundle, dual play.

MR PARKER: Yes, that for me is the kind of key implication of this data but we were talking specifically about standalone broadband and what it shows you in this context, but that for me is the key implication of this data and the following chart and the subsequent charts of this same nature, because you are talking about the difference between voice and broadband taken separately and voice and broadband taken as a bundle.

MR RIDYARD: No, I understand that. That is what you are interested in doing this chart. But I suppose just more generally, we are always looking for -- just looking ahead of it, looking for competitive benchmarks and to try and assess the reasonableness of pricing in this context.

So what you are saying here is that -- because I had kind of assumed it was an agreed position between the parties that competition for broadband bundles mean it is not perfect competition but it is effective competition so we can sort of take comfort in that as not explicitly defined as a benchmark by anyone here but nevertheless that is a description of what workable competition looks like with all its warts and all. But here you are saying that you think this gap here is a market power explanation rather than one of those things that just happens to happen in workable competition.

MR PARKER: No, I would distinguish between the blue and the yellow which are the bundle prices and then the green which is BT SFV plus TalkTalk standalone broadband. So it is not -- and then the gap between the green and the red is potentially market power that BT had or for some reason was able to charge a price premium on the standalone component relative to the standalone component of TalkTalk. I do not think that has any implications for whether the dual play prices were a competitive benchmark for buying voice and broadband but I think potentially the kind of the full difference between that benchmark and BT SFV and BT, BT standalone broadband is -- there is part of that gap is SFV and part of it, the standard, for standalone broadband for standard broadband speeds is also due to the difference in the standalone price. I do not think that -- that does not follow on Figure 8 because the gaps are very much smaller and you will see if we jump on a bit later you see the sort of similar --

MR RIDYARD: Yes, I will leave you a chance to comment on that after the break, Dr Jenkins, because I guess you might want to say something about it too.

THE CHAIRMAN: Thank you. We will take the break.

(11.47 am)

(A short break)

(12.04 pm)

MR RIDYARD: So Dr Jenkins, I was giving you an opportunity to respond on that last point about this premium and what it means.

DR JENKINS: Yes, I think your question started from what can we infer about standalone broadband prices, and

Mr Parker took us to some of the analysis he had done of the sum of certain standalone list prices, so it does not actually show standalone broadband prices, and I have not presented any direct evidence on that either for you.

I think, thinking about how BT thought about it, it is the case, as I think no doubt we will talk about plenty, that when they were attributing bundle revenue, they did attribute the full line rental price to the voice aspect of that product, and then put the bundle discount, effectively pass that through on the broadband element of the product. So they did think of that dual play price being a discount off the standalone broadband price when they thought about that competition.

I think, as was suggested, there has not really been any allegation that in the broadband market there is an issue beyond workable competition and those -- it might not be perfect, but the broadband element, there was a lot of competitive constraint and competitive activity that comes through the provision of broadband in bundles particularly, but also in other ways by rivals.

I think, as you come through the period, towards the end of the period is where we actually do see there is more offerings of broadband only products. Virgin Media I think recently has that. It is sort of tied in with another aspect of the case, which is the fact that people are using their fixed line much less frequently for making calls. So they do not see that line any more as a way to make calls, it is a way to connect so that you get internet access, and people use their mobile phones a lot more for making calls.

So actually in the latest period that we are looking at in 2022/23, that is where I think you do see more genuine standalone broadband packages in the market, but I think I agree with -- I think it was Mr Duckworth saying that early on in this period there really was this sort of buy through element that you needed to have a voice line in order to add on the broadband element to it, and that is how the market was evolving.

So then just a final point, I will not go into a lot of detail on what can you infer from the sum of the standalone prices, other than to say that for the rivals to BT, so where BT was supplying the voice service and the rival was supplying the standalone broadband or apparently standalone broadband to an SPC customer, that product, that broadband product may well have been an increment to the other services that were being provided by the rival. So using list price analysis may well not be the appropriate way to think about what the choices were for SPC customers, and the survey evidence from around 2016/2017 does show that the SPCs who were asked: why do you have your voice service from BT -- effectively, since I think we all agree they have got most of the voice element of this customer base -- but your broadband from someone else? A very large proportion of them said: because it is a good deal, because it is cheaper for me.

So I think one needs to be very careful at looking at a list price analysis where it may not fully capture the promotions and deals that are on offer for broadband from these other suppliers.

THE CHAIRMAN: Sorry, just picking up on that. I thought you said that the rivals who were supplying ostensibly broadband only to SPCs, I thought you said they might be supplying something else as well?

DR JENKINS: For example, television services.

THE CHAIRMAN: That is what I was about to ask.

DR JENKINS: So both Sky and Virgin would have had a strong incentive to add broadband, a broadband offer to their TV offer which may have been attracting customers to them. For Virgin, obviously voice would also come for free as well.

MR RIDYARD: Yes, but they could also get voice from that provider too, so there is still a puzzle as to why they do not consolidate them all.

DR JENKINS: I think for Virgin, certainly they could get voice. As I say, that was absolutely deliverable across the cable technology. For Sky, I think Sky could choose not to buy the WLR product and, in addition to its TV, just have SMPF, and just add broadband to the TV bundle, and then, having done that, then go for the voice service as well.

So I do not think -- you know, obviously they could also try to get both additional products, but I mean, I think we all think the split purchase customers, you know, it would be great to be able to have surveyed them at the time to really understand what was going on in their mind. There is some evidence but not a lot about what the choice was and what offers they were being made, but the evidence that is there does suggest that they were getting offers that they perceived as beneficial to split their purchase in that way.

MR RIDYARD: Okay.

I would like to sort of bundle up the next three questions into one question, really. We are looking at different ways in the other products, because I know mainly we are talking about voice and broadband in this discussion, but there are these other products too, TV being quite an interesting product in itself, but also the other variants of voice and the other products that were available in the market.

Could I just ask Dr Jenkins, where do you see those? What role is played by BT TV and Sport in this and the other variants on the voice products? Should we be treating them as something interesting or just as part of the homogeneous mix?

DR JENKINS: No, I think you should definitely treat all of that as interesting. I think they are important elements of the competitive dynamics that were going on in the market, and if we sort of take a step back to think about what do we know about BT's strategic direction through this period from 2009 when they were allowed to offer bundled products, so at that point they offer voice and broadband together, but they are facing stiff competition from the other big rivals in their market, Virgin Media, Sky in particular.

They have differentiated competitors. So they have TalkTalk, who are in a sense competing on price on the bundle more or less directly, they are not offering a lot of additional services. Then you have Sky and Virgin Media who have in effect more content that will be accessible down this line, and they are competing to capture the voice and broadband relationship with the customer as the time -- as time goes on.

So BT recognises that in order to be able to compete for these broadband customers, it also needs to be able to offer that bundle service offering something that is competitive with its main rivals in these markets while also facing head-on competition on the products, TalkTalk for voice and broadband bundles, but also the Post Office for voice on a standalone basis.

So almost every aspect of how BT is engaging with its customer base, it is seeing other rivals who are competing head to head with it in that.

So BT is looking to ensure that its offer in the bundle space is attractive in order to encourage its customers to spin up, to take a bundle, if they are just taking voice and that is all they are taking, but also to spin to BT, if they are currently splitting their purchase and taking the broadband element from someone else, and also competing head to head in the bundle market for other bundle customers to get them to come to BT.

So I think the investments they made in TV and Sport were very much associated with attracting and keeping customer lines for their business in a very general way, and that was seen as accretive to the revenue line of the voice product broadly, the broadband product as well. So that investment was paying off in terms of the revenue that they would earn from voice and broadband.

MR RIDYARD: So was BT Sport a sort of loss leader to encourage people to buy telecom and broadband services?

DR JENKINS: Particularly broadband, yes, and over time they have started charging directly for sport, but in the early stage it was something that was particularly set up and marketed as an attractor to taking broadband in a bundle with BT.

MR DORAN: Just to pick up on your point. You said a moment ago about customers were just taking voice, so that they would spin -- I think you said spin to BT if they are currently splitting their purchase and taking broadband elsewhere. By increasing line rental, how does the competitive dynamic of these other products and the significant line -- well, the steady line rental increases over this period, how do we fit this together? Is this an overall package of revenue? How does its work.

DR JENKINS: Yes, so I think BT is setting a system of prices in each year when it is thinking about what it is going to do, and it is facing constraints and competitive dynamics in a number of ways. It is also facing a decline in the calls elements, so calls revenue is declining through this period. It has investment needs to remain competitive in the broadly drawn competitive arena, which is ensuring that its quality of service for its voice is good, that it has attractive products to offer to its -- to its customers in competition with the other main rivals, and it is also thinking about how the structure of pricing will encourage its customers to take the services that it wants through the bundling, saying: actually, what we really want is to get people to take more services with us, so we will structure our pricing so that the incremental cost of the additional services is small.

So I think if you put that together where you have an overall need to increase the revenue, and I think it is not only that they are increasing the line rental price, they are also increasing other prices through this period because their cost base is going up. But taken in the round, all those pressures mean that they are having to increase prices, and they are doing it in a way that is designed to meet that competitive dynamic in the market to offer compelling services and encourage the take-up of bundles.

MR DORAN: So you see for the voice customers these differentiated products and the call deals being a very important part of the overall picture we should see in terms of competition. It is not all the line rental question.

DR JENKINS: It is not all the line rental question. Because while BT was, as you say, having a steady increase in the line rental component, it was facing declining call revenues overall, so the fact that they needed to compensate for that. At the same time they were observing customers leaving their voice only product, and they did introduce the Home Phone Saver product at that time. So that was in a sense saying, okay, we see that the main direction of the competitive dynamics in this market is towards bundled products, we can see that generally, and we need to be competitive in there because if we are not, you know, we are not going to have any of these customers, they are all going to leave us without that, but we do have other customers who are not at the point that they are ready to spin up to bundles, which many of the voice only customers were moving to take up bundles during this period.

So for that, then they offered an attractive differentiated bundle with additional voice services, with call -- bundled call opportunities, if you like. You can make many more calls and there will be no incremental charge for those. They designed that as a Home Phone Saver to target the interests of that element of their customer base.

MR DORAN: Just on that point, just to be very clear, when you mentioned "bundle" just now, you were actually talking about a package of call-related services, not broadband or anything else?

DR JENKINS: Absolutely. As I said, I got confusing. But, yes, the Home Phone Saver package, which was additional calls, some additional service level commitments, and was precisely targeted at customers who, they said, those not planning to take up broadband. It was for those who wanted to continue as a voice only relationship.

MR DORAN: Right. Thank you.

THE CHAIRMAN: We are shading, not surprisingly, into 1.2, the next section. But before we do that formally, and we know what you said, because a lot of what you said is actually relating to 1.2 questions, can I just finish off what I wanted to ask on 1.1, which is I note that how you say the inclusion of things like Sport, TV, was important for BT's competitive position in relation to bundles. I follow that. But what does that have to do for the pricing of SFV where they are not providing a bundle, where they are simply providing a voice service? What is the relevance to the competition in the bundles to what they might decide to do pricing wise on voice only?

DR JENKINS: So in the analysis that I have done, absolutely the sports costs are part of the bundles, part of the business, right? Like it is captured there. It is relevant for thinking about the pricing of voice, because effectively what the analysis that I have done shows, and here, yes, leaping perhaps quite a long way forward into part of the limb 1 analysis, but what can explain part of the increase, the cost reflective element of that increase, the fact that the increase is a reasonable attribution of costs, is effectively that more of the common costs get recovered from that product because there has been deep investment that is going on in the bundles market.

So the shift, what you need to be able to flex as a business when you are facing these competitive pressures, is how you recover your common costs may change over time to respond to the competition that you face.

MR RIDYARD: Mr Parker, anything to say on that at all?

MR PARKER: So quite a lot, but I am sure we will come to much of it later.

I am not compelled by the idea in a competitive market that if you are investing a whole bunch in, say, bundles, TV, sport and so on, and you do not make so much contribution on that, but in a competitive market you would be able to increase your price of SFV services. My view is there was a dual play bundle, a triple play bundle, a quad play bundle. BT is competing with rivals in those markets. It is setting competitive prices in those markets. I think actually the existence of bundles allows them to price discriminate against the SFV customers because these customers, by demonstrating they are still SFV, have demonstrated that they are not terribly switchy, and that has allowed BT to increase its prices year-on-year up until the commitments were introduced, pretty much.

I do not think it is right to say that investment in sport which does not benefit SFV should then lead to price increases for SFV services, because customers on SFV do not benefit from that, and I actually do not think that in a working competitive market you would be able to recover additional common costs. If SFV pricing was competitive, making less money from bundles does not somehow give you the ability, I think, to increase the price of SFV.

There are many other points but I think I will stop there for now, because we will ...

MR RIDYARD: We will indeed come on to those.

DR JENKINS: I would just add to that, though, that that implies that somehow there are these SFV customers who are very different from the bundle customers, and

I think that is the other piece I did not add there, which is the other reason all this investment is going on in sport and TV and all of those things is precisely because customers that BT is serving are increasingly attracted to the interconnectivity that is offered through broadband and the additional services.

So it is precisely a customer who was a voice only customer for whom the attractiveness of the bundle and the relative pricing means they now move to BT's bundle rather than a rival bundle, that is the risk that BT faces, and it has to balance those while also investing, and that is -- that dynamic rationale is what is driving competition in this market. It is not the case that there is this set group of SFV customers that can -- that are unmoved by the competitive activity that is going on through being able to purchase voice through a bundle.

MR RIDYARD: We will come on to that. They are not necessarily mutually exclusive, it is possible there could be a bunch of customers you could price discriminate against whilst competing for other customers in the bundles, but we will no doubt come on to that.

I think we should probably switch to this section 1.2, the questions of incentives to sell bundles to SFV customers.

I think the first question I would like to ask, maybe Mr Parker could go first on that, is: do we have agreement on how you crunch the numbers, rather than -- I know we do not have agreement on how you interpret the numbers having crunched them, but is there a common position on the numbers, how you should be looking at this?

MR PARKER: So is there a common position on the arithmetic? I think the answer is yes. Is there a common position on how you should be looking at it? I think the answer to that --

MR RIDYARD: I think I knew the second bit, yes. Where is the best place for us to go to look at the common number on the arithmetic, the common view on the arithmetic?

MR PARKER: The joint expert statement in the annexes, which is ...

MR RIDYARD: When I was going through those, I sort of inferred that Dr Jenkins seemed to go last and therefore she summarised the position for everyone, but was that incorrect? No.

MR PARKER: I would go to the tables, possibly it is the right thing to do because it is easier to see the numbers. I think we have tables in ... my annexes, I guess they are, from page 231, yes, that is page 231 of the Opus reference, running through to 237. Then also from 253 in Dr Jenkins' annexes up to 256. So those I think are our broad materials from the discussion.

MR RIDYARD: Yes. But you agree with one another on the arithmetic there?

MR PARKER: As far as I know.

MR RIDYARD: Yes, okay. That is progress. Okay.

Then maybe staying with you, Mr Parker, I guess the most -- maybe one of the most important questions here is when we look at this incentive, should we be looking at it on the basis of gross margins, or margins after allocating incremental costs, or indeed margins after allocating incremental costs and the profit element? I know you prefer the third of those approaches. Can you explain why that is the case?

MR PARKER: Yes. So we are thinking about -- the starting point is would BT want to put up the price of SMP services in order to move people onto bundles? The incentive for BT to do that, if it puts its price up and loses a bunch of customers on SFV and recaptures them on bundles, it will incur the direct costs on bundles of certainly each customer, plus the indirect incremental costs of serving that new group of customers. I think you have to cover both of those. I think perhaps if we -- I am sorry, sir.

THE CHAIRMAN: No, that is all right. I am thinking.

MR PARKER: So you need to cover the direct costs and the incremental costs. I would say you should also try and cover the margin -- you would need to cover the margin as well in the sense of the direct costs incur you a cost, the indirect incremental costs incur you a cost. To satisfy your investors you need to make a return on those costs. Perhaps if we move to a world where we have zero common costs, just for illustration. I know that is not the case and the number is disputed. But zero common costs, I would need to cover my direct costs, my indirect incremental costs, and I would need to recover a margin.

I think there are two ways you could do that in terms of conceptually but they come to the same place. You could either say: the direct costs are 100, the indirect incremental costs are 100, I need to make a 10% return on that, so that is 200 plus 20, 220. That is the sort of version 3 that you identify.

Or you could say: well, I make direct costs of 100 and indirect costs of 100, and I need to make a sufficient return. So rather than looking at a sort of: am I above 220? You say: how far above am I from 200? Am I making my 10% return? Then the important question is: do I go above or below that 10%?

I thought that Dr Jenkins was also of the same view about the importance of looking at long run costs if you -- perhaps we could get up 229 of the joint statement. {OR-E/49/229}. If we could bring up footnote 20 which is a reference to Dr Jenkins' report:

"If a firm is pricing below LRIC [so that is direct costs and incremental costs] it will not recover the direct costs of providing the service and will be making a loss on each sale."

So it will not recover -- sorry, strike that.

It will not recover the direct costs of providing the service and will make a loss on each sale. So it will not be recovering actually the incremental costs, if you like.

So you certainly need to recover all the incremental costs, and then I think it is a matter of both direct and indirect, and it is a matter of debate as to whether you say: do I hit my 10% target margin? Or 33% if you are using Dr Jenkins' world.

MR RIDYARD: So this third element, the profit element, you see it as a kind of cost of capital? That is what I have to do to satisfy the investors to make it worthwhile them continuing to back me?

MR PARKER: Exactly. Because if you had one world where

I have got direct costs of -- you know, direct and indirect costs of 200, say, and I make 100 return on that, or another world where I have 500 costs and I make a return of 110, your investors are not going to be terribly happy because you have incurred 2.5 times as much cost for a very small additional return.

So I think you need to think about that margin as a sort of cost from capital proxy, which is why we are using return on sales here and a sort of asset light industry. We cannot use a return on capital employed. We are using return on sales to proxy that. It is basically I think a sort of required return for the investor and that is ultimately who you are having to satisfy.

MR RIDYARD: Okay.

THE CHAIRMAN: I want to try and distinguish with you, Mr Parker, and then when it comes to Dr Jenkins, when she is asked some questions, perhaps she can give her view on it.

It seems to me there are two contexts. There is the sort of heavy duty, if I might call it this, calculations of incremental and genuinely common costs, apart from direct costs, which in different ways each side has to engage with when we come to the limb 1 question. Then there is this question of calculating profitability which has arisen, I will not say by a side wind; it is important, but it has arisen in the context where there is a suggestion that BT was seeking to incentivise at least some of its voice only customers to move to bundles.

Now, there is a factual question there, which I do not think the experts can answer, which is: is that what they were doing? We have had some evidence about that last week and we will have to consider it. But, as I understood it, Mr Parker, your riposte to that suggestion was, well, they cannot or at least they cannot rationally be regarded as seeking to incentivise customer movement through increased prices because it would not profit them to do so.

Now, in the context of that examination of profitability, how important to the analysis is it if in fact it turns out that, for the purpose of assessing profitability on a sort of month by month basis, BT were in fact simply using gross margin?

Or do you say -- let us just assume that is a given for the moment. Let us assume that is all they did. You may say it is unscientific, but let us assume that is what they were doing month by month. What relevance does that fact have, if it be a fact, to your approach?

MR PARKER: For me, a recapture incentive comes in at sort of the fourth or fifth criticism I have of Dr Jenkins' critical loss analysis. It is not an absolutely critical part of my case. But if we take a bit of a step back, the contention is I want to put prices up of voice in order to shift people to BT bundles, because it is more profitable for BT. But it seems to me -- and in order to kind of make the relative price difference not so much, so you put the voice price up, and then the incremental price of broadband is not so much on top of that.

But it feels to me that is a suboptimal strategy, because if you want to achieve a relative price difference you can either put this price up or you can put this incremental price down. If you put this price up, you run the risk of losing your voice customers to other SFV, losing them to other bundle providers because you have made them think about moving, or then you might recapture them yourself.

Whereas if you put your dual play price down, say, for the sake of simplicity, or the dual play example, put the incremental price of the broadband down so the dual play price as a whole becomes more competitive, at that point you might move people from BT SFV, you might move people from other SFV, and you might move people from other bundles. So it seems to me it is a much better strategy, if you want to reduce this relatively, to increase -- to reduce the price of the bundle.

Now, if we are saying you cannot reduce the price of the bundle because it is so competitive, that is also telling me there is not much profit in bundles. So I would have expected BT to come down to the competitive level, because we are on the basis that bundles are competitive, and then at that point this profit incentive does not really seem to be there, because bundles are competitive, because they are making the competitive return on bundles.

So to the extent of you want to -- why would you want to put your price up on SFV where you are making, for these purposes, it would imply, a supra-competitive return, some kind of supernormal profits on SFV, why would you be doing that to have some prospect of getting a competitive return on bundles, but you could also -- I think the phrase used earlier was you might "poke the bear", right, you might be encouraging people to switch who may not have switched and you will lose some of them. Would it not be more sensible to cut prices on dual play, because that way if someone is encouraged to switch then, great, you will pick them up, and you might pick up from other competitors in the market as well.

THE CHAIRMAN: Thank you.

MR RIDYARD: Dr Jenkins, I do not know how -- I am sure there are several things you would want to comment on. Maybe start on the gross margin point. You favour looking at this on the basis of gross margins alone. Why is that?

DR JENKINS: Because if we are thinking about pricing strategies set on an even one to two year basis, so the fact that BT -- you know, as you say, this will have to be determined in evidence, but the fact that there is evidence that BT did use gross margins is consistent with that economic view of pricing which says, okay, first of all you want to cover the direct costs that you incur for different products, and then you look at setting your prices with respect to the demand conditions that you face such that you can recover your common costs that are there, fixed and common costs.

So we have the grey area, I would say, around indirect incremental costs. Now, in general, when we are talking about pricing decisions, those are often not included in that gross -- if you think about gross margin, in the sense that while for other purposes we might be thinking about that in a longer term perspective, for the question of what is the right pricing to do in the market over the next year, you would not be able to vary those costs, and so you would often include those in the fixed element that is then recovered from the pricing that you do.

I think -- so there is a grey area around how one treats indirect incremental costs. I think it is certainly the case you would not add a contribution, a margin on top of that for determining what the relevant pricing incentives is. That is the output of the process is telling you, you know, how much are you going to be able to earn, and, in a sense, saying to an investor: oh, because I might not make the full margin on this product, even though I earn absolutely more cash on supplying that product, I do not think saying it is because you have got to tell your investor that you are going to do this, because the question is, will you earn that amount of margin? That is the question that we are looking at here.

So you do not bake that in to your pricing incentive to say, well, I do not have an incentive to seek to move -- seek to strategically target this area of the market.

MR RIDYARD: Is that right, though? Because you are committing -- by persuading this consumer to trade up to more stuff, you are committing more resources into serving that consumer. So are you not at the same time asking your investors to stump up a bit more cash to help me do this thing that I am trying to do?

I know you do not have an explicit conversation with your investor every time you make a marginal choice, but is it so wrong to think of that as committing more resource to the activity, and therefore sooner or later you are going to have to satisfy your investors that that was a good thing to do?

DR JENKINS: I guess it is that short-term/long-term question that we are looking at here. So in general when you are thinking about these pricing incentives you would use a shorter term measure, in which case that return on the capital investment is not generally seen as one of those variable cost elements that you would seek to recover.

MR RIDYARD: You say it is "not generally seen as". What does that mean? What is the basis of that statement?

DR JENKINS: That if -- in a sense it is like if you are deciding, am I -- which of these products do I want to be committed to in the long-term, and you say, okay, I am going to approach the -- I am going to look at what the absolute gross margin is of these different products, and especially in a case where in a sense a customer is moving from one category to the next over this time period, so in a sense, many -- if what you are thinking is many of the costs associated with dealing with that customer remain the same, right, like that is part of your common costs, and they remain there, but now I am going to earn more from this customer because they are going to take an extra product from me, and the average revenue I am going to earn from them is more, then I am then going to be able to recover more from that customer.

Now, to add in a benchmark margin on top of that and then say, oh, because that margin is very high I am not going to be interested in serving that customer, even though their actual contribution to that is higher, I do not think that is a practical way in which that pricing -- those pricing decisions get made, and the whole framework as we are discussing it, like -- is a very static one. It is like there is this perfect choice. I can choose whether I am going to have this customer stay as a standalone fixed voice customer or whether I am going to move them over to this other product.

However, the risk that BT was facing, it was facing a lot of competition for these customers, so it was deciding where to invest in order to capture, maintain, serve those customers well, and so that is the sense in which, yes, it is investing, and it is investing to attract customers to the higher gross margin absolute value product. Otherwise they run the risk of losing all the margin on that customer, because they are not actually meeting the competitive needs of the customers that they have.

MR DORAN: So if I have understood what you have said, and please correct me if I have not, what you are saying is the customers were at significant risk of moving, in which case your question is a binary question: do you try and serve them or not? The return to investors point is a consequence of how you serve them and how you invest etc. It is not a reason because you cannot stop them moving. Is that the point you are trying to make?

DR JENKINS: Yes, that is right.

MR DORAN: Thank you.

MR RIDYARD: So if there was -- if it was the case that there were a bunch of VOCs who we knew were never going to take on a bundle, and therefore the only competition there is between BT and other people who are providing standalone voice services, if that was the case, and I know you do not think that is the case, but if that were, then would you look at this, would you be looking at this question of these incentives differently in that scenario than the one you are? How important is this so-called strategic issue, in your assessment?

DR JENKINS: I think the predominant arena of competition was that move to bundles, and so that is why the bulk of the thinking on these questions is about that shift, and the main investment direction that BT was engaged in was around having a compelling offer to bundle customers.

However, it is not that I think there were not potentially some customers even probably today who do not find a broadband offer something that they need or desire, the problem is you do not know who they are. So when you are deciding what you are going to offer in the market, you cannot say, directly, oh, well, this postcode, well we know what they are going to do, they are going to be our standalone fixed voice customers.

Now, what BT actually did was they did design a product to allow customers to select into that, the Home Phone Saver one, which was recognising that there were customers who were not at the point where they were ready to move on to a bundle. So the bulk of their strategic direction was around the bundle market, but they were not forgetting these customers.

MR DORAN: Sorry, when you say you do not know who they were, as in who those who were not going to move from voice only to bundle, do you mean you do not know the proportion? Is it the proportion?

DR JENKINS: Literally you do not know who -- you know, you have a set of customers who today are taking a voice only, or at the time in 2016 were taking a voice only service. They did not have broadband, they were taking standalone fixed voice from you. You would not be able to rely on the fact that they were going to remain -- any individual one of them was going to remain with you in 12 months' time on that SFV contract, right. They were -- they could well have been considering their options, and if you do not offer an attractive offer to them, either on a voice product or on a bundled product, they may move to one of the rival firms.

MR DORAN: So numbers in that class who were going to remain voice only falling, numbers of calls falling, and then pricing for those, is it that the point you are trying to make? You do not know who they are and you do not know what scale they are or will remain?

DR JENKINS: I think it was known they were declining and so -- yes. But you do not know how fast that decline is going to come. Or even to some extent I think BT were thinking: the quicker we get them on to a bundled product with us, the better chance we have of keeping them with us for the long-term, because we are meeting the needs in that area.

To the extent there were some customers that were not in that group, then they had the Home Phone Saver offer, which they absolutely did not advertise widely, but used at the point that those customers were calling in to say: I am really unhappy. Then, in a sense, they self-identify at that point: okay, I am one of these customers. Here is the offer which is right for you.

MR RIDYARD: So it sounded like you were at least sort of more open minded on the question of whether the indirect incremental costs should be allocated or not in making this assessment. If we are going to do that, how should it be done?

DR JENKINS: I think that is really the challenge for this exercise that we are talking about. If we are thinking about a merger assessment where you have a very similar question -- questions come up about, well, what are the pricing incentives of the merged firm afterwards? Generally start from gross margin, at times might ask some questions of the merging parties to try to decide what other costs might be incremental for the increment that you are looking at.

Now, here what is definitely the case is there is no identification of indirect incremental costs that was used by BT on a regular basis to inform its pricing. In the annex that Mr Parker took us to, I have shown three different ways in which those indirect incremental costs could be allocated. The first of those, EPMU, is the one that I used for my SAC combinatorial limb 1 analysis, and there are particular reasons that I chose to do it that way to be conservative in that analysis. It is not necessarily the case that that is the way I think BT would do it.

I have also presented a customer basis and a revenue basis as other allocators that were used at various points in time --

MR RIDYARD: Sorry to interrupt, but when you are playing with these different ways of doing it, what you are trying to do is to identify what is incremental. What actually changes as a result of serving more of these customers. So what is the connection between the different -- we know you present three different ways of doing it and we know it comes to different outcomes and --

DR JENKINS: Yes, what does it mean? I would say in one sense the customer one, I know that is the one that gives the same ranking, but the reason why that has merit is precisely where you are thinking, oh, I want -- it is a customer relationship -- I want to keep that customer relationship as I move from them being a voice customer to being a bundle customer, right? I do not think one can reject that as a reasonable basis on which those indirect incremental costs would be recovered.

Similarly, revenue would be: well -- that goes a little bit to this question we were saying before. Well, actually what I am interested in is how much they are going to contribute to my bottom line for my investors so I will do it on a revenue basis.

EPMU is probably the least intuitive from the perspective of pricing that we are talking about here.

MR RIDYARD: Unless you believe that indirect costs -- the causality of indirect costs is comparable to the causality of direct costs.

DR JENKINS: Absolutely.

MR RIDYARD: Mr Duckworth, this is more your thing, is it not?

MR DUCKWORTH: Yes. I think -- Dr Jenkins talked about how BT set prices, but the fundamental issue is trying to capture those indirect incremental costs, which are on the basis of causality, not thinking about -- have BT thought about its pricing decisions in terms of revenue. So I think it should be trying to estimate incremental costs which reflect cost causality in the most sensible way.

I think also a discussion of kind of the time perspective. You are capturing customers for -- if it is a subscription service you are capturing them for quite a number of years, typically, and so you should be looking at costs which could vary not from month to month but over a longer time period. So, for example, customer care staff. Yes, you cannot change the number of customer care staff from one day to the next, but over time you are -- so bundle customers, and they are calling into the customer care centre more often than SFV customers because they have issues with faults on broadband or their TV set top box, then you should be taking that into account when looking at profitability, even on a contribution margin basis, of those different customers.

MR RIDYARD: I can see that. But what does not jump off the page at me is which one of these three accounting rules for allocating direct costs best reflects causality.

MR DUCKWORTH: That is also not clear from the evidence that we have.

MR RIDYARD: No, okay.

MR PARKER: If I might. So on the question of gross margins versus sort of national contribution margin, at some point you need to recover these incremental costs and the idea that every year you say when you set my prices for the next year or two and I will do that on a gross margin basis, and then next year you say, having set my price this year, I am going to set it for the next year or two on the basis of gross margin, you never get to recover your long-run incremental costs if you do that, and that does not seem sensible.

So if you are going to take on a bunch of customers on a dual play product for example and that has a lifetime of 18 months to 2 years, you are going to say what are the total costs I will incur in serving another 100,000 of those customers and you are going to set your prices in respect of not just the direct costs but also the indirect incremental costs that are incremental to serving those customers.

I cannot see how one cannot think about that. It may be that you look at gross margins and you have in your mind that I need to make a certain gross margin to start covering the incremental costs that apply to each of these products. But ultimately it has to be about incremental costs.

(Redacted)

MR RIDYARD: You need to be a bit careful about the confidentiality of the second number; is that right?

MR BEARD: Yes.

THE CHAIRMAN: Yes, there is some yellow.

MR PARKER: Sorry, I will not talk about any of them. I am going to talk about the ratios rather than the absolute numbers. Sorry, apologies for that.

If we look at the next table, penultimate line, we have, you can see costs at sort of 150/160 and then into the confidential area.

So the relativity of in this case costs direct plus indirect plus margin is about three and a half for serving a bundle customer. So it is three and a half times as costly to serve an average bundle customer as it is to serve an average SFV customer.

If we can jump on to {OR-E/49/253} in the joint statement. While Dr Jenkins does not report the per line numbers, they are essentially the same in terms of the relatively. So actually if you look at the SFV services -- this one is fairly straightforward -- if you divide the cost of sales number by the number of customers maybe the easiest thing to do is to look at 2016/17 because the numbers do not change round that much, it is about £100, and that is fairly consistent. Then if you look at similar amounts for bundle customers you are dividing, say, 2016, about 2.4 billion by 6.7 million. That is about 350. So we are talking about again a ratio of about 3.5.

So actually these numbers -- these ratios will be exactly the same because of using the approach that Dr Jenkins has in her SAC combinatorial plus then just scaling up by a margin is always going to give you that ratio.

So what we have here is it costs you three and a half times as much cost-wise to serve a bundle customer as it is to serve an SFV customer but the absolute, the absolute margin you get is you can see from the difference in margin that -- the gross margin that Dr Jenkins identifies is compared to the absolute amount is about 30%, somewhere around that difference.

It seemed to me that is not a very large additional profit for putting in £250 per customer even on a direct cost basis compared to you would previously -- so you are making £173 or whatever off the £100 costs for an SFV customer and you are making 217 off the £350 costs for a bundle customer. That is just on the direct cost basis.

It seems to me your investors will care about the returns that you are making. Another way of thinking about this is the SFV services return is about 65%, bundles return is about 35%. They vary up and down a bit. But the contention is I want to put my SFV prices up where I make 65% gross margin to push them on to bundle where I make 35%.

MR RIDYARD: I suppose if you are looking at it in terms of cash generated per customer, then you might still find that attractive even though it is a much lower margin business, you are just getting more cash out of that individual customer. I understand what you are saying about the effort involved and therefore in the background the implications for investment cost.

I know we are very close to the lunch break. Sorry, I just wanted to ask you, Mr Parker, to comment on Dr Jenkins mentioned what do you do in merger control when you are looking at unilateral effects analysis because this topic of which margin to look at there, are there any obvious lessons to learn from how it is done when you look at this very similar issues at a different context?

MR PARKER: Yes, I think I would not necessarily agree that -- people do I think use gross margins in merger analysis. I do not think it is the right thing to do. I think you should generally use net margins. I think to the extent there is some rationale for net or contribution, however you want to think about it, because that is the true profitability, but to the extent that there is some rationale for doing it in a merger case is because in a merger you have a kind of -- the purpose of it is to create a structural break in concentration in the industry and it is possible at that point that you might be able to engage in some short-term pricing behaviour before costs properly adjust.

So I think there might be more of a motivation for thinking about that in a merger context from a gross margin perspective. Personally I do not think it is right. I think the use of gross margins in a copy type analysis or illustrative price rise analysis and so on, I actually do not think is right but if you use high gross margins as opposed to net margins competition authorities will find it gives you more concerns, and I do have a concern that they are somewhat over-egging the kind of the concerns that they have. But I am not sure that in this case it applies because we are talking about a long-run pricing incentive. People will be pricing at the long-run competitive level. That is what LRIC is all about if it is a competitive market.

THE CHAIRMAN: We will continue this after the lunch break but in the meantime we have got the essentially factual questions that we raised in section 1.3. Now, first of all, I wanted to ask Dr Jenkins, you mentioned something about a data pack. What is that?

DR JENKINS: I might defer to -- I know we have been contributing some of the answers to the questions you asked.

MR BEARD: So the data pack, it is not quite so glamorous as that. In answer to the questions that the Tribunal posed on Day 5 we have been pulling together that data and obviously Oxera have been assisting in providing the references. We think most of it is agreed but there are some issues that we think may not be which we need to communicate to the other side and we are in the process of doing that. Now, you are welcome to have what we have but I know that in the questions that were asked there was a question about: to what extent could these pointes be agreed.

THE CHAIRMAN: Yes.

MR BEARD: That is the data pack that I assume Dr Jenkins is referring to because Oxera have contributed to that so that is charges and switching and incremental stuff. It was all of those things that raised by the Tribunal on Day 5.

THE CHAIRMAN: That is helpful. I think what might also be of use is we have been trying to work out our own checklist of where the tables or the figures are and I think we would be quite happy to let you have what we have -- where we have got to on this. In other words, in terms of working out what table shows this, what table shows that I suspect they might be common --

MR BEARD: They may well be.

THE CHAIRMAN: But it might be of use to the experts as well because we do not want to spend a long time on question 1.3 which is essentially just working out where we are going to find switching, pricing and things like that.

MR BEARD: Yes. Look, if the Tribunal wants to provide us with that we can do a cross-check against the material we have got and --

THE CHAIRMAN: Yes.

MR BEARD: -- then we are able to get to you at least some of that in the next day or so.

THE CHAIRMAN: We have got some more things on 1.2 anyway and then we do move to switching and pricing directly which is why we wanted to try and see what common ground there might be but I think the best thing is, we will give you a version of our document and the experts should be provided with it as well.

MR BEARD: That is fine.

THE CHAIRMAN: It just provides cross-references to where we think the relevant bits are and even if it is just for the purposes of the afternoon the experts may say that is fine or no, this table is hotly contested. I do not think it will. But we will do that over the course of the luncheon adjournment.

MR BEARD: Sure.

THE CHAIRMAN: All right. 2 o'clock.

(1.06 pm)

(Luncheon Adjournment)

(2.00 pm)

MR RIDYARD: Dr Jenkins, I think you were keen to contribute to the discussion just before lunch.

DR JENKINS: I just had one very small point to make on ... I think we were at table ... it was in the joint economic statement.

MR RIDYARD: Yes, was it table 4?

DR JENKINS: 4 or 5. Apologies. I closed it up. {E/49/253}. Yes, that is right. I just want to make a very quick point about the relative gross margins per customer, that one should also look at the "Number of customers" line directly above it, and so you see that SFV services is declining from 2.7 million to half a million and the bundles customers is relatively -- it is going up and then coming down from 6.4 million to 6.3 million. So that is another part of thinking about who were the customers that you are interested in. It is with an eye to that overall change in the underlying demand for these services.

MR RIDYARD: Okay. So maybe my next question, it probably makes more sense to address it to Mr Parker in the first instance.

It seems, maybe you disagree with this proposition, but it seems that everyone in the market is very much focused on seeking bundled customers. Why do you think that is, given your conclusions about how much more profitable standalone voice is compared to bundle?

MR PARKER: So I think that is going to be true for rivals in the sense that the rivals -- so BT has inherited a customer base from when it was a statutory monopoly. By and large, there are elements that have changed there, but that is the sort of starting position. That has not been the case for rivals. Rivals, if they wanted to get into standalone fixed voice, have had to fight really hard to try and get people to take standalone fixed voice. That seems to have been difficult. There is evidence from rivals about the customer acquisition costs of doing that.

As Dr Jenkins has pointed out, the majority of the demand now is for bundled products, so they have been focusing their competitive efforts there, because they do not have a big SFV legacy customer base to deal with, but BT is in a bit of a different position. So that is why the competition focused over there and sort of left this rump of customers, if you like, for BT --

MR RIDYARD: So it is down to customer acquisition costs for the non-incumbent.

MR PARKER: Yes, I think so. I think that is why there has not been SFV competition in a very material way. There are one or two references to the Post Office. The Post Office did try to compete on a substantially lower line rental price for a while, but eventually it stopped doing that and floated back up to the -- a little bit below the BT level, but the sort of same level as everyone else. Obviously I mean Post Office can speak to why it did that, but it is at least consistent with the view that it was not doing well enough out of having that price differential, and having got some customers it was then seeking to change to making money.

MR RIDYARD: We will come back to that when we talk about entry barriers and so forth more directly.

Again, I think if I address it to you, Mr Parker, on this whole issue about whether we should look at gross margins or some notion of net margin, if -- to the extent that we find that internally BT was talking about gross margins, is your position there that they were just looking at the wrong thing, or that they should have been looking at net margins and maybe they were behaving badly, or wrongly, as it were, or something else?

MR PARKER: I mean, so obviously that is ultimately a matter for BT, but my feeling would be you could look at gross margins as a proxy for profitability, even if that is not the true measure of profitability, if you thought it was revealing something about the level of profitability you thought -- the relative levels of profitability you thought you were getting. So even if BT was talking about gross margins, you would expect people to have in mind, when you are talking about gross margins, all the costs of serving the product, because if you are completely divorced from that, I do not see how you can make sensible pricing decisions.

MR RIDYARD: Okay, right.

Good, I think we can probably move on to -- I guess we will come back to some of the points we have just discussed in other contexts later on in the sessions, but I think we can go on to the question of switching now.

Our first question is really about the amount of switching by BT's SFV customers that actually occurred. We were hoping this might be a topic where -- again where you would agree on the facts, and we were talking about the interpretations, but is that the case?

Maybe Dr Jenkins, do you want to go first on that?

DR JENKINS: Yes. So I think we were helpfully sent -- I was helpfully sent a schedule that you had handed down at lunchtime. I do not have it in front of me actually. But to answer whether we are agreed on those bits, so I will just explain to you what I --

MR RIDYARD: Yes, that is a good idea.

DR JENKINS: -- and see where we go from there.

I think you had highlighted in terms of what levels of switching by BT's SFV customers actually occurred, Figures 4.1 to 4.4 in my first report.

THE CHAIRMAN: Yes.

DR JENKINS: I think --

MR RIDYARD: Do you have a page number for that?

DR JENKINS: {E/17/76} is the bundle reference. So starting from there. So this is the overall market outcomes, and it looks a little bit odd at the beginning, because there is missing data, okay. So I would say even up to 2013, because of the way BT's housekeeping worked, you only have from 2014 onwards -- sorry, from 2014 onwards we have data but going back from 2014 we only have the data of the customers who were customers in 2014, Q1.

But what you see there is -- but the overall picture from this is right, which is that overall BT's fixed voice lines were declining, and their SFV lines -- sorry, the SFV lines were declining and the bundle fixed lines were increasing, though in the part that we cannot see, it is -- you see that towards the end of the period BT's share of bundled lines is also falling.

THE CHAIRMAN: Can I just see if we can move through this first question of switching in this way. You have got your tables, Dr Jenkins, 4.1, and 4.1 is showing the SFV lines in black decreasing, bundle fixed voice going up, and your greyed area, the grey columns represent the total.

DR JENKINS: The sum.

THE CHAIRMAN: Which is why, when there is a crossover at 2013, you have got about 5 million of each type of customer, the SFV on the one hand and the bundle on the other. Then we have the whole market -- the whole number decreasing. So the number of bundles is decreasing as well as the number of SFV lines, and we can see that.

Then 4.2, if we can just move on to that {E/17/78}, is the breakdown of where the switchers are going. So in each -- for each year -- for the switching you have got -- you are losing 15% to non-BT suppliers.

DR JENKINS: So this is all excerpts from BT in Figure 4.2. So this is -- in that SFV chart that we just saw, you see that lines are declining, so this is showing the amount of the decline in the SFV where they are exiting BT, and the lighter green is where they have switched to a different BT product.

THE CHAIRMAN: Yes.

DR JENKINS: So the reason is that it includes home movers and those who have died.

THE CHAIRMAN: Yes, I appreciate it is all leavers.

DR JENKINS: So it is not moving to another supplier necessarily, but I do have a chart that shows that.

THE CHAIRMAN: Right, it is all leavers, but of the
leavers -- when it says "out of BT cessations", those
are going to a non-BT supplier?
DR JENKINS: No, they are out of -- they are no longer
customers of BT. So if you think of BT's records --
THE CHAIRMAN: They are no longer customers of anybody.
DR JENKINS: Some of them are no longer customers of anybody
and some of them have switched to an alternative
supplier. So if you think about BT's record-keeping,
they know when someone switches to their other product
and they know when someone terminates the product, but
they do not necessarily know, unless the person tells
them, where they are going.
THE CHAIRMAN: If they have gone somewhere else, if at all.
DR JENKINS: Yes. But of course they do capture some
information about that, which is what I use elsewhere to
infer what proportion of that out of BT's cessation is
switching to a competitor supplier.
THE CHAIRMAN: Right. Then we have Figure 4.3, which is
just dealing with the within BT cessations, those who
cease but stay with BT on a different product, and that
shows the vast majority going to a bundle, and then much
smaller percentages either going to two -- bundle plus
mobile, or mobile.
Then finally on this point, if we go to Figure 4.4

{E/17/81}, we have got in each case, so far as the switchers are concerned, whether they are going to bundle or whether they are just going to another SFV, and both percentages will make up the 100% in each case, and what we see there is that the percentage who is going simply to another voice contract is going right down.

DR JENKINS: That is correct.

THE CHAIRMAN: If I could just pause there for a moment.

In terms of those figures, Mr Parker, is there any disagreement about that? Because if there is not, then we have a fairly clear statement of the general switching position.

MR PARKER: No, so I think no disagreement with the figures. Two small points. One is the cessation reasons that underpin Figure 4.2, I think the data is a little bit patchy, it is not fully collected, it is not all customers, it is if they ring up, and it is if they are asked a question about how do you leave, and then if it is recorded properly, and so on. So I am not disputing the figures at all, you just need a little bit of caution, perhaps, on the interpretation of those.

Then similarly, Figure 4.4, I am not disputing the figures, but as Dr Jenkins points out, the base is small for these statistics, so you have got 37 people in 2016, no, 2017. 28 people in total in 2016. So it is -- you know, I am not suggesting this is not the direction of travel or broad magnitudes, but I would not place too much weight on the exact numbers.

THE CHAIRMAN: No. But there is no alternative version as far as that is concerned. That is all I ...

MR PARKER: No, that is ...

THE CHAIRMAN: Just give me a moment ... (Pause)

Yes, can we just continue this trend of dialogue for the moment because I think it might be helpful. We might be able to knock some of these points on the head.

The other -- and I will do them all in one go, because they are all in one place, and I am staying with Dr Jenkins, but going to Dr Jenkins' second report and starting at page 47, {E/18/47}. I want to go to her Figure 3.2. We have got that there. If we could have that enlarged.

Now, this is dealing with where the increase -- and, Dr Jenkins, tell me if I have got this wrong. This is dealing with where the increase in bundle lines has come from. 25% has come from what were SPCs. 9.7% from other voice only. 26% from new customers altogether. 4.9% from BT Basic, which we know -- we are considering is not in this market. Then 34%, which is the largest percentage, coming from BT's voice only customers.

Have I got that correct?

DR JENKINS: So I am inferring these different blocks, because we do not have a source of data that precisely gives this to us. So what I have done here is I have said, okay, we observe a certain increase in BT's bundled lines. So first of all, I assume that all of the BT SPCs that have moved, have moved to BT bundles.

Now, maybe some of them did something different, but I am trying to be conservative. So at the end the proportion that is left for BT VOCs is the smallest it could be.

THE CHAIRMAN: I see.

DR JENKINS: But, yes, your interpretation of each stack was right, but each one I have sort of said: let us infer all of whatever category I have identified has switched in this way, and then what is the residual that is left, which must have come from BT voice only customers.

THE CHAIRMAN: Right.

Then can we go to Figure 3.3, please, which should be {E/18/49}. That is it. If we could have that one enlarged.

That is just taking the cohort as it was at 2014, just looking at it in a static way for a moment and seeing what bit of that cohort left in each successive year. So it is not looking at -- there were some

joiners in subsequent years, but we are not looking at that, we are just looking at 2014. Have I got that right?
DR JENKINS: Yes, that is correct.
THE CHAIRMAN: Right. Can we then go to 3.4, please, {E/18/50}. So this is actually showing you again the 2014 customer base but showing what happens to it. So for 2015 we have ...
DR JENKINS: Shall I have a go?
THE CHAIRMAN: I think you had better have a go. I am running into the ground here.
DR JENKINS: Yes, exactly. It is a complicated chart, absolutely.
So here what we are doing is building on the chart before, which you rightly said is showing: take a cohort of SFV customers in 2014 and see how many of them remain each subsequent year, so it is tracking the customer. So the first black column on each of these is the same as the previous chart, so it is the 2014 cohort, how many are left one year after, two years after. But as we rightly said, to understand the SFV customer base, actually then in 2015 we had some new joiners come in, so that is the light green column.
What I have not done here is show you how many they are. That is somewhere else. This chart is just

showing how the evolution of those customers compares from cohort to cohort. So you see then the first green bar in 1 -- so at 0 it is 100%, they have just joined. What happens after one year? Half of them have already left.

THE CHAIRMAN: Is this year 1? Is that 2015?

DR JENKINS: That would be 2016. Because they join in 2015, so their first year is 2016. So that is why it is labelled as "1", because for each cohort the actual first year is a different one depending which year they joined.

THE CHAIRMAN: Why have you got joiners of 2018 in year 1, the purple bit?

DR JENKINS: So then the last -- the purple -- yes, the purple bit, they joined in 2018, so the end of their first -- so then their first year would be 2019.

THE CHAIRMAN: Ah, all right. So the years are different depending on who we are talking about.

DR JENKINS: Yes. What I am trying to show is what the -- the decline rate. I am comparing decline rates and not actual years. That is why you cannot have a yearly comparison.

THE CHAIRMAN: Right.

DR JENKINS: So you see that our cohort from 2014, which is where we pick them up, so they are a mix of people, they do -- they are in a sense stickier than the subsequent cohorts, because you see their black line is above the others, right, so that the joiners, the ones who are coming in, within the first year mostly half of them have spun out. Again a voice somewhere else. I did think about showing what happens to these --

THE CHAIRMAN: The short point is those who were customers earliest tend to be the stickiest.

DR JENKINS: They are the stickiest, but they are still declining through this period, so that by the end of the period you see you have only a quarter of the people left in that group who started in 2014.

THE CHAIRMAN: I follow. So if you go to 0, you have got all the colours there because they are all the people, and then they all decrease.

DR JENKINS: Yes.

THE CHAIRMAN: Right, I have got that.

DR JENKINS: By the time you get to year 4, while there still is a difference with that first cohort, the black stack is still a bit bigger than the others, it is still 10 percentage, 15 percentage points more. But overall what you are seeing is while the joiners that come in are then moving on from the SFV service, in general all of those SFV customers are -- or, rather, a high proportion of those SFV services customers have left by the end of that period.

THE CHAIRMAN: Right. All right.

Can we then just look at Figure 3.5 which may be {E/18/54}. Yes, this one. Now, this is the recapture rate. If you could just take us through that.

DR JENKINS: I will just read the notes so I can tell you exactly right.

THE CHAIRMAN: I appreciate this is in your critical loss analysis we are coming to later on, but I just wanted to get the ...

DR JENKINS: So here what I have -- because I was using it in my critical loss analysis, here I am asking the question now not of all leavers from BT, but the leavers from BT that I assessed to be doing so for price-related reasons. I make a number of corrections for that. But for the sake of simplicity, let us say, for example, I do not include all the people who are thought to have died as part of this. It is not very informative for a recapture analysis.

THE CHAIRMAN: I think, okay, we will park that one, because that is likely to be disputed, I think. Then there is a question of --

DR JENKINS: Yes. But just in terms of what it is showing, it is showing, in a sense, customers that were responding to -- that were making active choices here, what proportion of them remained with BT, so they moved to a non-SFV BT product, a BT bundle or BT Mobile.

THE CHAIRMAN: Right. Then finally, so far as your diagrams are concerned, Dr Jenkins, if we could go to your first report at page 155, your Figure 5.19 {E/17/155}.

DR JENKINS: Yes, this is the one that has been updated and will be provided. But for the sake of explaining what it is, this builds on Figure 4.2 for the leaving, the black lines, the leaving BT's SFV. So when we looked at Figure 4.2, it was all cessations, it is like all the ending of the line -- the SFV relationship. Here, what I have done is only counted those that are leaving to competitors, and for that I have based that on the cessation reason code information that we have. So that means I have stripped out the bereaved, those who are moving home, and other, a few other miscellaneous categories, and so those numbers have changed because of the error, but that is what that bottom --

THE CHAIRMAN: So the minus 8% is 8% of whatever that cohort was in 2014?

DR JENKINS: Not the cohort. That is -- these are all on the SFV base in that year, so it mixes up the cohort. In 2014 it is of course the whole cohort, because that is our starting position.

THE CHAIRMAN: But it is SFV, not your bundle customers, it

is just SFV?
DR JENKINS: SFV base.
THE CHAIRMAN: SFV. But what I am saying is the 8% is 8% of ...
DR JENKINS: The SFV base at the beginning of the stated calendar year.
THE CHAIRMAN: The total number of SFV customers.
DR JENKINS: Yes, in 2014 and in --
THE CHAIRMAN: But on the other hand, you say there is a number which represents 10% coming in.
DR JENKINS: Coming in, that is right.
THE CHAIRMAN: Right, and we have that going all the way through. Fine.
Now can I ask Mr Parker: Mr Parker, in relation to all of those diagrams, except the recapture rate, which we will park for the moment, again there is no alternative version to these figures, is there?
MR PARKER: I think the only one I would have a concern about is 5.19 and the additions numbers. The reason for that is if you look at -- there is a sort of clarificatory point about what proportion of the customers remaining in 2022 were there in 2014? We are both in agreement that it is a large proportion. So of the -- however many there are left, 0.5 million, or whatever it is, in 2022, what proportion of those were

in the data in 2014, and the answer is 80/85%, something like that. The substantial majority. I think we all agree on that.

THE CHAIRMAN: Yes.

MR PARKER: So if that is right, it is not very consistent with the idea that you are getting 10% additions into the customer base every year, because 80% of customers who are left there at the end were there right at the beginning. So it could be the case that there is a sort of a frothy top, if you like. There is a pint of Guinness, and there is the black stuff which is the customers who stay there all the time, and then there is this incredibly frothy top with people churning in and out, in and out all the time. I think that is unlikely, because there is other data from Ofcom that says how long have you been with your SFV provider if you are BT, and the vast majority of people have been there five, 10 years, if not more.

So I am dubious about the data on customer additions. I wonder whether there is some misrecording going on in that data. Because I do not think it is consistent with the idea that virtually everyone who was there at the end was also there at the beginning. That seems to be more consistent with a sort of new acquisition rate of 2% per year, which I think is also one of the data points that has come out when BT has looked at it.

THE CHAIRMAN: This is the issue that was subject to clarification in the joint expert reports. There was a question mark about what Dr Jenkins had meant, I think. Is this not where there was a --

MR PARKER: This is a side effect of that issue.

THE CHAIRMAN: A side effect. But this is the one where you say that as at -- which period was it? 2022 you were comparing who was there in 2014?

MR PARKER: Yes. So maybe the --

THE CHAIRMAN: Is there another chart from your side showing this figure, these figures?

MR PARKER: So maybe -- if we can just go up one page, because that is the starting point, and we have got 5.82 -- sorry, I am just trying to give a sense of the debate {E/17/154}. So we have here, if we look at the losses and additions, there has been such significant churn that only a small proportion of BT's customers in 2022 were part of BT's SFV base in 2014. That is the same as was -- actually that ends up looking at the wrong end of the telescope, so that has been clarified now in the joint statement which ...

DR JENKINS: Sorry, could I just clarify the clarification.

So I do not think it is looking at the wrong end of the telescope. It is correct that, as worded, that was incorrect. But the change I made was to swap the dates.

So there has been significant churn, such that only that proportion of BT's SFV customers in 2014 were also part of BT's SFV base in October 2022. So I am saying what is of interest is you say think of the claim period, how it starts. We have got all these SFV customers there. When we get to the end of the period, what we find is there is only ... a small, you know, a small proportion of them left, since I cannot say the number I think.

Now, what Mr Parker is correcting is that we both agree that if you look at the other end of the telescope and you say, okay, but what I want to know is when I look at the customers who were left there in October 2022, how many of those were also in the base in 2014, then that number is 85/90%, and we agree on that, I agree on that.

So it is not that that statement is looking at the wrong end of the telescope. It was misworded, but I intended to look at it from the end of the telescope such that the smaller proportion was --

THE CHAIRMAN: Because it is obviously the case, and we can use entirely arbitrary numbers so we do not stray into confidentiality. It is obviously the case that you can say that you had 100 customers in 2014 and of those customers only 25 remained in 2022. The 25 -- but on the other hand, of all customers who were there in 2022, and there may have been customers gained along the way, nonetheless, most of the customers from 2022, which is a much smaller number, were there from 2014.

So I think you are both agreed.

DR JENKINS: Exactly, we are agreed on that.

THE CHAIRMAN: There is no dispute about the figures there. But, Dr Jenkins, Mr Parker has just said that a side effect of this is that he then questions whether your additions percentages can be right, and I do not know if you want to come back on that?

DR JENKINS: I mean, you saw the cohort analysis which -- whether that matches the frothy idea, but it certainly does show that the people who come in are more likely to leave than those who were present in 2014. I have not done a full reconciliation of all of that, but I do not think it is inconsistent actually to have the levels of additions that are there and those two numbers. I do recall thinking about that at some point, but I cannot in this moment remember exactly what it is, but I think if you do have some difference, such as people are coming in, and it could be that someone is coming off different contracts, so they take SFV for a bit with BT, move their voice over, and then go on to a bundle. So that time when they are transitioning through the voice product is because they are intending to take a bundle, but this is just how they are doing the switch in a particular -- I do not know, that is a speculation on my part.

So in terms of these additions numbers, I think Mr Parker would agree those are the numbers that are in the data has been shared, and it also includes new household formation. So that is the bit to remember when one is thinking, oh, but how can there be all these people? Actually, every time a new household forms, it is very likely they are deciding what to take as their product, and, again, it could be new households that first establish a landline and then decide what they are going to do with their bundle product.

THE CHAIRMAN: All right. Then I want to do one more thing on this, and then we are done with switching facts, subject to anything you say.

SPC switching specifically. Could we go to Mr Parker's third report, page 85, figure 9.

MR PARKER: Yes.

THE CHAIRMAN: Let us wait for that to come up on the EPE. It is page 85, Mr Parker's third. {E/3/85}

Now, can you just take us through that, Mr Parker.

MR PARKER: So this is a best guess on the number of BT SPC customers. It is based on Ofcom data, because BT pre-commitments -- so this is all pre-commitments -- BT did not know, could not distinguish between voice only and split purchase customers at the time. We have the total SFV lines from Dr Jenkins and from BT, and this is applying the percentages that there are in the Ofcom data, which is based on some of the data submitted to it in the Section 135 notices for the purposes of the provisional conclusions, to give an estimate of how that total SFV base splits between voice only and split purchase. It is about 50/50 I think in each year, and this is just the decline in the split purchase customer base best estimate. Not perfect, but I do not think we have a better ...

THE CHAIRMAN: That is what I wanted to ask.

MR PARKER: A better number. So I think you just need to be -- I think at the level of total aggregate decline, I think this is fine. I think if you start doing kind of more sophisticated analysis on it, I think we are in danger of placing more weight on it than one would necessarily think it should bear.

THE CHAIRMAN: Thank you.

Dr Jenkins, there is not anything else, doing this particular calculation, is there, which competes with this?

DR JENKINS: I have done my own version of this and get -- and do it in some slightly different ways. But I agree with Mr Parker that the approach, which is to use the Ofcom analysis, because they had access to information from other market participants and, importantly, Openreach at the time, on which they derive these proportions, they did it quarterly. For part of what we have done, you have got to turn it into monthly. It finishes in 2017, so you have to extrapolate from the end of the Ofcom period to when we start to get the accurate information from BT systems post-commitments. We have done slightly different things when we have done that, but overall --

THE CHAIRMAN: Are you prepared to go with this for the purpose of argument?

DR JENKINS: I am very happy to go with this for the ... I mean, there are a couple of points I have tested to say that none of my conclusions change where I'd use Mr Parker's.

THE CHAIRMAN: That is what I wanted to get at.

I am hoping, on that basis, if we just use these materials for the moment, the figures are broadly agreed, there are a few nuanced points, I can then invite Mr Ridyard to go back to the specific questions.

MR RIDYARD: I would just like to pick up on one of these charts. Figure 4.2 in Jenkins 1. That is page 78 of Dr Jenkins' first report {E/17/78}.

One thing which I think has come up in some of the expert commentaries is this notion that, over time, the SFV customers are becoming more and more of a hard core and therefore changing in how likely they are to switch away. You could have a sort of impressionistic view that in the early years here, lots of people are switching to bundles, so there is lots of risk of losing people, but as time goes on, you are getting more of an exploitable rump of customers who are never going to switch.

But this table here would not support that proposition, I do not think, would it, because it seems to be showing that the black -- whether you look at the black bar or both the bars, the proportion of the SFV customer base which is stopping being an SFV is pretty -- obviously it wriggles around a little bit, but it is basically pretty similar throughout the whole period. Is that how both of you would interpret this evidence?

Dr Jenkins.

DR JENKINS: Yes.

THE CHAIRMAN: Mr Parker.

MR PARKER: Yes, I think there is a pretty constant rate of decline. I think the implications of the switching rate for pricing are a rather different matter which no doubt we will come on to.

MR RIDYARD: Yes.

DR JENKINS: The only thing I would add is this is the one which includes bereavement and home moving, so when the corrected 5.19 is in place ... But even that, the level is lower. But you see, if anything, increased switching through that period, but it is still relatively similar. You certainly do not see the opposite of that, which is a group of customers who are less engaged through that period.

MR RIDYARD: Yes, okay.

Then we had a question about -- we were interested in the consumers who were joining the SFV kind of base in each one of the years. We were quite curious as to who they were and why they were joining as SFV customers.

Dr Jenkins, you have given us some speculation on that, which is sort of quite plausible.

Did you want to add anything to that, Mr Parker?

MR PARKER: So if you look at the underlying data for 5.19 and the additions, you see things like about 5% of the SFV customer base is apparently switching from BT bundles back to SFV. It seems to me -- I wonder whether there are data issues that mean that BT's data is not fully capturing exactly -- it might be creating artificial sort of churn and additions if it is not fully properly recording things, because I had understood -- you know, Dr Jenkins makes a point elsewhere that once you have gone to dual play, you never come back, and if 5% of people are coming back every year, that is quite significant, and that is just from BT.

So I am not totally sure how you reconcile those two points. It goes back to my -- I think my general doubts about the additions data is we know that by the end of the period, almost everyone, not almost everyone; 85% of the people who are left were there at the beginning. So you could imagine a world where there are people just frothing in and out.

MR RIDYARD: Yes.

MR PARKER: But I think that feels to me more like --

MR RIDYARD: It may be just noise.

MR PARKER: It may be noise --

MR RIDYARD: It is noise of one kind of another.

MR PARKER: -- misrecordings of various sorts in the underlying data.

MR RIDYARD: Okay. Let us go on to looking at the question, which is I guess the relevant question for market definition and our SSNIP test.

Dr Jenkins, I think it is probably best to address this question to you. I know there are all sorts of issues about how you would describe the hypothetical monopolist; but leaving that to one side, as a matter of principle, what you are trying to do is identify for this hypothetical monopolist what the own price list of demand is for that product, holding other things constant.

Now, in doing that, is it true that the right way of looking at it is control for other factors that would have caused switching in and out, irrespective of price changes, and just identify the impact of price change-based switching, compared to other things that might have influenced the number of customers that might exist from one year to another?

DR JENKINS: The hypothetical monopolist test is seeking to identify what the close substitutes are for the focal product and it is generally formulated as a response to price, as you say, holding other things constant. What is I think increasingly understood, which you can see in the US merger guidelines or the recent European Commission guidelines, is that sometimes, if you are in the real world looking at information, you will have price changes, but you also may have quality differences, and those other competitive attributes to do with the nature of the product can also be relevant when thinking about, in a sense, the relative price.

So as you put it: what we would ideally like is price holding everything else constant, but in the event that in the real world you have quality changes, you have to think about that as well, you would not necessarily ignore those, like the quality adjusted price is probably the price that you would want to use in your test.

MR RIDYARD: "The quality adjusted price is ... the price you would want to use". Sorry, can you expand a bit on what that means?

DR JENKINS: So what I have used is the price, because that is what I have available to me, but you need to think about the fact that at the same time you may have had that the attractiveness of the alternative product was increasing for -- because it was being invested in, even if the price was not changing necessarily, and that is a relevant pull factor for consideration in a hypothetical monopolist test in thinking about substitute products.

MR RIDYARD: It is relevant. In this case, let us say the quality of broadband was increasing year-on-year, and that is not to say that it was getting faster or better, but the attraction to a consumer of having broadband was increasing year-on-year, just because there was more stuff you could do on the internet year-on-year.

If that was the case, would you want to control that out of your SSNIP test and to say how would people have responded to the changes in price if that quality improvement had not occurred, or do you want to include that quality improvement in the way you describe the SSNIP test?

DR JENKINS: I would -- I think ideally you would estimate a demand system that enabled you to control for features of the products as well as the price of those in order to accurately identify own price elasticity. I would not ignore that overall switching behaviour that is linked to the features of the products when I am thinking about the price responsiveness, because there is always going to be a trade-off between the price and the offer that is being made.

So it is inherent, in thinking about that switching decision, that it is not just the price that was offered but what was offered for that price. So in using the actual information that we have of what people did, as good or bad as it is, it seems to me you would not ignore the fact that you are observing switching to this alternative way in which voice was sold through this period.

MR RIDYARD: Mr Parker, what is your perspective on that one?

MR PARKER: Yes, so I think I would say the start point for market definition is looking at whether there is a set of products over which it is possible to exert market power if you are a monopolist, and trying to identify what are the significantly important competitive constraints that would mean that the hypothetical monopolist could not raise prices when you expand the market.

So it is not about identifying what is the closest substitute, it is about identifying whether any substitutes are sufficiently close and important to lead to price constraints. That is just a kind of point of distinction, I think, between the way we are both looking at it.

It seems to me that starting from that perspective, then the question is: if you raise prices as the hypothetical monopolist, holding everything else constant, can you do that profitably? If people are switching away, and would switch away in any event, we had a bit of this discussion earlier. If people are going to switch away in any event, then those are people you would lose in any event. So you should not think about, as the hypothetical monopolist, you should not think about: those are customers I am losing because I put my price up. You should think about all the customers you lose because you put the price up.

I am going to lose 50% of my customer base anyway, whether I put the price up or not, so you need to look at the next change, I think, from changing the price, in this case of SFV services, and say, well, how much of that general switching away is to do with the price change? Because that then tells me what is profitable, because you are looking at a counterfactual analysis: I am going to lose 50% of the customers. If I put the price up 10% maybe I will lose 55/60%. But I really care about the 5/10% of additional switching, I do not care about all 60, because I am going to lose that in any event. So that is what I have described as a secular trend, but ...

THE CHAIRMAN: If I can just interject here. I want to ask about the secular trend because both of you -- you, Mr Parker and you, Dr Jenkins -- have addressed this question, but there is obviously, to say the least, a difference in emphasis here.

Now, Mr Parker, dealing -- let us just assume switching is significant, and let us just assume the reasons for switching are significant. Your analysis seems to say, well, broadly speaking, most of these people who are switching can be put down to a secular trend. Can you just first of all say have I got your evidence correct and, secondly, just to be precise about what you mean on secular trend.

MR PARKER: So secular trend is people who will have switched away anyway, irrespective. I think there are multiple data points that one could look at to look at this question. So if we could go to Dr Jenkins' Figure 4.1 {E/17/76}. So if you imagine maybe sort of start from the claim period, and so from 2015, Q3, this is the decline in the SFV customer base. During that period we have price increases on SFV services, which you would think would lead to a greater decline. We have a price freeze period, where BT did not put up the price of SFV line rental. We have the commitments, where there was a substantial reduction in the price for VOC customers. It is very hard to see from that line -- we also had increases in broadband -- different broadband products being introduced increasing the broadband quality. It is really hard to see any of that going on in that line. That line just goes down.

If you go on to Table 4.1, {E/17/90}. This is the analysis Dr Jenkins carries out for each of the price increases, but you will see -- and you see the dates in the first couple of rows. But you will see there is a break between June 17 and September 18 between 4 and 5, and there are two things going on in that break. There is a period from June 17 until April 18 when there was no change.

THE CHAIRMAN: That is the price freeze.

MR PARKER: That is the price freeze period. Then there is a period -- there was a big price reduction at April 18. If you look at -- just look back at the graph, that price freeze period, you do not see any change really in the reduction in the number of SFV customers in the price freeze period as opposed to the previous period, or indeed other periods. So I think it is not -- that price freeze period is -- maybe that reflects the secular trend. If that is the right number of -- if that is customers who are leaving anyway even if there is no change, that tells you something else is going on.

I have also looked at the impact of the commitments. I have done this in two ways. I have said, first of all, if the elasticities that Dr Jenkins has calculated here are correct, then the commitments price change was about 30% price reduction, so you might have seen, might have expected to see, a very large jump, because of an elasticity of 3, and a price reduction of 30%, you should see a 90% increase in the number of customers.

The other way to look at that is to say maybe what we see is not an increase in the number of customers, but a reduction in the customers that switch away. Dr Jenkins has done some analysis that says, well, the number of customers that remain after the commitments, a year after the commitments, seems to be -- I think it is 21% higher than it would have been if the commitments had not been introduced, and that is an elasticity of minus 0.7, so very low. This is all stuff that is in the reply report, I think.

I think it is a bit -- I think there is quite a lot of evidence -- there is clearly evidence of lots of people switching away gradually over time. I think we are all in agreement on that. The question is why. It seems to me it is hard to attribute to the impact of price increases. It seems like -- for me, there is quite a lot of evidence that people are just gradually switching away for whatever reason, and therefore a hypothetical monopolist, as we see, the prices have been -- line rental has been going up every year, up until the price freeze period, and the question is, that was -- that price increase was not being prevented by whatever switching we saw.

MR DORAN: Can we make anything of what I think it was Mr Bunt said about the impact of price changes, which is that there would be an announcement in the press and they would get a response, and then people would start -- then there was a sequence of notification processes which would take several months, and then people would get their first bill, and at each of these stages you might get a little spike of people ringing up and talking to an adviser, some terminating the contract within the requisite ... I have forgotten now the general condition, but within the requisite general condition, others not doing so.

So that would tend at least to some smoothing effect question over time, and then of course you have the back book and front book question as well, and I am afraid sitting here I cannot quite think of what impact that would have in relation to smoothing or not, but you might be able to help on both those points.

MR PARKER: Yes. So I think, if I understand correctly, there was a phase-in of sort of two to three months, I believe, of the price notifications, and then people might ring up to avoid the early termination --

MR DORAN: That is right. I was picking up on your "gradual", which is the impact would be graduated in some way if there was a response to pricing.

MR PARKER: Yes. So I think, if that is right, what I would expect to see would be a bigger response in the two/three-month period where people were getting the notifications and faced the early termination -- the opportunity to avoid the early termination charge. Then maybe I would see a reduction, because it is no longer so salient. Then I would see another reduction the next time the price increase was being made.

MR DORAN: Or when their first bill comes, which I think was a secondary point that was made.

MR PARKER: So maybe another three or four months then.

MR DORAN: Yes.

MR PARKER: But I think you should ...

MR DORAN: You would expect to see steps?

MR PARKER: I would expect to see some kind of greater response. I think it was called "bill shock", was of one of the phrases that was used. I would expect to see more of a response than you seem to see in that figure which, to me, shows a pretty gentle decline. Then of course you have got the price freeze period, which looks like the number of people leaving is essentially the same than -- as it was in the previous period.

THE CHAIRMAN: Thank you.

Dr Jenkins, just sticking with switching, we are going to come on to pricing anyway, but just sticking with switching and the reasons for switching. Now, in the analysis that you do, I think, if I am correct, you do discount -- you put a discount on the amount of switching to take effect of non-price-related reasons, if I can put it in that way. Was that 20% or 40%?

DR JENKINS: For the out of BT switchers, the losses out of BT, I first of all exclude quite a large chunk of the stated reasons for leaving which I think could contribute to the secular trend, and those are in particular bereavement, moving to care homes, those kinds of elements. So to the extent that that secular trend is driven by an almost aging population and changing the demand, that part of it I have stripped out of my analysis and not counted as price-related switching.

Then as you rightly say, when -- I have then ... certainly for the market definition analysis. The other category I have stripped out is the evidence that shows BT customers that are switching to another SFV product, because that would not -- that is what the hypothetical monopolist is monopolising, so strip that out. Then what I have got left is my estimate of, from the cessation reason code information, the people who are switching to other products. Then, as you say, I have then, recognising that the data is not perfect, I have made a 20% reduction, and then, as a sensitivity, a 40% reduction, to capture any further non-price-related element. But what I would say is that --

THE CHAIRMAN: Sorry, so just on the maths, in terms of the total number of people switching, ie coming away from their SFV contract, you end up with, what, 60% is price-related? Or something less than 60%? Because I just want to see what the difference effectively is between you.

DR JENKINS: It is much less, because I strip out 70% on the basis of those bereavements.

THE CHAIRMAN: 17%?

DR JENKINS: No, 7-0, or 69.4%, for those other reasons. I think it is in the annex.

THE CHAIRMAN: You still have 69% of switchers?

DR JENKINS: For bereavement and those sorts of reasons.

Let us just remember what I keep in, the people who are switching within BT, right? Because they are switching to bundles.

THE CHAIRMAN: Just a moment. I see, all people who switch to BT bundles are in, in any event. Which in fact is a reasonably significant proportion of switchers, because we know that BT recaptured quite a lot of them.

DR JENKINS: That will probably help with your mental maths on this point.

But then of the ones who are leaving -- let me see if I can find ... (Pause). So it is at {E/25/26}, paragraph A1.43. This is in my annex describing in detail the CLA that I have done.

THE CHAIRMAN: This is your Annex A1.

DR JENKINS: Yes, in my first report.

THE CHAIRMAN: Yes.

DR JENKINS: So you see the last sentence of that paragraph.

(Pause)

I am excluding those for two reasons, as I said. Part of that is the secular trend part, which is people who are dying or moving home or moving overseas, those sorts of reasons, and the other is moving to another SFV product, because I want to exclude those from my hypothetical monopolist.

I could work out for you how many are there, but I am really trying to only include people who are switching to other products other than SFV in the CLA analysis.

MR RIDYARD: But you are not including, in the secular trend, people who switch from a voice contract to a bundle because the internet has just got more attractive to them and who would have switched to the bundle even if prices had not changed?

DR JENKINS: For those customers I make the 20% adjustment.

MR RIDYARD: What is the basis for the 20% adjustment?

DR JENKINS: Judgment on -- just saying, okay, it is hard to know exactly what is going on there.

Now, in my view price does have an impact on that decision, and that is shown by the events study that I did, which showed that when you increase the gap between the voice only element and the bundle, you had a reduction in the amount of switching that went on in that period.

So in a sense, that, yes, there may be things going on that make bundles attractive and you have price changing at the same time, so how -- I do not see how you can disentangle those two things. That is what is -- the price is an integral part of what it is driving at.

If we take, for example, the split purchase customers who are buying these two products currently separately, and then we say: are we saying that when they switch to a bundle -- because they are included in this SFV group, the data I am talking here -- they switch within BT from taking the voice, they cease to have their broadband from their other supplier, and they take it from BT now. It cannot be a secular trend because they already had broadband, and do we say, well, it just happened and the price had nothing to do with that?

It just seems to me that even if we believe that, it would still be relevant switching for the purpose that we are interested in, which is to decide whether or not it would -- it is something that you would want to do in terms of raising prices, or whether you are going to encourage customers to switch to this bundle.

THE CHAIRMAN: Why cannot there be, if you like, a sub-secular trend of people who are just moving towards bundles, because ultimately it is going to be more convenient, and although there were lots of different offers taking two products, everyone is kind of gravitating towards bundles? Why does that have to be a price-sensitive move, which is what you are attributing it to?

DR JENKINS: I make an adjustment such that it does not get the full weight. However, I am saying that when making that choice for any substitute product, it is always the case that what you are thinking about is the combination of the price and the product features that are going on. So even if it were the case that you said, well, the price stayed the same and the quality improved of bundles, and we saw switching towards it, that is still relevant, economically driven switching for the voice customers. The other product is becoming more attractive.

THE CHAIRMAN: Right, so let me just isolate that, if I may. You did talk about this earlier on, when you said it is not just pure price, it is a question of quality.

So if someone switches to a bundle because there is some perceived quality advantage, even if the prices were the same, and they were not the same, but even if they were the same, you say that should be taken into account in your SSNIP analysis, or however you frame it, because in truth it is price related?

DR JENKINS: It is a meaningful competitive attribute, perhaps is a better way of putting it. That a SSNIP analysis or a hypothetical monopolist test, as we both agree, it is a framework of thought that is trying to capture changing -- worsening the competitive conditions, actually, is what the HMT does, and does it via increasing price. But that can be worsened in other ways, and the guidance does -- increasingly you see in the guidance given by competition authorities a recognition that, in thinking about substitution behaviour, it may not only be price that you want to take into account, it can be other features, and that is coming to the fore because we have, increasingly, products that have zero price.

So when people are contemplating that, they go, well, does that mean, you know, there is never anything to monopolise? Well, we monopolise in a different way. I think that is just recognising that what is being offered and what you have to think about is not -- we economists are terrible at just saying, well, you can turn everything into a price, and that is why we do this as a shortcut, but it does not mean you ignore switching that is driven by these other competitive factors. It is relevant.

Indeed, the way I structured my market definition analysis was to start by saying there is just a lot of switching from voice sold at standalone to voice sold in a bundle; in and of itself that is a clear sign that the two products are seen to be substitutes in some kind of way.

THE CHAIRMAN: Can I just ask one more question, and then I am going to revert back to Mr Ridyard, which is on this point about perceived quality benefit, even if not in price terms, of the bundles, in a different context I think when you were asked to deal with the suggestion, the SPCs were in some way inert or disengaged, I think you put forward well, that is not necessarily the case. They may positively prefer to stay as SPCs because there may be quality advantages with the two contracts. I do not quite see how that squares with what you have just said now.

DR JENKINS: Well, through this period, because what I am basing this on is the actual evidence of what was going on, so I mean, so we are framing it as a hypothetical monopolist but we are basing it on the switching that BT observed on its customer base.

Now, it may be that it was serving some SFV customers with a voice only contract because they got a really great deal for TV and broadband from Sky. BT then introduces TV and sport and all of a sudden for that customer they go, oh, okay, now I would prefer to switch to BT for my bundle because I am going to get BT Sport, I can still get the Sky channels through my TV package and that makes sense to me now.

That type of switching behaviour could be what is underpinning this.

THE CHAIRMAN: Thank you.

MR DORAN: So that is a sort of quality, it is perhaps a range question. It is about the nature of the alternative products whether inside the market strictly or outside the market. Is that the point here?

DR JENKINS: Yes, so I would say whether it is inside the focal product or the potential alternate product that may be within the market, yes.

MR DORAN: But these are competitive responses by players in the market. We will improve quality here, we may not change price. We will improve this, we may not change price.

DR JENKINS: That is right. Hence, when one is looking at what are the constraints for someone who is seeking to monopolise standard fixed voice it would be relevant what is going on in the bundles market there because even if what is going on is not a purely price effect but also other aspects of the offering effect.

MR RIDYARD: Mr Parker, would it be fair to say that you would completely disagree with what Dr Jenkins has said? Because I think you have explained your position on this and it seems to me you completely disagree with her on this point, and do you want to say anything more than that?

MR PARKER: I think you have cracked the code on that one. Yes, I am very much in disagreement. Perhaps it may be worth pointing, if we go to the joint expert statement at 246. {E/49/246}. Just jump to a couple of charts.

So this is a chart on -- the commitments is the black line. This is the standard line rental price in red and the wholesale line rental which is the main 90-95% of the direct costs of standard fixed voice.

So this is saying line rental price has gone up a lot and over the same period up to commitments also line rental price went down. I think for me the purpose of an analysis of switching is to identify whether the level of switching that has been observed is sufficient to place a competitive constraint on the focal product in question and what this is telling me is I cannot see how -- I can see if you take this view this was all this price related switching how is it that BT has responded to that by continuing putting up its price.

You can see a similar chart in relation to calls. Obviously there will be a conversation about this. But if you look at {E/49/228} in the joint expert statement you have BT's average revenue per minute, so average effective price. Similarly -- and the blue line there is the average for rivals, so I think rivals, smaller more likely to be competitive, more likely to be cost related. Then again you have this sort of, this divergence in price.

But it seems to me the point of a switching analysis in a hypothetical monopolist test is to understand whether it leads to a competitive constraint. It is not an end in itself. For me I think the discussion about secular trend, I think we both agreed there is one. It is a question of how big. To me the relevant question is: was it enough to prevent BT from raising its prices and that to me is the kind of the most important lens that you need to sort of apply to the level of switching. So I am not disputing that there was a level of switching. I just do not think it was enough to constrain BT's pricing.

THE CHAIRMAN: Yes, just give me a moment. (Pause).

We have a little bit more on 1.4 but we are going to do that after the break. In the meantime, the other page of the document we sent at lunchtime tries to do the same exercise on switching as we have done on pricing. So you will see the reference -- and once we have finished 1.4, we will do the same thing. We will quickly run through and see if there is agreement on the relevant materials, two of which that we have suggested you have just mentioned now, Mr Parker.

Right, we will take our break.

MS KREISBERGER: Sir, I wonder if I could just ask if Mr Duckworth could be released now.

THE CHAIRMAN: Of course. Thank you very much, Mr Duckworth.

(3.15 pm)

(A short break)

(3.30 pm)

THE CHAIRMAN: Just as a matter of housekeeping before we resume, we hope to get through certainly most of 1.5, which is the facts on pricing, today, but we may not, and our intention is that tomorrow we will be starting cleanly with 1.6. So can we start at 10 o'clock tomorrow, please? If that means we get through everything we need to get through before we get to dominance tomorrow, and it is a little bit earlier than 4.30, then we will stop earlier, but just in case, so we would like to start at 10 tomorrow.

Now Mr Ridyard has some more questions.

MR RIDYARD: Just before we move on to 1.5, I just wanted to ask about the exercise that Mr Parker did, looking at the impact of the commitments. This is, as I understand it, as you described already actually, you tried -- you tried to look to see whether that experiment and that change in price caused by the commitments, whether lessons could be learnt that would disentangle the price effect from the secular trend effect, and I think your conclusion, Mr Parker, was that that implied a very low elasticity, because what you got was a decline in the -- a fall in -- a decline in the amount of switching from voice to broadband but not a reversal.

I explained that very badly, I apologise. But Dr Jenkins, the point you make on that is that that might be because switching is asymmetric between one direction and the other. Can you just expand on that and explain why you think that asymmetry may exist, or ...

DR JENKINS: Yes, so for this point, and the use of this information, when the commitments price reduced it would imply that bundle customers decide to cease to take broadband and switch back to SFV, and given that the bundle product, as we all agree, is voice plus something, and that once customers have taken up that offer, then it would not be at all surprising to see an asymmetric response to a reducing of the price of the alternative less elaborate product, in this case, the standalone fixed voice.

MR RIDYARD: Can I stop you there. Maybe it is a bit surprising, is it not? Because the last few people to have switched to the bundle are the ones who were the hardest at this point to be persuaded that broadband was worthwhile, so they were just -- they thought it was just worthwhile trading up to broadband, and then suddenly the prices change and the price I am paying -- incremental price I am paying for broadband has just jumped. So why would I not say, oh, in that case I am going to switch back to what I was doing before?

DR JENKINS: We do not have a lot of evidence about what was in the minds of those customers at the time. I do think that it is possible for voice only customers that for various reasons they may feel they do not need or they do not want broadband or they do not want to engage with that. Once having received -- once having broadband, for example, able to use wi-fi on a computer, or they may have been -- they may get a tablet, they can do calling over the internet, voice calls, video calls. There may have been a range of services that became available to them that perhaps they had not realised how much they would value them when they had them.

So at the point the price falls, it is a point at which you now understand very well the product that you are now consuming, and you have the question of, okay, do I actually want to give this up? Or has it revealed to me that the value is sufficient to pay that incremental additional amount?

MR RIDYARD: So you are saying these consumers, they were not really marginal people at all, they just did not realise they should have switched long ago.

DR JENKINS: Quite possibly.

MR RIDYARD: It is more than that; that is what your argument depends on, is it not?

DR JENKINS: I think we know that you can need a push to make you engage and to make a decision to switch, and then once you have switched you may decide not to go back. So, yes, it is that they did not understand. There was an information barrier and people did not understand fully what the benefits would be of that service. Or perhaps they felt they knew and then when it happened it did change.

MR RIDYARD: Okay. Mr Parker, your thoughts on that?

MR PARKER: So I think -- I have done two different analyses. One analysis is to say, looking at the decline and taking the numbers that Dr Jenkins has calculated for her elasticities of demand, a cut in price should lead to an increase in demand, and you do not see that. Dr Jenkins' response to that is this idea that there might be asymmetry, that once you move from dual play -- to dual play, you may not come back.

But I have done a separate piece of analysis which says: take Dr Jenkins' analysis of the reduction in switching away after the commitments, because what we see after commitments is that people were still switching away in total from SFV, despite a 30% price increase, but the rate of that decline falls.

So this is not an asymmetric -- it cannot be answered by this asymmetric idea of: I have moved to dual play and I might be coming back. This is people who are already in -- they are still in SFV, but they are not switching away as quickly, because now it is a much cheaper price. That would be the contention.

If you look at that, the elasticity of those customers is less than 1, and I do not think -- I think that is not captured, even if you thought that Dr Jenkins' view on asymmetry as between dual play or bundles and SFV, that is not relevant to this piece of analysis. This piece of analysis says: I am already SFV, I am just less likely to switch away. But how many -- it is not a very big effect, given the scale of the price change which was 30%.

This is for VOCs, I should say.

MR RIDYARD: Yes. Then are there any clues we can get from the different choices of VOCs versus SPCs in all of this respect? Is there anything there which we have not thought about it so far? Obviously prior to the commitments BT was not able to identify them, so a bit of a silly question for that purpose, but maybe afterwards.

DR JENKINS: I think Mr Parker said just before the break about showing how prices had -- the line rental prices had increased over the period and saying, okay, so the switching is not enough to constrain BT's pricing. I think the question that we are thinking about for market definition is trying to identify what was the response to those price rises and looking at the actual switching evidence, and that is what I have done, is I have sought to pass that to get to some meaningful evidence on what are the switching responses that occurred at the time of those price rises.

If we look at SPCs for the period after the BT commitments, so my CLA looks from that point onwards, I am looking at SPCs, but the challenge I face is that there is not any specific data on SPCs. The actual data we have from BT is still for all SFVs and how they are leaving. While the VOCs have dropped out of the claim, they are still out there in the market doing things. So for that period post 2018, I am applying the general SFV shifts to the SPC price changes at that time.

So even when we do know who are the SPCs and who are the VOCs, we still do not have very good information on what is driving the choices that the SPCs make. We do see that the SPCs continue to decline dramatically through that period, and so this -- I am sure we are going to come to that at other parts of agenda, but it is really important to be clear when we are talking about what BT would do and what a hypothetical monopolist would do, and we will no doubt debate that.

MR RIDYARD: We will.

DR JENKINS: But the work that I have done in my CLA was using the market evidence to infer what you can about what a hypothetical monopolist of SFV would find profitable, and that -- because I think that is the relevant question that we have to ask here.

MR RIDYARD: Thanks.

I think we should probably move on to the pricing evidence.

THE CHAIRMAN: So if we can just go through the same sort of exercise we went through on the switching evidence. If we start with line rental increases, and I think Mr Parker already looked at this, but we -- there is a joint -- it is in the joint expert report, so presumably it is agreed. Page {E/49/246}, please.

MR PARKER: It is in one of my annexes so I would certainly agree with it.

THE CHAIRMAN: Right.

MR PARKER: I think possibly Dr Jenkins might, but I should not speak for her.

DR JENKINS: Yes, I think at that early period there may be one or two other little changes that happened, but overall, yes, I agree with that.

THE CHAIRMAN: Not material.

DR JENKINS: Yes.

THE CHAIRMAN: Right, so we can use that one. I know there are more -- I know, Mr Parker, that in your third report you have done some more sophisticated versions of this where you have put in competitive prices, but for the present purposes I think, if we are just looking at BT's line rental increase, we can use that.

Also there is the Annex 2 to Mr Bunt's witness statement.

MR PARKER: I would need that handed to me if we have a copy.

THE CHAIRMAN: If we could call that up, that is D/2/4. Ah, so I have this in error.

MR PARKER: It is towards the end.

THE CHAIRMAN: I will get the reference for that. Just a moment. (Pause).

MS KREISBERGER: Page 47.

THE CHAIRMAN: Thank you. Yes, I missed off the 7. {D/2/47}

We had some -- you cannot take all of the figures at the bottom in terms of pricing changes completely at face value, because Mr Bunt explained that where it is a bundle, and there is £1 on line rental, it is not another £2.50 on broadband. The total increase would be £2.50. But putting that to one side, if we just look at line rental for the moment, that is the easiest thing to look at here, because that is all we are concerned with at the moment, what he has done there is identify, for example, where it changed to CPI or CPI plus 3.9% or the price is frozen.

Have you seen this before, Mr Parker, this document?

MR PARKER: I have seen it. I have not necessarily tracked it back recently through to the price changes that are in the back of my document. I think that is something I would have to take away and confirm.

THE CHAIRMAN: Well, you can have a look at that overnight.

Dr Jenkins, have you seen this before?

DR JENKINS: I have seen it before, and I have not considered that I needed to check it in detail.

THE CHAIRMAN: It may not be critical, because we have got the document at page -- the table at 246. But can you both have a look at it overnight, just to see if there is likely to be any objection to what is being portrayed in terms of line rental increases.

MR PARKER: Yes, so not on line rental. If we are going to come back and talk about this in relation to calls and bundles, then I think there is a distinction between the front book and the back book, and I think ...

THE CHAIRMAN: Well, in any event, on call charges -- let us leave that one where it is.

Call charges, Dr Jenkins' first report, there are a number of figures here. Page 275. {E/17/275}.

If we can go back to Figure ... Go back one more page, please {E/17/274}. 7.6, it is a bit ... I am looking for call charge increases here.

DR JENKINS: This is it. This is the beginning of the call plans, so this is the first chart.

THE CHAIRMAN: That is the first chart. So this is a comparison of call plans. All of these are call plans?

DR JENKINS: The first three are call plans, which are the three call plans that are part of the claim. Then I move to comparing some of the salient per unit -- or not per unit, but call prices for specific types of call that would be out of bundle -- out of plan, out of package.

THE CHAIRMAN: Right. As I have got this, this goes up to 7.12.

DR JENKINS: Yes. So 7.6, this is unlimited weekend --

THE CHAIRMAN: Why do you not just quickly go through each of these figures.

DR JENKINS: Yes. So Figure 7.6 that we are showing is unlimited weekend call plans, and you see that has a lot at zero, because this was one of the call plans that was predominantly included for no additional charge with line rental for many of the operators.

THE CHAIRMAN: Right.

DR JENKINS: If we go on to Figure 7.7, which is on the next page at the top, {E/17/275}.

THE CHAIRMAN: If we can have that expanded.

DR JENKINS: Yes, expand that one. So that is the unlimited evening and weekend call plans for the different operators. BT is the black line, and you see Virgin Media is the light blue, Post Office is the yellow.

THE CHAIRMAN: Yes.

DR JENKINS: If we go down that page.

THE CHAIRMAN: Bottom half of that page, 275.

DR JENKINS: Figure 7.8. That is right. So this is the unlimited anytime call plans. It gets -- towards the end of this period, it gets harder to benchmark, I think I explain that in the paragraph below. You see a move away from time of day charging for fixed call bundles or segmentation on time of day and move to just inclusive minutes, which I think Mr Bunt explains in his third witness statement was with the increasing competition from mobiles, and the way people were thinking about how they used and made calls, that BT moved its call packages over to look more like a mobile package.

I have benchmarked this with the large unlimited minutes plan, but it was a bit hard to benchmark with some of the other participants.

THE CHAIRMAN: Right. That is 7.8. Then if we can move on.

DR JENKINS: We go to 7.9 {E/17/277}. So here I now have three -- four charts, actually, that talk about the pricing of an out-of-plan call. I have calculated these over a five-minute duration, because most of the suppliers would have an up-front charge and then a per minute charge. So if you have too short a call, that can put too much emphasis on the up-front charge, so I chose a five-minute call duration to benchmark.

So these are out-of-plan daytime calls to UK geographic numbers. This would be the price that would be charged. If you did not have a plan, they offered you those for free.

THE CHAIRMAN: Yes. Then the next ...

DR JENKINS: Then 7.10, it is the same principle, but that is out-of-plan evening calls. {E/17/278}

THE CHAIRMAN: Let us look at the top half of that. That is it.

DR JENKINS: Again, five-minute calls. If we go down to Figure 7.11, then we get out-of-plan weekend calls. You see -- so for this one again BT had this basically within plan until 2019, so that is basically at zero, and then the BT line is the black line at the end. Other market participants had plans which did not include this. So they had an out-of-plan charge.

Then 7.12, {E17/279} is out-of-plan anytime call to UK mobile numbers.

THE CHAIRMAN: Yes.

DR JENKINS: Again, a five-minute call.

THE CHAIRMAN: Thank you.

Now, Mr Parker, in terms of the facts underlying each of those increases, is there any dispute about this?

MR PARKER: So I think in relation to 7.6-7.8, these are front book prices, and there are potentially different back book prices not captured here. I think there is a reference to something called Isabella. There are pre- and post-Isabella prices which I think was when BT --

THE CHAIRMAN: You have not put any alternative --

MR PARKER: No, I have not. But this is -- just to say this is what it does capture and what it does not capture. I have not put the full list of prices, but the average revenue per minute analysis, that I think we were going to come on to next --

THE CHAIRMAN: We will come on to that.

MR PARKER: -- amalgamates all of the call minutes and the relevant revenues to get an average across the --

THE CHAIRMAN: Just to make it clear, the call charge increases here. The reason why I went back to this document, it is actually quoted in the Class Representative's skeleton argument, but you have made the qualifier about what the back room cost is. Then after 7.8, 7.9 to 7.12, anything on that?

MR PARKER: Again, if I understand correctly, and Dr Jenkins should contradict me if this is not right, this looks -- I think you are taking one data point per year per operator where such things exist for each of these call plans, and question whether that is a front book price, a back book price. There could be multiple things going on for all these tariffs.

DR JENKINS: Yes, so it is their reported list prices at that point in time. So I would have to check whether they operated at different price points. I think BT did not operate different call price points on different --

THE CHAIRMAN: You mean whether you were an existing customer or whether you were a new customer?

DR JENKINS: Yes, but I would have to check that, whether -- so the difference is if you were switching to them or you called them up and said: I want the new call package, you would get that price, but if you did not call them, you might be on a previous one.

THE CHAIRMAN: We certainly have references to front book and back book in the witness evidence.

DR JENKINS: Yes, I would have to read this in the evidence to just check that when they changed the outer call plan prices, whether they just had one schedule that worked for everyone, or whether they had multiple schedules depending which plan people were on. I will have to check that.

THE CHAIRMAN: Right. All right. Then can we move to page 228 of the joint expert statement, which we looked at just before the break. This is the ARPM. {E/49/228}. This is BT data. Mr Parker looked at it earlier on.

MR PARKER: It is BT data for BT and it is Ofcom data for non-BT.

THE CHAIRMAN: Right. But I mean, you do not take any issue with this diagram, Mr Parker?

MR PARKER: No.

THE CHAIRMAN: Dr Jenkins?

DR JENKINS: Yes, I do.

THE CHAIRMAN: Ah, right.

DR JENKINS: I think it would be useful if we could go to the confidential version of the JS.

THE CHAIRMAN: So IR ... just a moment.

DR JENKINS: E/49/258.

EPE OPERATOR: Is it OR, not IR?

DR JENKINS: OR. {OR-E/49/258}.

So this has an additional column in there, compared with Mr Parker's. So I have some principled reasons why I do not think that average revenue per minute is the right approach for calls, because it --

THE CHAIRMAN: Just one second. Let us deal with your side on that now, and then we will revert to Mr Parker on this principle question.

DR JENKINS: Yes, which is that average revenue per minute, because people are often buying these bundles which give them the option to make calls, and then if they make fewer calls in that period for which they have paid a certain fixed amount, then the average revenue earned per minute will be higher, even though the customer may have bought the package that suited them, but made fewer calls than another customer.

So just as a matter of principle, I think it is best to use the list prices for comparing what was actually offered to customers, particularly where we are thinking about switching decisions, which is people will know what their own usage pattern may be, or maybe they will not, but they will make a judgment on looking at what is being offered to them and comparing the different offers like for like, and so -- and that is certainly what I am interested in at the market definition stage.

Then the second point I have made with respect to this ARPM data, which is we are comparing -- the dark column is the BT internal information on call revenue, and the grey final column is for other suppliers that are not BT, which comes from Ofcom. I think then what I have added in is BT's data from Ofcom. It is not showing very well on that, but that is the green column in the middle.

So if you use the same Ofcom source for the BT information as the non-BT, and you see that between 2019 and 2020 there was a reallocation that Ofcom did, and you see it had a very big impact on the revenue that was attributed to calls for BT, so that in 2020 that shift -- so before 2020 the black and the green columns are not -- they are not identical but they are not massively different, and then you get to 2020 and there is this very big difference, and now the BT Ofcom ARPM data looks very similar to that of the rest of the market.

Now, I actually -- I did ask a few questions about do we know what Ofcom did? I could not find any explanation of that. But it made me question whether or not you can do this comparison because of the different sources, and especially when you couple that with looking at the list price evidence, which seems to suggest that the BT pricing and the pricing of the other suppliers was not that different, that it could be that the reason we are seeing this big difference is a data issue, rather than a genuine difference in the average revenue per minute --

THE CHAIRMAN: I am sorry to interrupt, because it is not quite clear on the colours here, but the Ofcom data from -- the "BT (Ofcom data)" is the green?

DR JENKINS: Yes, it is the green.

THE CHAIRMAN: Yes.

DR JENKINS: Sorry, I agree with you, that legend looks a bit odd.

THE CHAIRMAN: They look black. It is green, right.

MR RIDYARD: I understand what you are saying, but is there any reason why the BT numbers would be so much higher than the non-BT numbers?

Just to go back to what you were saying about in your view what matters is the list prices, because that is what causes people to choose. Is there -- could you think of a rationalisation for why consumers have done that, seen that the two list prices are similar, but then the outturns are so different between BT and non-BT customers?

DR JENKINS: I could not, and so actually --

MR RIDYARD: Which leads you to your --

DR JENKINS: Which led me to look into this and ask the question: do we have the BT Ofcom data? Because this data looked so weird compared with the list price analysis, and then this came to light. But honestly I do not know what Ofcom did. I do not know if Ofcom went through the same thought process and thought, oh, that looks a bit odd and then they recalibrated. I do not know.

MR RIDYARD: Mr Parker, are we missing something here?

MR PARKER: It might be worth turning up Dr Jenkins' first report at page 119 {E/17/119}. If you look at the footnote at the bottom there, 165, that is the reallocation of revenues point. At that point, Dr Jenkins had a view that she felt the BT revenue data was reliable, that was the internal BT data, so this top line.

To the extent I think that there are potential reasons why list prices might give you different results to ARPMs, I think there could be a front book/back book issue. All we are seeing is the front book prices. There may be people on back book products which are maybe legacy products, people who have hung around for a long time and have not changed. There might be usage differences.

Dr Jenkins says, well, what happens if one person is paying £10 a month and uses 20 minutes, and another person pays £10 a month and uses 100 minutes because it is an unlimited package, that may be true on an individual customer base, but the question is: why would that be systematically true for BT customers as opposed to others? So why would it be that BT customers bought these unlimited packages but then did not really use them very much? Or another way of thinking about it is: why would BT not feel the competitive pressure to price down to the costs they are genuinely facing in providing those packages, because they could do -- they could be more attractive. Customers that choose them do not use these products very intensively so they could be more aggressive on price. There could be a product mix effect, which is that although there are different lists prices for different products, BT customers might disproportionately be on more expensive products.

I think there is just -- I think there are so many different tariffs out there and so many sort of different weightings, the point of the ARPMs analysis is to amalgamate all of the revenues and divide through by all of the volumes to get an average across all the tariffs, and it seems to me that is a sensible thing to do. That is sort of the effective price, if you like.

MR RIDYARD: Yes, but still ... You have provided some possible explanations, I suppose. But we are talking here about the whole of BT's voice customers across ... so this is not just the VOCs or the SFV customers here.

MR PARKER: Yes, we cannot distinguish between SFV versus everything else.

MR RIDYARD: It is going to be dominated -- these results are going to be dominated by what is happening to the bundle customers because, as you go through time, they become the majority.

MR PARKER: Yes, I do not think we have got any particular reason to think that bundles and SFV customers from a calls perspective are very different.

MR RIDYARD: No.

THE CHAIRMAN: Thank you.

Then we turn to, Mr Parker, your fourth report, page 25, on line rental and incremental or total broadband prices, Figures 1 and 2. If you could just run through those. {E/5/25}

Let us do them separately for the moment. Can we just have Figure 1 expanded, please, and then ... Yes, because I was not sure what you meant when you said "the price of incremental broadband", so can you just take us through this.

MR PARKER: So the red, blue and green lines are the incremental price of broadband within a bundle. I have actually taken this from Dr Jenkins' reports, so these are I think similar to 5.5 to 5.7, though slightly amalgamated.

So the dotted line is the BT standard line rental price, that is going up, and the red, blue and green lines are the incremental price of broadband within a dual play bundle. So if you added the dotted line to each of the red, blue and green lines, you would get the total dual play price, but this is just looking at the incremental price of the broadband service within the dual play bundle.

THE CHAIRMAN: So in other words, on top of line rental, what you are paying if you are taking a BT dual play bundle.

MR PARKER: Yes.

THE CHAIRMAN: So the fact -- whether the blue, red, yellow, etc, goes above or beyond the line rental point is really of no significance at all because it is a different pricing.

MR PARKER: Yes. So the purpose of putting them on the same graph is to say if you thought that, if you like, there was a fixed relationship between standard line rental and the total bundle price, what you would see is that the incremental broadband prices would all be flat, the standard line rental price is going up, and therefore the dual play prices, when you add them together, are going up by the amount that the standard line rental price is going up. That is not what you see. What you see is the incremental broadband price changes around a lot in order to get the dual play price to be competitive in dual play.

THE CHAIRMAN: So taking the red line, for example, looking at it so that -- it starts at £25, so that would be £25 plus the line rental.

MR PARKER: Yes.

THE CHAIRMAN: Then we see it drops right down to just over £10, etc, and then it goes up and down.

MR PARKER: Yes.

THE CHAIRMAN: So that is what that is showing, right. Then Figure 2 which is across the page {E/5/27}.

MR PARKER: So this is the total price, so that is adding -- it is the same data but it is adding the standard line rental and the relevant incremental prices, so this is -- those blue, red and green lines are now the total dual play bundle price.

THE CHAIRMAN: Let us pause there.

Dr Jenkins, especially if this was derived from your report originally, is there any disagreement over the actual facts that are shown here?

DR JENKINS: No. The only additional point I would make is that this is drawn from the pure pricing data. It is explained in my first report. So these are new customer acquisition prices by the different parties, so it is the price that they offer in each month, and it includes any promotional activity on those products as well, which I think I described earlier. The way we did it was if you were offered six months free on a 24-month contract, you would not do six months free and then 18 months full price, I would spread it over as an average price for the 24 months.

THE CHAIRMAN: So it is front book.

DR JENKINS: It is even more promotional than front book, because what I have not done is then wait -- okay, someone joined with the front book price at this period and then it is held for 24 months, and then someone else comes in and the front book has changed for them. So it is the price that if you went to whichever -- sorry, in my report I have got all the operators, but if you go to BT's website at that point in time and want the best promotional price for that speed, this is what you will get at any point in time.

THE CHAIRMAN: Right, thank you.

Then going back to Mr Parker's fourth report again, page 44. This is now ARPU. SFV as against bundles. Figure 4 and Table 1, please. It should be page {E/5/45}.

Do you want to just go through this, Mr Parker.

MR PARKER: So this is based on the data again in Dr Jenkins' SAC combinatorial, I believe. So this is the total average revenue per user for someone taking BT SFV services, and then someone taking any kind of bundle. So this is not just dual play, this is dual play, triple play, quad play, weighted across all of those, so it is -- and I think it would include BT Sport as well. So this is out of -- this is, again, Dr Jenkins' data that I have presented in a slightly different way.

THE CHAIRMAN: Right, but this is just revenue. Right. So any disagreement with this, Dr Jenkins?

DR JENKINS: I do not believe so.

THE CHAIRMAN: No, because if this is just revenue, we know there is an argument about profitability here, but this is just revenue. All right.

Table 1 which should be I think the next page, {E/5/46}.

MR PARKER: I think that is just the same number.

THE CHAIRMAN: It is the same information, is it not?

MR PARKER: Yes, it is the same information, so I do not think there is any --

THE CHAIRMAN: Finally can we go to Mr Parker's third report, {E/3/81}. This is SPC two contracts prices as against BT dual play prices.

MR PARKER: Yes.

THE CHAIRMAN: So this is what we looked at earlier -- I think we looked at this.

MR PARKER: So this is BT SPC so standalone fixed voice and

standalone broadband versus rival dual play pricing.
THE CHAIRMAN: Yes, the combination of the standalone voice and the standalone -- you have to add them together, have you not?
MR PARKER: The SFV price for BT against the dual play price for rivals.
THE CHAIRMAN: Yes, right. Then if we go to {E/3/83}, tables 8 and 9.
MR PARKER: These are just derived from that figure.
THE CHAIRMAN: Right, and is the same true for table 9 which again are the percentages? Yes.
MR PARKER: Yes.
THE CHAIRMAN: Then can we go figures 10 and 11, page {E/3/98}.
MR PARKER: These are the same equivalent charts but for a later time period.
THE CHAIRMAN: Is this post-commitment? Yes, post-commitment.
MR PARKER: Yes.
THE CHAIRMAN: 10 and 11 should be -- that is all blanked out. But I can see why. But let us just go finally to table 10, page {E/3/101}.
MR PARKER: Which again should be a reflection. Table 10 and 11 are essentially drawn from figures --
THE CHAIRMAN: So Dr Jenkins, taking the figures as figures

is there any debate or dispute over these?
DR JENKINS: I have not presented equivalent analyses on the standalone broadband price of rivals. I accept Mr Parker's assessment of that. I think we discussed this briefly earlier which is whether or not the list prices that have been chosen there are salient ones that are actually representative of what SPC customers of BT who are taking the voice component from BT would have actually paid from the other supplier who was supplying them broadband. I think you cannot know that from this. It is just adding two list prices together.
THE CHAIRMAN: But for the purpose of the argument where there is a debate between you on the differential between what in total the SPC is paying, there is no alternative to these figures or tables from your side.
DR JENKINS: Yes, there is no alternative.
THE CHAIRMAN: Thank you. That is what I wanted to say on pricing.
MR RIDYARD: That is very useful.
When we think about whether it is the SSNIP test or actually more generally looking at excessive pricing later on, when we talk about the focal point here which is voice services sold on their own, is it necessary for us to look at both access and the call charges and if so how do we do it? Mr Parker, do you want to start on

that.

MR PARKER: So I have looked at both and I have looked at them separately and I have added them up. I have also looked in my latest report at if you just took the split purchase analysis and said well, what if there was no change -- if calls were competitive and so we do not need to think of any price increase on calls, do you still get the same results, and I say you do.

It seems to me if the focal product is access and calls, then you need to be looking at a SSNIP of access and calls over all. Clearly if you have a SSNIP on access and a SSNIP on calls and you have them together you will get a SSNIP on the whole thing because if they are both of appropriate proportion then the weighted average will be above.

So I think you could look at everything together or you could look at it separately.

MR RIDYARD: Except if call volumes are calling in the time period that you are looking at, that is something we are coming on to in a minute, but if call volumes are falling, then you might get a very different story from looking at average revenue per user than you do from looking at the increase in the price of access and calls.

MR PARKER: So that is correct. The other way to do this is to look at the limb 1 analysis directly which looks at average earned use per user as a whole. It seems to me that the way that the SSNIP test is normally done is on a per unit price and therefore I would have a tendency to use effective prices for access. That is the same -- for the list price is the average per user because it is a one unit product. For calls it is not the same and it is a bit more complicated.

I think if you look back at the calls chart, which is annex A2 of the joint statement, because the substantial difference between the average revenue per unit for BT versus rivals, obviously very much more than --

MR RIDYARD: Sorry, which page are you looking at there?

MR PARKER: I am sorry. Page {E/49/228}. So if you look at the difference between the BT pink bar and the non-BT bar we are looking there at increases that from 2015 or 16 or so, the price differential per unit is more than 100%.

MR RIDYARD: Yes, it is huge and also the relative, it is growing here I think.

MR PARKER: Yes, that is right. Up to 2020 at least.

MR RIDYARD: Yes.

MR PARKER: Yes, there has been a decline in call volumes but that is obviously associated with a decline both in revenues per user although being offset by this revenue per minute going up and in the cost of providing those calls because if you have fewer calls that you are using you have lower costs as well.

MR RIDYARD: Clearly lower costs.

MR PARKER: The lower costs if the non-BT calls market is competitive and they are reflecting the costs of those calls are being -- seem to be fed through there. So it seems to me, and I think if I look at the calls volumes for both BT and rivals, although I am not sure that is in any of the reports, they are essentially falling at pretty similar rates. There is not a dramatic kind of mix effect.

So I think taking all of that together and if you look at the limb 1 analysis that Mr Duckworth has done, you find that there is an additional effect from calls. So I think take all that together and you end up with a view that, yes, whether you look at access and calls separately or you look at them jointly I think you end up in the same place.

MR RIDYARD: Okay. Dr Jenkins.

DR JENKINS: Okay. Mr Parker and I take very different approaches to the question of market definition, so when I am using the price information I am using it to help me estimate any elasticity by looking at the switching that I can link to those price changes, so I am using it in concert with the switching evidence.

Mr Parker is inferring something directly from the price evidence that he sees and so I think we could make different uses of the price information for that reason.

Starting first with Mr Parker's position that you can look at line rental and you can look at calls separately, I think if his position is you can infer directly from the average price that is paid by a customer something about whether or not BT is able to increase prices, then the ARPU for SFV services would seem a natural metric that he might consider.

If we went to Figure 3.8 of my first report, which is {E/17/56} I mean, we did see a chart from Mr Parker but this just shows what the ARPU is for SFV services through this period. You can see that there has not been -- there was some increase over the first few years and then it has been declining since that point.

If we --

MR RIDYARD: Let me just interject. This is something that is really bothersome for us looking at this because you have this pretty flat movement in ARPU and yet the ARPM seems to be saying something quite different, subject to the criticisms and concerns that you have of the ARPU numbers. It is a real problem for us to -- and also the ARPU is doing something very different than looking at line rental on its own. It is quite a challenge to sort of prioritise these different measures of price because you can see that they are all interesting and they are all relevant but we really need to hone in on what is the right price to be looking at for what purpose.

DR JENKINS: I agree. I would say this is the focal product which is SFV services and it is calls and access and it is an average revenue measure which Mr Parker has articulated with respect to calls that he thinks is a valuable measure.

Now, the calls measure that has been presented, the average revenue per minute, I think as we discussed a little earlier, that is for voice overall. It is not for the customers only, the SFV services customers only. So the inference that Mr Parker is taking from that is that there were SSNIPs on a product that was being supplied to a group of customers that are beyond those that are solely in the Class and beyond the focal product which is voice sold to SFV services.

So I mean, I agree that, as he pointed out, like I use BT data predominantly because I think that is the most accurate one. What I doubt is the comparison of the ARPM of BT with the rivals because I think rivals'

ARPMs were probably going up as well. It is just not showing in the Ofcom data.

THE CHAIRMAN: Can we just get Mr Parker's response to that particular point there because I think it is quite a key one.

MR PARKER: So in terms of this Figure 3.8, I think the key thing is to say that starts in 2015. The question for me is where have we got to in 2015? So if you look back at the joint expert statement at {E/49/246}, so what you see is there has been a lot of price increases up to the start of the period and then actually not much happening since then. You have one more price increase and then Ofcom starts looking at it and then there is a price freeze. At the same time, yes, you have -- so what the ARPU does not tell you is whether that was close to the competitive level so we can see that the wholesale line rental price there has gone down over that period but then the ARPU is quite flat within the claim period but I think you need to work out, you need to say, well, where have you started from? If you started from a place that is well above the competitive level the fact that the ARPU is quite flat from there does not stop you observing that there is a SSNIP above the competitive level. It just tells you there may not have been a SSNIP from the beginning of the claim period.

MR RIDYARD: Do we have ARPU for prior years, to the years before 2015/2016? Can we take that back to 2009?

DR JENKINS: Not back to 2009 I believe. I would have to check, but maybe to 2014 we can. It is what data is available but I would not want to be held to whatever I say on my feet now.

MR PARKER: The other way to think about ARPU is to look at the limb 1 analysis because that looks at total revenue for SFV services including calls for SFV customers, total costs and obviously that gets into a broader debate. But that is the other way to sort of think about the whole ARPU and whether that is above the competitive level. So, if you like, that bundles up everything. That is probably not helpful language here, but that combines ARPUs for all of the products or SFV customers only. This is sort of breaking it down to the individual component points.

My view is this shows you that there were considerable increases up to the beginning of the claim period and I think you need to take account -- you should not just start at the claim period and say what was going on from the beginning of the claim period. You should look at the difference again.

MR RIDYARD: I understand that totally. But if we are looking at the wholesale and retail line rental prices, as it were, you are saying BT is just sort of reselling the Openreach product to consumers. But if there is more going on in the background such as fall in call volumes and if the line rental price is doing a different job over time, it is not just a way in which BT or any other operator re-charges the wholesale cost. It is providing a margin to cover other things that are happening and compensating for the volume reductions and the change in the way in which calls are priced as well. It is a bit more complicated, is it not?

MR PARKER: Maybe another point to look at in the annex to the joint statement, well, let us do it from Dr Jenkins' data, so this is the -- if you go to {E/49/253}, so these are ARPUs against direct costs. So the SFV ARPUs or the total revenues and the total costs. Yes, we are seeing that is approximately a 65% margin, varies up and down a bit from year to year. So that is very consistent even though the volumes of calls at least are declining and the volumes of customers are declining.

You can look similarly, if you want to do it on more of a contribution margin basis, then you can have a look at the numbers in, if we go to {E/49/231}. Then we have table B22. We have got BT SFV services, revenues and incremental costs and we have the contributions there. Again, quite substantial margins on the basis of -- and these are again ARPUs against, in this case, total costs as calculated by -- well, this comes out of Dr Jenkins' model.

MR RIDYARD: Dr Jenkins, yes.

DR JENKINS: I think it is agreed between Mr Parker and myself that when we come to limb 1 we are all agreed that we should use ARPU but the question you asked was about what is the right price to use at the market definition stage.

MR RIDYARD: Yes.

DR JENKINS: What Mr Parker has suggested is we look at the line rental list price and we look at the ARPMs of calls. He is inferring directly from price changes that are observed something about what that means in terms of the switching behaviour of customers and the fact that those price changes are informative about whether or not they would be profitable for a hypothetical monopolist.

So the question I am asking is, for that purpose if you are talking about the price of the focal product, which is SFV services, and you want to think about the increase in price of that product, would ARPU have relevance for that?

The reason I have not used it, which may be a reason that Mr Parker would also say he does not use it, is I am going to use the price information to match with the actual switching behaviour and try to work out okay, what actually happened when these prices were changed, what sort of response did we see?

Now, what is certainly true is that the ARPU does incorporate some of that quantity response in it because it is a mix of the price and the actual purchase that people made of it.

But it is not clear to me that Mr Parker thinks it is relevant what switching actually happened. He is saying you can infer from its face something about whether or not it was appropriate and for that then that price seems salient.

Now, for the analysis I have done, just to get that in here before we finish for the day, is I have used the line rental price rises as a proportion of ARPU, right, and the reason I have done that is the switching that I am capturing is the choice by customers to cease being an SFV customer and switch to voice in a bundle.

So I think for that decision the relevant question is the line rental price. The call prices will actually be the same for them, whether they are an SFV or a bundle customer. I have divided by overall ARPU because that is actually the amount that will be on a customer's bill each month. It will be the mix of the calls they have made and their line rental charge.

So when they are thinking about, I have got a line rental increase they think of it as a proportion of the average revenue that they are paying per month.

So I have used that because that is the sort of push price that is sensible to link to the switching that I observe and so it is relevant for my analysis. It is not clear that just take taken on its face, I disagree with Mr Parker's analysis, I do not think you can conclude anything from those list price rises without thinking through what was the consequence of those price rises in the market.

THE CHAIRMAN: Just one moment. (Pause). We will stop now. We will resume at 10 o'clock. There may be a couple more questions on the facts of pricing before we then go on to 1.6. So 10 o'clock tomorrow. Thank you very much.

(4.32 pm)

(The hearing adjourned until Tuesday, 13 February at 10.00 am)