IN THE COMPETITION APPEAL TRIBUNAL

Case No. 1251/1/12/16-1255/1/12/16

Victoria House,
Bloomsbury Place,
London WC1A 2EB

7 March 2017

Before:

THE HON. MR. JUSTICE ROTH
(President)
MR HODGE MALEK QC
DERMOT GLYNN

(Sitting as a Tribunal in England and Wales)

BETWEEN:

GENERICS (UK) LIMITED
GLAXOSMITHKLINE PLC
(1) XELLIA PHARMACEUTICALS ApS
(2)ALPHARMA LLC
ACTAVIS UK LIMITED
MERCK KGaA Appellants

- and -

COMPETITION AND MARKETS AUTHORITY Respondent

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HEARING

A P P E A R AN C E S

Stephen Kon and Christopher Humpe (instructed by MacFarlanes) appeared on behalf of the Appellant (Generics UK Limited).

James Flynn QC (Brick Court), David Scannell (Brick Court) and Charlotte Thomas (Brick Court) (instructed by Nabarro) appeared on behalf of the Appellant (Glaxosmithkline PLC).

Robert O'Donoghue QC (Brick Court), (instructed by Clifford Chance) appeared on behalf of the Appellant (Xellia Pharmaceuticals APS (1) Alpharma LLC (2)).

Sarah Ford QC (instructed by MacFarlanes) appeared on behalf of the Appellant (Actavis UK Limited).

Ronit Kreisberger (instructed by DLA Piper) appeared on behalf of the Appellant (Merck KGaA).

Jon Turner QC (Monckton), Marie Demetriou QC (Brick Court) David Bailey (Brick Court), Thomas Sebastian (Monckton), Ravi Mehta (Blackstone) and Elizabeth Kelsey (Monckton) appeared on behalf of the Respondent

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THE PRESIDENT: Yes, Mr. Scannell.

MR. SCANNELL: May it please the Tribunal, GlaxoSmithKline calls Mr. Andrew Sellick.

MR. ANDREW SELLICK (sworn)

Examination-in-chief by MR. SCANNELL

THE PRESIDENT: Do sit down, Mr. Sellick.

MR. SCANNELL: Good morning Mr. Sellick. I believe you have been handed bundle E.

A. I have.

Q. Within that bundle could you kindly turn to tab 6, please. {E/6/1}

A. Yes.

Q. Is that your first witness statement in these proceedings dated 11th October 2016?

A. It is.

Q. Within the same tab, could you turn, please, to page {E/6/8}.

A. Yes.

Q. Is that your signature under the statement of truth?

A. It is.

Q. Could you now turn, please, to tab {E/8/1} in the same folder.

A. Yes.

Q. Is that your second witness statement in these proceedings dated 20th January 2017?

A. It is.

Q. If you could finally turn to page {E/8/5} within that tab. Is that your signature beneath the statement of truth?

A. It is.

Q. Does the evidence in these two witness statements remain your evidence in these proceedings?

A. It does.

MR. SCANNELL: Thank you.

THE PRESIDENT: I think you have corrected in your second statement something in your first statement, have you not, about the --

A. It was just reference to the region.

THE PRESIDENT: Yes. So subject to that correction, your first statement is correct?

A. Yes. Cross-examination by MR. TURNER

MR. TURNER: Mr. Sellick, I am going to ask you a few questions.

Do you have, as well as the bundle you have just been looking at, another bundle which has been handed with some separate tabs in it, because that is the one we are going to be asking you some questions about. If you put that other bundle to one side at the moment.

If you open that bundle up you should have in the first tab the first witness statement we were talking about, and in the second tab the second witness statement.

A. Yes.

Q. Underneath that you should have a hard copy printout of the spreadsheet, which you exhibited to your first report.

A. Yes.

Q. If I may, I will hand up to the Tribunal hard copies of this, copies have already gone round the room, because it is easier than navigating the Excel spreadsheet as we go through the examination.

(Handed)

THE PRESIDENT: Is this exhibit AS.1?

MR. TURNER: That is right, this is exhibit AS.1.

THE PRESIDENT: Just for our record, what is the bundle reference for that, do you know?

MR. TURNER: {E2/36/1} on the Magnum system. It clicks through to an Excel spreadsheet.

THE PRESIDENT: Thank you very much. Perhaps we can have {E2/36/1} up as well. Does that come up? Thank you.

MR. TURNER: You will see that at least on the Magnum screen it is not quite as full.

What you see from the main print, the hard copy printout, is a series of letters all the way through at the top of each column. Some of the columns you discuss in your report, and that is the full printout containing all of the details that we found in the Excel spreadsheet, I believe.

If you go over, behind it, in order to make it somewhat easier for the purpose of discussion, you should have a single page entitled "Columns hidden in Excel spreadsheet".

A. Yes.

Q. What has been done there is to strip out certain columns which are of less interest. If you then open up the shorter document that follows, we now have again the lettered columns at the top. We try to restrict this to the columns of main relevance to the discussion and this now relates only to the Seroxat product, you will see from column O, whereas the main spreadsheet refers to all of the different products that were listed there. So if you have those open.

THE PRESIDENT: Just one moment, Mr. Turner. (Pause)

So I understand this, the second document is extracted from the first with certain columns left out. So you leave out columns D and E, leave out column I and so on, which we have in the full one.

MR. TURNER: Yes.

THE PRESIDENT: Then, also, you have left out those items that are not Seroxat; is that correct?

MR. TURNER: That is right. To illustrate it, if you take the main spreadsheet and turn to the second page, halfway down that page you will see entries for Boots, the chemist.

THE PRESIDENT: Yes.

MR. TURNER: There are a series of entries under column C, and if you track across to column O you will see that in the middle of those entries you have the Seroxat product being sold by GSK to Boots, and surrounding it you have the descriptions of other products that were also of interest to the sales representatives as well as Seroxat, such as Amoxil.

THE PRESIDENT: I see, and it is only that one that we find in the shorter spreadsheet under Boots, just the one item for Seroxat?

MR. TURNER: Yes. If one then goes to the shorter one and looks at the item for Boots.

THE PRESIDENT: That is what I mean, you have just the one entry.

MR. TURNER: You do. As you go across, you will see the same information is reproduced for that.

THE PRESIDENT: Yes.

MR. TURNER: The purpose of extracting the shorter one is for ease of reading because it makes it much clearer in larger type --

THE PRESIDENT: No, very helpful, thank you.

MR. TURNER: So, Mr. Sellick, you have worked for Glaxo and before that SB for over 20 years.

A. I have.

Q. Your current role as a business partner involves providing support and advice to the respiratory business?

A. Yes.

Q. In the relevant period between January 2001 and early 2003, you were a regional sales manager and you were responsible for 12 account managers who were dealing with pharmacies?

A. Correct.

Q. As the President pointed out earlier, this is for the eastern region not the southern region?

A. Yes.

Q. Can we turn to your main statement, your first statement, which will be at the first tab of that bundle {E/6/2}. Look at paragraph 3.
We see from that that you were the regional sales manager responsible for the 12. But you yourself sometimes attended meetings with pharmacies with your staff and you approved payments and certain customer rebates and you led on certain negotiations?
A. Yes, that is accurate.
Q. To be clear, you had no involvement in this case before the CMA's decision which was February 2016?
A. Correct.
Q. You were not involved in giving information for GSK's Notice of Appeal either, in April last year?
A. Correct.
Q. If we look at paragraph 9 on page {E/6/4} of this statement, you explain how you came to be involved.
You were contacted for the first time about the case in September last year?
A. Yes.
Q. In preparation for one of the calls, on 30th September, you found on your laptop the spreadsheet which we have just been looking at and which you then discuss in your statement?
A. Correct.
Q. Just to complete the picture, before coming to this hearing, have you read what the economist expert retained for the Competition Authority, Ms. Webster, has said in her discussion of your statement?
A. I have read some of it.
Q. Have you read everything that she said about your statement as opposed to all of what she said about other things?
A. Probably.
Q. You were given an extract of it --
A. Yes, so I have the full document with some paragraphs that were highlighted which Nabarro asked me to review.
Q. Yes, okay. Were you involved in helping with Dr. Stillman's further report which responded to Ms. Webster on 27th January?
A. Define help?

Q. Were you involved in providing any information to assist with the process of producing that report? Were you asked about anything?

A. I do not know whether it was directly, but I provided information. I do not know what happened to it, where it went.

Q. Yes, thank you very much.

May I begin with a question to clarify how you worked out your prices to pharmacies in 2001 before you moved to the DTP, direct to pharmacy, model when you were still using wholesalers.

You deal with this in paragraph 6 of your first statement {E/6/2}. One gathers from this that you took your manufacturer's list price, MLP, and you worked backwards from that to get a price to the wholesaler at a standard discount?

A. So the medicines were sold to wholesalers at 12.5% discount, basically.

Q. Off list. So you start with the list and then you work backwards from that?

A. So the medicines were sold to wholesalers at the 12.5% discount.

Q. From the list price, that is how you worked it out?

A. Yes.

Q. You generally assumed that the wholesalers then sold on at list minus around 10%?

A. It varies, but 10% was probably about the average.

Q. When you say "assumed" here, it was not just an assumption, this would have been based on observations by you and your colleagues of what the wholesalers were customarily doing?

A. Yes, so sometimes we would find invoices, look at an invoice to see what a pharmacy chain or pharmacy was actually getting, and because we captured all the information across the whole country we could sort of get a sense of whether the wholesaler discount that a pharmacist was telling us was reasonable, given the size of his business.

Q. To illustrate this, if we open up either of these spreadsheets but take the more condensed one, the third column along on this, column G, was entitled "WS discount", which I take to be wholesaler discount?

A. Correct.

Q. We see recorded there what you believed the wholesaler discounts that were being applied were for those cases?

A. Yes.

Q. We see some variations around the 10% in practice, but they are not that large, which is why you refer to 10% in your statement?

A. Yes.
THE PRESIDENT: Just so I understand it, for Boots, Boots being a national chain, you supplied direct; is that right?
A. So I was not involved directly with any of the national accounts, so Boots was a national account.
THE PRESIDENT: But the fact that there is no wholesaler discount, is that a reflection of the fact that it was a direct supply?
A. I would assume yes, but as I say, all the data in here is not my data, it has been entered by the relevant account managers at the time.
THE PRESIDENT: Yes.
MR. TURNER: You are referring to these percentage discounts from the list price to the wholesalers as relating to the portfolio of products. We do not have different wholesaler discounts for individual line items.
A. No, no.
Q. Can we just turn up one document to make sure that you agree that this is how it worked. In your bundle it should be tab 8, for others it is at {G3/61/34}. (Pause)
THE PRESIDENT: We have a technical problem. (Pause)
It will be resolved over the short break. We will just carry on.
MR. TURNER: If we turn perhaps to page 1 of the document so you can see what it is, the Office of Fair Trading did a market study into medicines distribution. It is dated 2007, as you see from the second page {G3/61/2}.
If you go in that to page {G3/61/34} there was a description there. This is about full-line wholesalers and what the Office of Fair Trading found to be common practice. Do you have that?
A. I do, yes.
Q. It is common practice for full-line wholesalers to publish standard discount terms --
A. Sorry, where are you reading?
Q. 2.47.
A. That is not page 34.
Q. My mistake. Bottom right it says {G3/61/34}, on the left it will say 30.
A. Found it 2.47.
Q. Yes:
"It is common practice for full-line wholesalers to publish standard discount terms, laying out the basis of discounts offered and the medicines which are eligible for

discounting. Full-line wholesalers' standard terms tend to follow a common structure. They are based on the total monthly value of purchases of medicines eligible for discount. A minimum threshold is set for this figure below which no discounts are offered. Above the threshold a small number of discount rates (usually three or four) apply to set bands of the value of monthly purchases. Wholesalers may differ in their standard terms by virtue of the discount rates used, the monthly sales bands, and the range of medicines eligible for discount. In addition to these standard terms some wholesalers remove discounts (apply surcharges) to customers whose purchases are below a certain level."

Does that seem to you a reasonable account of how things worked?

A. Yes.

Q. If we go back to your first statement and look at paragraph 8 {E/6/3}, you make the point that there was value for pharmacies in stocking a UK product, domestic product instead of a foreign parallel import?

A. Yes.

Q. It was often possible to charge a premium for that reason?

A. Yes.

Q. You also make the point that if patients do not get dispensed a familiar medicine, a domestic medicine, with English packaging and the tablet shapes, there could be questions and complaints from them to the pharmacists which the pharmacists then have to spend time dealing with?

A. Yes. If you think about pharmacies, their business is patients coming in filling prescriptions, so you want that repeat footfall, as it is called. So yes, there is a benefit of making that pharmacy the one that the patient -- especially with a medication like Seroxat, chronic medication, they will be coming back month after month.

THE PRESIDENT: Repeat, yes.

MR. TURNER: Could you perhaps explain from your experience the basis on which you say that this was a significant problem for pharmacies. I understand it as a matter of principle, but is your experience that this was actually a significant factor for pharmacists?

A. I would say yes, because if you are having to spend time in a busy pharmacy explaining to a patient why their paroxetine looks different to how it looked last month, it is time when you are not serving other customers and generating income.

Also, when the PIs started coming over, they had -- it was a blister pack, so -- and if it came from France, it would be French ... you know. So they would stick -- the importers would

stick a sticker on it with "Monday", "Tuesday", "Wednesday", but it was very difficult. It was just complicated for the patients to use a PI. So in practice there was a definite benefit for the UK pack, and also to your last point, the more UK pack they are buying, the more value they are putting through their main-line wholesaler, which might maintain their current discount level that they have got in the main-line wholesaler.

So there are a number of reasons why a UK pack is -- we were able to price it as a premium to the PI.

Q. Thank you very much. You exhibited the spreadsheet which we were talking about earlier and its title is "CMS export, 25th July 2001".

A. Yes.

Q. The date of the spreadsheet is in the middle of 2001. It shows a snapshot of the deals in place at that time.

A. Yes.

Q. So, just to understand, it does not tell us about deals that were concluded after 25th July 2001?

A. Correct.

Q. Or deals which were renegotiated after 25th July 2001?

A. Correct.

Q. Some of the deals which it does record had in fact expired before July 2001, and we have, for example, Boots, where the deals that are recorded expired on 31st March 2001.

A. Yes.

Q. In fact, a significant number of the customers who are listed in your spreadsheet do have contracts which expired before 25th July 2001?

A. So I can give a view as to why I think that is, if you like.

Q. I am sorry?

A. I can give a view as to why I think that is, if you like.

Q. Before giving a view as to why that is, do you agree with it?

A. Yes.

Q. Before you give your view, and please do, can I ask whether you were shown the relevant part of Ms. Webster's evidence about that, which for others is at {H/4/33} and for you is at tab 10 of your bundle?

A. I found it.

Q. Page 33. If you look at the top of this, at (i), she said:

" ... taking the data as given, a significant proportion of the deals (by volume) included within the ... data, including those for major customers such as Boots, ended substantially before November 2001. For example, 41% of the deals by sales value have expiry dates prior to July 2001."

Is that one of the paragraphs that you were asked to consider before coming to court?

A. I cannot remember.

Q. Yes.

A. There are an awful lot of paragraphs in here, I cannot remember.

Q. You were going to add a comment?

A. So even though I was not directly involved with the national chains, we had a team of national account managers, three of them, and if you think this was post-merger. So where you have got the large customers, suddenly you are combining the SmithKline heritage products and the GlaxoWellcome heritage products.

So for a national, it is much better when you are thinking about constructing a deal -- bear in mind these deals were not just for Seroxat, they were for any number of packs, that it was -- I seem to recall that the national accounts were taken out of our contract management system that we used in SmithKline Beecham, which is what these deals in here are, and were dealt with separately, so outwith the contract management system and therefore this export.

So that is my view as to why there are deals in here, especially for the major ones, that are no longer appearing in here, because they were negotiated outside the contract management system and the spreadsheet.

MR. TURNER: Thank you, that is a very helpful explanation.

Can we go to paragraph 18 of your first statement {E/6/7}. This is going to feed into a general question about how you and your account managers competed. There you are talking about the time after the switch to no longer using wholesalers as intermediaries for distribution to the pharmacies.

You explain the competitive reality that was faced by the sales representatives, and what they do is to adjust rebates as necessary to respond to threats by the pharmacy customers, at that point: we will increase our purchases of parallel imports. That was the competition that you were mainly facing?

A. Yes.

Q. Then if we go back to paragraph 7 {E/6/3} where you are talking more generally under a heading:

"How SB competed with Parallel Importers."

This approach, which you come back to a little bit later at paragraph 18, this is really what you were generally doing before the switch to direct to pharmacy as well.

You seek to agree these direct discounts with the pharmacies in order to compete against parallel imports in that way. It is the second part of paragraph 7 where you describe that.

A. Yes.

Q. Now, the parallel import threat was a significant factor for your Seroxat product?

A. Yes.

Q. If we go to the condensed version of the spreadsheet and we turn it up and look across even for Boots, which is just over a third of the way down the page, we see there is a column R "Brand share". Perhaps you could be absolutely clear about what that means, but we see that even Boots has a 12.5% brand share for Seroxat in the spreadsheet.

If you could perhaps explain to the Tribunal what that means, that item, and what the 12.5% in the case of Boots means?

A. Okay, so I do not know why you say "even Boots". So the brand share is the brand purchasing share. So it is absent of a deal. It is the -- they will be fulfilling their paroxetine prescriptions with either UK Seroxat or PI Seroxat, and it is nothing to do with the brand prescribing, what is on the prescription, it is to do with what we are looking for is how much they purchase. So we want to know how much of their paroxetine prescriptions they were purchasing from the UK and how much they were purchasing as PR. So that number would have been derived.

I make the point again that I was not directly involved with the national accounts, and Boots is a national account, but that would have been a figure that had been calculated based upon all of the Boots -- there is 1,400 stores -- their UK purchasing versus their PI purchasing. So 12.5% of all the paroxetine that Boots was buying, 12.5% of it would have been UK Seroxat.

THE PRESIDENT: You say you were not involved with the national accounts, but the accounts you were involved with, how do you know with that sort of precision? Do they tell you?

A. So, it depended. It very much depended, but we did have a data source called WSDS, which I think stood for wholesaler distribution services, and it was, I think -- bear in mind this was 16 years ago.

THE PRESIDENT: Sure.

A. I think it came from IMS, but I would not swear to that. But it was a data source that we were provided that showed basically what of our products pharmacy shops were buying

from their main-line wholesalers. So if you have not got a deal, therefore they are buying PI and UK, just as -- month on month, we could see actually this particular pharmacy chain, you are buying 100 packs of UK Seroxat every month, and so that is how we could sort of validate the brand share without a deal.

THE PRESIDENT: You used that intelligence or that information to deduce, work out --

A. Yes. So for someone like Boots obviously that was incredibly -- there was an awful lot of focus on that. Again, for other -- for smaller chains, one of the things you could do was go in and, you know, a pharmacy would say, "I do not buy any UK Seroxat" and you look on the shelf behind it and he has got ten packs of it. It is a real-life negotiation.

MR. MALEK: With a deal, that 12.5%, would that be 100% for Boots?

A. Yes. So if they have do not a deal and you are renegotiating the deal, then the discussion is if you were not in a deal, how much of your paroxetine would you buy in the UK? You might assume that someone like Boots will say, "Clearly, we are going to buy it all". But in reality, Boots, they have got a -- they have -- you go to Boots, you think you are going to get a good product, so there is all sorts of different drivers and motivations on each side of the negotiation.

Yes.

MR. MALEK: Yes.

MR. TURNER: So, Mr. Sellick, you said:

> "I do not know why you say 'even Boots'", actually it is because of what you have just said. One might assume that someone like Boots is going to buy it all, but --

A. So I could comment on that if you would like me to.

Q. Let me just make a question and then perhaps if you want to, you can.

It follows from what you are saying then that Boots was open to competition really from parallel imports in relation to about 87.5% of its purchases of paroxetine, because absent a deal it would be taking the 12.5% from you?

A. Yes, that makes sense.

Q. Now, you wanted to make a comment?

A. The reason you would assume Boots would buy all of our paroxetine PI, bear in mind the supply of it varied, it was not like a -- one of the beauties in the negotiation of buying a UK pack is it is always in the main-line wholesalers. Therefore, buy a UK pack, you have continuity of supply.

The PI supply was a bit dependent upon the exchange rates and availability, whether it was from Greece or France. I cannot remember the other countries. So Boots might argue that,

yes, if we do not have a deal, we will buy all of our paroxetine PI. But whether they could get hold of enough every single month in a consistent pack, for example, so they have a brand -- a consistency across all their shops -- again, this was something with the larger chains. You would assume they would play the "We are going to buy all our paroxetine as PI". In reality, you could negotiate that that would not be the case because they would not be able to.

Q. Again, that is very helpful indeed.

MR. GLYNN: Sorry, if I may. So the match price, that means that if Boots were at the moment buying 87.5% from parallel trade, but they could get it from you at £12.75?

A. So the match price is not a deal price, is not the price at which they were buying. It is an equation to come up with a match price. It is the weighted share of how much you are spending on your UK pack and how much you are spending on your PI pack.

So I can explain the equation, if you like. But the match price is effectively a floor price. So that is how much one of these chains is their weighted price that they are paying for their total paroxetine that they are buying.

MR. GLYNN: It is not what you are offering to match the parallel --

A. No, it is not. So you would say -- you would look at how much you are actually paying for a UK pack, which is your -- the list price, take off their wholesaler discount, multiply that by the brand share and then the rest of the overall demand, you multiply that by the price they are paying for the PI pack, and then you come up with a weighted price per pack.

So that is the price at which, if we were to offer Seroxat at that price, the retail pharmacy would be no better or no worse financially.

MR. GLYNN: Right. Forgive me for just repeating, but at the moment Boots -- this is mid-2001, they are buying from parallel traders at 12.03. That is the PI generic price. Is that right?

MR. TURNER: It is better if you look at the second spreadsheet.

A. I have found it.

MR. GLYNN: At the moment you have got PI price at £12.03.

A. Yes.

MR. GLYNN: The £12.75 which comes next is not an actual transaction price, but that is the price at which, if GSK were to sell Boots all their stuff, all their Seroxat, at that £12.75 --

A. No, sir. So that is 12.5% -- so if you think about the maths, it is £17.76 which is the list price, take off 10%, which is their wholesaler discount, multiply that by 12.5%. You have then got -- you have got the element then of how much they are paying for their UK pack.

Then you add to that how much they are paying for their PI, which is £12.03, multiplied by 87.5%, so you have the two elements, that comes up with the match price of £12.75.

MR. GLYNN: That is in a way what I was trying to say, that in a hypothetical situation in which you went to Boots and said, "Look, we will provide everything, the branded stuff and the generic equivalent for 12.75 for the lot", then that would leave them where they were financially.

A. I understand, yes, correct. Sorry, yes.

MR. GLYNN: Thank you very much.

MR. TURNER: I am going to touch on these in a little bit more detail so I understand it too now. One point we might pick up, however, straightaway is that on Boots we see that the match price there is £12.75. Then next to it you have in green at column U a deal price for a customer where it is a direct deal, which is a lower price there, £12.55.

A. I emphasise the point that I was not directly involved with the national accounts, but bear in mind, I come back to the point that Seroxat was one element of a larger deal. So I would imagine that it is a bit of give and take on the prices across the whole deal because they could have been buying 20, 30 separate packs of medicine from GSK.

So there is a bit of -- we might have been willing -- again, this is all supposition -- we might have been willing to give a little bit more away on the Seroxat to get more on another product.

Q. We can gather from this that the match price is not always a floor for the deal?

A. So can we not -- we can talk about Boots all you want, but I was not involved in the negotiations with Boots. I can talk about some of the regional chains, especially the ones in the east.

Q. Yes.

A. So I cannot explain because I was not involved.

Q. Let us just then make sure we understand how the spreadsheet works more generally and pick up on Mr. Glynn's observations.

At column S, that column shows the estimated prices at which your pharmacy customers could get PIs or generic versions of your medicines.

A. Yes.

Q. To understand the competitive dynamic around competition with parallel imports, which you were touching on a little bit earlier, can I ask you to look at, in your ninth tab, for everybody else {D/1/8}, some comments that were made by a High Court judge in one of the court cases back in 2001.

I do not know if you have seen this before. If you go to the first page of it, you will see it was a judgment by a judge called Mr. Justice Jacob.

A. No.

Q. You have not seen this before?

THE PRESIDENT: What tab?

MR. TURNER: This is {D/1/1}. The relevant bit is at page 8.

Here, he was commenting on others who had come in with generic versions of the medicine, and you will see five lines down --

A. Hang on, are you talking about page 7 or page 8?

Q. In the internal numbering, that is the middle of the page, it says 7.

A. Found it.

Q. If you go to the fifth line numbered on the left-hand side, he says:

"He then has to decide his selling price."

THE PRESIDENT: I think we need to start with line 3:

"Consider the position of the Norton marketing manager."

MR. TURNER: Yes:

"Consider the position of the Norton marketing manager. He buys from the patentees who, incidentally, make a turn at that moment. He then has to decide his selling price. There is no point [this is somebody who has an authorised deal with GSK] in his being higher than the price of the parallel importers. He has got to go equal to or below that price."

Pausing there.

From what you were saying earlier and the ability to charge a small premium, would that be entirely correct? No point in being higher than the price of the parallel import?

A. Bear in mind this is the first time I have seen this.

Q. Of course.

A. I can sit here have a think about it and read it, if you like.

Q. No, if you have an instant reaction to that. I think it followed from what you said earlier that for a UK product you could charge a little bit more, pausing on that question.

A. So a UK branded pack.

Q. Yes.

A. So that is where I can give -- so putting to the side authorised generic for one minute, my role at the time, it was about Seroxat PI or paroxetine PI and UK Seroxat, not about generics. So I am not sure I would like to comment, actually.

THE PRESIDENT: Forget the fact that it is a judgment. It is just a point of how the market works. The question is: if there was an authorised generic supplier but there was not a parallel importer, but authorised by GSK, but not selling branded Seroxat, selling paroxetine, and they are trying to win the business of a pharmacy as opposed to parallel importers, would they have to match the price of the parallel importers? Or does it follow from what you were saying a little earlier about the pharmacies' disinclination to buy parallel importers, they will do if the price is good, but there is what one might call an inconvenience, hassle factor?

A. I honestly think it would depend because, again, if you think you are a patient, if you think from a patient perspective, you for years have been having UK Seroxat in its pack. I seem to recall there was a patient information line in there so people could phone up and get advice and things like that, and that was not part of the generic paroxetine pack or the PI. I think it would depend.

THE PRESIDENT: One can see why the pharmacy might prefer the branded to either, but as between the generic and parallel import, would there still be a benefit to the pharmacy in having a UK generic as opposed to an over-stickered foreign pack, or do you think it is not very important?

A. I think it depends on so many other factors, because -- bear in mind, again, in a pharmacy, Seroxat or paroxetine is one box out of hundreds on the shelves, and they are buying these boxes, these medicines, from various suppliers -- there will be short-line wholesalers, main-line wholesalers, PI importers. So a pharmacy might be thinking, "Actually, do you know what, no, I want to continue to buy the PI because it adds to my overall value that I am putting through my PI importers". So they could be buying other PI products. Or they might want to buy from their generic supplier and increase their value to the generic supplier because, again, it might either maintain or give them an increased discount. So it is very difficult for me to say definitively what would happen because it depends.

THE PRESIDENT: They would never think of Seroxat in isolation.

A. Exactly. It is one box out of hundreds and hundreds that they are having to buy. So it is about the convenience, when they are trying to find out, on the phone to their short-line wholesaler, or whatever, they are not spending time checking prescriptions that are going out. It is all a --

THE PRESIDENT: Yes.

MR. GLYNN: Would they assume that a generic supply from GSK was more reliable than a parallel imported supply?

A. Possibly.

MR. TURNER: Final question along this line, Mr. Sellick. If you focus only on the question of patient preference, does it follow from what you were saying earlier that the domestic packaging with the advantages you talked about earlier might lead to an advantage for the generic in being able to price, all other things being equal, at a slightly higher price?

A. Possibly. The thing is as well, the thing to remember is the PI price constantly changed. If you had a list price from, I do not know, maybe Norton or whoever, it is likely to be at that price. But a PI -- A lot of the PI importing was done on sort of spot deals, so they would see what the exchange rate was, they would be able to get 10,000 packs from France, or whatever, and the importer would go and buy it. They then have a medicine they are going to try to sell. So, again, the price could vary quite a lot.

Q. If we read on a little bit further in this document you have got in front of you, take it from line 8:

> "Should he go [this is the generic, the authorised generic] equal to, or below, or much below? The answer, to my mind, is self-evident. He is to go close to/equal to. He has no other competitor to worry about, other than the patentee whose price is higher anyway. All he has to do is just to beat parallel importers who themselves cannot go any lower because they cannot buy the product any cheaper on the continent. There is no incentive to take the price down and down."

Pausing there.

You were making comments earlier about how the parallel import price varied from time to time depending on various factors, and I agree with that. But in line with this, is it not right that the parallel importers do not tend to react to you striking a particular deal price for a particular customer by further cutting their prices to those customers, so that you are then faced with having to address that as well?

A. Sorry, could you repeat the question?

Q. Yes. You talked about the variations in the PI prices which can rise for different reasons?

A. Yes.

Q. But where you go into a customer and seek to agree a competitive price in the way you describe, you do not --

A. Price of what?

Q. For Seroxat. You try to get your Seroxat price bought rather than the PI, which is being offered in competition.

A. Yes.

Q. What you do not tend to observe then, and following partly this document, is that the PI price is then lowered for that customer in response, so that there is an individual process of competition for that customer's business?

A. So I see that -- so I think the pharmacist is always trying to get the best deal, the lowest acquisition price, with all the parameters around it with continuity of supply etc. So if that customer is offered a generic price, they might go to their PI supplier and say, "Well, I have been offered this, can you reduce my PI price?". But, again, some pharmacists will be bothered to do that, some will not, because they do not have the time, they will just take whatever, or they will just keep buying the UK pack.

Q. Let me approach the same thing from a slightly different direction. If you turn to that spreadsheet, we were looking at the PI price and the match price and the deal price in columns S, T and U.

Your people identify what they believe to be for Seroxat the PI price and they record it. You work out from that in the way that you have described a match price?

A. Yes.

Q. That is used to guide you in your pricing negotiations?

A. Yes.

Q. What does not happen after that is that when you make an offer to the pharmacist, based on your deal price, guided by the match price, the PI importer comes back and says, "No, I am going to offer a lower price"? It does not tend to happen?

A. I think in the reality of the commercial world, it may have happened, not tend to. Because by the time -- I think by the time we got to this stage here where people -- you have got account managers going over the country trying to do deals. They are not going to spend time entering the data into the contract management system if they do not think a deal is nearly on the cards, because it is a complete waste of time and energy.

So you are going to enter the contract -- anyone can do the maths with a calculator. You do not need a computer to do the maths. So there and then, either when you are in the buyer's shop, or whatever, or over the phone, you will have a negotiation to do the deal and then you will agree the prices and then enter in the contract management system and generate the contract, off it goes to get signed. So that whether or not a PI price -- you have already had that discussion before you get to this stage here.

Q. Yes.

THE PRESIDENT: Does the deal, when a deal is done, commit them to take all their supplies from you, or a certain proportion?

A. The contract is written in a way that you will fulfil all of your paroxetine requirements with UK Seroxat. So it was not volume, it was based on the --

THE PRESIDENT: Yes, but it is exclusive deal?

A. That is what the contract said. Whether that is actually what they did or not -- bear in mind we are then putting discounted UK pack into the market, which has a premium, and there was a certain amount of grey trading that went on.

MR. GLYNN: The parallel traders have lost a huge amount of business, have they not?

A. Exactly.

MR. GLYNN: Some of them may well have wanted to reply by --

A. Which is why in the spreadsheet -- it is not in the abbreviated one, but there is a monthly expected volume. That was based on -- so we knew -- it varies, but on average a shop would dispense about 30 boxes of 20mg paroxetine a month. We knew an average shop had about 3,800 PPA returns, which is the total number of items dispensed by a pharmacy a month. So that is what was omitted for the PPA for their reimbursement.

So we knew if you were an average shop and you were an average PPA, you are likely to be needing about 30 boxes a month. Equally, then you go up to ten shops in the chain, or whatever it is.

If you then have a ten-shop chain and it is average, they should be buying about 300. If they are buying 50, well, they might not get their rebate that month; we will go in and see, well, actually, there is still PI on the shelves. Equally, if they are suddenly buying 1,000, either there has been a terrible incidence of depression in that particular area or they are selling it on. So it is nitty, hard graft negotiation in the reality of the commercial world.

Q. So just before we entirely leave this point, if you still have open that document, which is the judgment.

A. Where was that?

Q. In your bundle at tab 9. We were 8 of the --

A. 7.

Q. Yes, 7 in the middle. As you will see, the judge there concluded that all he has to do is just to beat the parallel importers who themselves cannot go any lower because they cannot buy the product any cheaper on the continent.

So is the main qualification to that, therefore, what you have already been referring to: that sometimes there are currency fluctuations that you can buy from different foreign countries at different prices at different times, that that is a qualification that needs to be built in? But

that otherwise one would not tend to see a process of individual reaction by the parallel importers in individual cases?

A. So if I am a parallel importer and I have 10,000 boxes of PI paroxetine in my warehouse and suddenly there is another competitor come in, I am thinking, "Oh my goodness, I have all that stock there, it is taking up space, working capital, I potentially might need to get rid it". Again, there was spot prices for PIs. What was on a price list was very rarely what was ever paid anyway. These people are hardcore traders, the PI importers.

Again, I cannot give a -- I think the answer "it depends" is becoming slightly repetitive --

Q. No, that is fine.

A. -- but it is sort of the case.

Q. Let us move on from that, then, to try to stay on track.

You have no reason to think that the prices for Seroxat, for your product, remained the same in the last part of 2001, in the first part of 2002 --

THE PRESIDENT: Can I just ask, are you moving off the schedule now or are you coming back to that? The spreadsheet.

MR. TURNER: I may be coming back to that, yes, if you keep that. Unless, sir, you have a question you want to raise?

THE PRESIDENT: I have one question, which is, Mr. Sellick, we know that Seroxat came in 30mgs as well, but we do not seem to find any supplies of 30mg on this spreadsheet. Why is that?

A. For whatever reason we did not trade on 30mg.

THE PRESIDENT: We have seen overall figures in the sales of 30mg. Certainly there were some sales, maybe not as much, but this is exclusively 20mg, I think.

A. Having looked at the total spreadsheets with all the products and there is no Seroxat 30mg at all, we presumably did not trade Seroxat 30mg. Because that was the smaller -- much smaller percentage of the overall volume of paroxetine. I cannot remember. I hesitate to put a percentage on it.

THE PRESIDENT: It was smaller, it was not non-existent.

A. We did not trade on it. I was not involved in the decision as to -- the products we did trade on and the products we did not, I was not involved in the decision to determine that.

MR. TURNER: Can I offer a reason to follow the President's question to you, Mr Sellick.

There was not 30mg Seroxat here because there was not the competition from parallel imports on it, it was not offered.

A. I cannot remember.

Q. If you go to your eleventh tab, which, for others, is at {A2/18/1}, you will see this is a response given by Glaxo, by the solicitors on behalf of Glaxo, to a Competition Authority request. If you go in that to page {A2/18/7}, both the internal and the bundle number, would you look at paragraph 9.2. This is part of a question which we might come back to, which is not entirely relevant to you, about a sudden change in 30mg paroxetine packs that was observed by the Authority, that they were asking about.

You will see at paragraph 9.2 that your company said:

> "As far as GSK is aware, having made enquiries including of relevant individuals within GSK, there was no change in marketing strategy in relation to UK sales of 30mg in the relevant time period. Although GSK launched 30mg tablets in other EU markets in late 2001/early 2002 (eg the Netherlands and Belgium), GSK had supplied 30mg tablets in the UK since launch in 1990."

This rather suggests, Mr. Sellick, does it not, that there were not parallel imports coming in of the 30mg product for you to have to compete against?

A. You can draw your own conclusion. I cannot remember.

THE PRESIDENT: If there were no parallel imports coming in at all of a product, would it feature in this?

A. No.

THE PRESIDENT: Right. It is only --

A. So, again, I come back to the point I was not involved in the decision around which products we traded or not. I just led the team and had to go and implement the trading strategy. So I cannot comment on that --

THE PRESIDENT: When you say we did not trade in 30 -- you mean you did not match --

A. We did not offer any discounts over and above what people would get through their main-line wholesalers.

MR. MALEK: Was that the case even in 2002, by which time you already launched the 30mg --

A. I honestly cannot remember. It is 15 years ago, and bear in mind Seroxat again is -- when the companies merged there was 20, 30 different packs we were doing different deals on -- and it did change over time depending upon -- So if some of the generic medicines were getting so the prices in the market were so low, we might decide actually there is no point competing because we can make enough margin on the branded bit, we do not need to discount everything.

So there was a bit of a flux, change over time in what we did trade in and what we did not trade in.

MR. TURNER: Let us turn to Seroxat prices and what happened to those.

My question a few moments ago -- I will repeat -- is that: there is no reason for you to think that the prices for Seroxat remained the same after the date of this spreadsheet, in the last part of 2001 and in the first part of 2002, as they were in the period covered by your spreadsheet, which is the first part of 2001?

A. So the price would be constant. So every time the deal was done, prices were constantly going up and down, because it depends on the variables of how you are constructing the deal. But unless something major happened that would change one of the dynamics, if you think there are about four or five different things that go into calculating the match price and then umpteen different things that go into trying to get that extra margin above the match price, prices would -- the commercial reality have changed deal versus deal.

Q. But the average price for Seroxat, there is no reason to think that that would be the same after the date of your spreadsheet as it was before?

A. The prices did not change that much.

Q. Well, you have seen what Ms. Webster has said in some parts. Were you made aware that the Seroxat prices to Boots, for example, based on your company data, which appears in this case to include rebates, did come down in the second part of 2001? Do you recall that from Ms. Webster's evidence?

A. For Boots?

Q. Yes.

A. I cannot comment on Boots, I am afraid.

Q. Shall we just look at it.

A. You can look at it. I have nothing to do with it. Nothing to do with Boots.

THE PRESIDENT: Mr. Sellick will not be able to help us on it. I mean, if she has found that --

MR. TURNER: We will leave it there. Yes, I will leave that.

In your first witness statement at paragraph 10 {E/6/5} at (c) --

A. Hang on, which page?

Q. Paragraph 10 of your first statement, and (c) is at the top of page {E/6/5}.

A. Let me read the context. Yes.

Q. So you explain there that your spreadsheet does not include deals that were put in place by a telesales team?

A. Correct.

Q. But those tended to be the deals with smaller pharmacies?

A. Yes, or small pharmacy chains. I think we got to a stage where the key account managers would deal on average with chains of sort of four shops and above, and the telesales on -- either single independent pharmacies or two or three shops, but it was about the right level of resource for the right business return.

Q. Yes. So on that basis you say that the average price that all the pharmacies were paying for 20mg Seroxat, in 2001, would not have been lower than the price which we see in your spreadsheet, but it may have been higher because the smaller pharmacies had weaker bargaining strength; is that right?

A. Possibly, and also there would have been a number of pharmacies -- because I do not know how many pharmacies there were at the time, a lot -- there would have been a lot of pharmacies, single independents, and they would not have a deal at all, and they would be buying Seroxat. Because we could not get to everyone, because it either was not justified by the business return or a physical lack of resource. There were only a certain number of people to go and do the deals.

Q. The spreadsheet does not only exclude the small customers, does it, there are some other Seroxat customers that are not on your spreadsheet?

A. Possibly.

Q. When you say "possibly", do you know who those might be?

A. No.

Q. Why do you say "possibly"? Why would this not be comprehensive?

A. Because you have just said the nationals in here --

Q. So the nationals are not.

A. I can comment on what is in here, I cannot comment on what is not.

THE PRESIDENT: The nationals are in here, Boots --

A. But some of the expiry dates of the contracts were prior to 25th July, because as I say, someone like Boots was taken out of this process of recording the prices and generating contracts.

MR. TURNER: The spreadsheet does not include any hospital customers?

A. Correct.

Q. Were you aware that the prices for 20mg Seroxat to hospitals in 2002 at least were significantly lower than the average prices paid by other customers?

A. I do recall that we had purchasing agreements, contracts in place for hospitals or trusts for a number of products, and I seem to recall Seroxat 20mg was one of the products.

Q. So one would expect --

A. Bear in mind I was not involved in the hospital pricing at all during this time.
Q. But we would expect hospitals, partly for that reason you have just given, to have paid lower prices than the pharmacies in 2001 as well as 2002?
A. If they had a contract in place.
Q. Yes. Let us finally just turn to a few questions, turn back to the spreadsheet.
You have explained in your witness statement that you built this model to enable pricing to be calculated for deals; is that right? It was you who was the maker of 1this.
A. So the way it worked was there was a contract management system that was an Access database. That is where the data was fed in and that is the thing that generated the contracts, and this was an extract from that database.
In order to replicate the maths that was in the contract management system, this is just data extract plus some of the columns in here have got formulae in them that replicated the math that was done in the contract management system. So in answer to your question, this is an extract of the raw data from the contract management system that I added a few columns to, to replicate the numbers that the maths had been done in the contract management system.
Q. Thank you.
A. If you see what I mean.
Q. Yes, I do.
Really to complete the discussion that we were having earlier, the aim was to arrive at the deal price, which we see on the right-hand side of the spreadsheet?
A. Yes.
Q. There is a column for the direct customers, U, and the indirect customers that are supplied by the wholesalers in column X.
A. Yes.
Q. You are competing against what you understood to be the parallel importers' generic prices; that is column S?
A. Yes.
Q. Then Mr. Glynn asked you about the match price which you described, and you have explained how that works and you said that generally speaking, subject to the qualification we discussed earlier, it was used to assist your sales representatives in their negotiations?
A. Yes.
Q. So that generally speaking where they saw lower match prices, that should generally mean lower deal prices?

A. Depending upon how good the account manager was at negotiating a price above the match price. But the logic works.

Q. Yes. Finally, then, let us turn to the question of the accuracy of the parallel import prices --

THE PRESIDENT: Just before you leave the spreadsheet, can you help me on one thing, Mr. Sellick. The other big national chain is Lloyds. I was trying to understand -- if you look at the enlarged one -- the two entries --

A. Yes, found it.

THE PRESIDENT: Have you found Lloyds?

A. Yes.

THE PRESIDENT: You see they have got 1,296 shops, but we have got two entries.

A. Yes.

THE PRESIDENT: It is not like where we have two entries for other pharmacies where you have a deal that expires and a new one starts.

Can you assist on what the first --

A. So I -- again, notwithstanding the fact that this is not my data, but I would argue from here that a deal started -- it looked like someone was putting in a deal -- So that deal reference, column E, is basically the customer identifier, then the account manager initials, then an 09/10, which is the deal number within the number of deals that that customer might have had.

So the one that starts 1st February is the one that is column J, start date 1st February 2001. That has no shop number in it. I reckon the account manager started putting the data in, then something happened and they could not get the negotiation, and instead of -- a sensible person would have deleted it, but they left it there and started another one which was due to start 1st April.

So it looks like they started putting the data in, did not get the deal negotiated in time --

THE PRESIDENT: So one can effectively strike out the first line?

A. Yes.

THE PRESIDENT: Thank you very much.

MR. TURNER: Essentially it is probably just a glitch reflecting the way people were using this spreadsheet as a tool in their work?

A. So they were not using this spreadsheet, they were using the contract management system. This is an extract from the contract management system.

Q. Yes, thank you.

MR. MALEK: Where it says "price offered", is that the actual deal, ie that is what they have agreed, your salesperson and the --

A. So if I had -- so 16 years ago I wish I had named that column heading something slightly different, because what it actually is, if they are in a direct deal, buying direct from GSK, that is the price they would pay. If they are buying an indirect deal, we did not want to give money away because we have already discounted the product to 12.5% to the wholesaler. So then we give them the rebate, but we do not want to give too much away. So for the customer it was always better financially for them to have a direct deal just thinking about Seroxat.

But having an indirect deal meant they were putting more volumes on their main-line wholesaler, and therefore possibly getting -- again, it is just another piece of the jigsaw of coming up with the overall deal, depending upon what their motivation was.

Does that answer the question?

MR. MALEK: It does.

MR. TURNER: Final questions, then, from me. PI prices and your column, at column S, and the accuracy of those estimates there will help the sales representatives get to their competitive positions.

In your second statement, at paragraph 9 {E/8/3} -- go there if you want, but I will remind you what you said.

A. I will go there.

Q. That is paragraph 9 in your second statement.

A. Yes.

Q. You explained that the PI price there was based on factors, including intelligence from the pharmacy, including based on shop visits, sight of purchasing invoices, sight of price lists and the general awareness of current PI prices across the UK.

A. Yes.

Q. In estimating the PI price using that approach, you were aware that the pharmacies would be motivated to quote to you low PI prices to try to get the deal price down. That was what they were up to. For the match price to be a useful negotiating tool for your company, you needed to take that possibility into account when you were estimating the parallel import price and therefore getting to your match price. You had to be aware of that, presumably?

A. Yes.

Q. Then look at paragraph 10 of your second statement {E/8/4}. There you say that some of your sales representatives may have intentionally recorded PI prices lower than they were in reality.

You say, reading from the third line:

> "The reason for this is that securing a deal was typically more important to the sales representative (selling, say, 12 to 15 products) than to the pharmacy (for whom paroxetine would have been one of hundreds of medicines it was buying); and I recall that measures of sales representatives' performance included how far the deal price was above the match price and the overall sales value of all of the deals the representative had. This meant that a sales person might have agreed to use a low PI price for a benchmark in order to secure an actual deal price higher than the match price."

So you are explaining how the people in your company might have been behaving and this was because, is it, bonuses from the company would be higher? The measure of sales performance?

A. I cannot -- so the sales force incentive schemes, they tended to change every -- we worked on a trimester basis, so every four months there was a different type of incentive, which varied depending upon what the particular strategy was at the time. It might be we need more generic deals, we need more PI deals; it was about getting the price above the match price. It varied. But I seem to recall there was -- again, this is 16 years ago -- we were looking to -- and it was not just a one-off, there were a number of things. But I think there was an element, one of the incentives where there was -- one with of the elements was about that price above the match price. The margin above the match price.

MR. TURNER: So they were personally motivated to approach in that way?

A. Sometimes.

Q. Did you adopt that practice yourself?

A. No.

Q. Are you aware of any of your team doing that?

A. No, because if I was -- so this was -- if I was, (a) they would not be eligible for their incentive, but they probably would be in a bit of trouble.

Q. Would you have looked on it as a disciplinary matter?

A. Again, it depends because the pharmacies are always trying to argue the price lower. So it is not that someone is going to make up a price, but they might be willing to accept -- if you have three prices there, and actually the pharmacist is saying, "These are my PI suppliers,

this is one I use most of the time and, actually, this is the discount I get off when I order from this", even though they might not that month have ordered PI from that particular PI wholesaler, the threat is they could have done because that PI price was available in the market.

So, actually, some of the negotiation was to -- if the pharmacist felt, "I have got one over on GSK because they have accepted this price that I am showing them, they might be willing to accept a slightly higher brand share", for example, it was all a bit of a --

THE PRESIDENT: Give and take.

A. Lots of give and take, but I would -- I think that would be the most -- that was the way it worked in practice.

MR. TURNER: To return to my practice, when you said they would have been in a bit of trouble, would that have been looked on as a disciplinary matter, when you said "bit of trouble"?

A. It is an assumption, but I would have thought so. Seems reasonable.

Q. Did you take any steps to avoid that possibility, because it was the company's interest to ensure that the estimated PI price is as close to the actual PI price as you can get?

A. Exactly. So all the deals were reviewed -- generally the deals were reviewed by the managers. There was an ongoing month -- we had monthly reviews with the account managers, so you could see the deals that they were putting in place, and especially when we had a new account manager they had much more focus on the sort of numbers they were agreeing with the customers to put into the contract management system. So I think there were checks and balances in place.

Q. Because of that you are not saying that there was a systematic understatement of the PI prices recorded and used in the system?

A. No, I am not saying that at all.

MR. TURNER: Thank you. I have no further questions.

THE PRESIDENT: When you say "not systematic", are you saying it may have happened sometimes but it was not widespread?

A. No, absolutely not, absolutely not.

THE PRESIDENT: Mr. Scannell, any re-examination? Can you tell us, if there is, about how long because we have not had our break?

MR. SCANNELL: This will take less than 5 minutes.

THE PRESIDENT: I think we will finish Mr. Sellick. That seems better.

MR. SCANNELL: Thank you. Re-examination by MR. SCANNELL

MR. SCANNELL: Mr. Sellick, you were asked the question whether hospitals feature on this spreadsheet.

A. Yes.

Q. In the long or abbreviated form, and you explained they are not present.

A. Correct.

Q. You were also asked the question whether the prices that hospitals were paying for GSK's Seroxat were lower than the prices paid by pharmacies. I believe that you said that they were?

A. Now you mention it, I do not know quite why -- on what I can base that.

Q. Is it your recollection the hospitals were paying a lower price?

A. Yes, because after I moved from my retail manager role, I became the national manager for hospital accounts, which was specifically involved in leading a team and negotiating contracts with hospitals. So not from the time itself, but from the time after I knew what the Seroxat deals were, and in fact before merger I was an account manager with SmithKline Beecham -- one of my responsibilities was negotiating product-specific discounts with hospitals -- so even though I was not at that particular timeframe.

Q. Understood. What I wanted to ask you about was whether you had any recollection of the sort of volumes that hospitals were purchasing Seroxat in? Do you have any recollection of the sort of volumes of GSK Seroxat that hospitals were buying in 2001?

A. No specifics, but generally it would have been a lot, lot less, and actually it is more likely to be the 30mg. Because if you think of hospitals, you are thinking of inpatients, you are probably dealing with more severe depression. Therefore, 30mg is more likely to be the strength that is used, rather than --

Q. It might assist Mr. Sellick to look at just one paragraph of the decision which might jog your memory. Bundle {V/1/29}.

A. Help me. I do not have that.

MR. TURNER: Perhaps if that is on the screen.

MR. SCANNELL: Yes, if it is on the screen that will suffice.

What I am going to ask you to look at, please, Mr. Sellick, is note 49 at the very bottom of the page. Do you see the second sentence:

> "For example, sales to hospitals accounted for approximately 2.9% of GSK's sales by value in 2002 ..."

It is not 2001, of course, but is that the sort of volume you were talking about in 2001?

A. Yes, in my head I have sort of a 3%, 4% channel split between retail and hospital. That seems reasonable.

MR. SCANNELL: Thank you.

THE PRESIDENT: We have no questions. Thank you very much, Mr. Sellick. You are released.

A. Thank you. (The witness withdrew)

THE PRESIDENT: We will take our break, and I think perhaps we will take 10 minutes so that you can rearrange your seating, so that we can have the experts in the front row. They will have with them their reports and, indeed, all the experts' reports, they will have copies of those and the joint statements, and perhaps also the decision, but nothing else. They should be from the bundles.

MR. TURNER: I was going to ask, I was just told before coming in that Professor Shapiro had scribbled on his copy of his report. If it is not sensible, he will not use it.

THE PRESIDENT: I think it is better if we have clean copies in all cases.

So we will return about 12.05 pm when everyone is ready.

(11.55 am) (A short break)

(12.05 pm) Expert Panel Discussion

THE PRESIDENT: I think we will begin by having each of the experts sworn, please. If you would like to start with Dr. Stillman at the far left. DR. ROBERT STILLMAN (affirmed)

THE PRESIDENT: Thank you. If you sit down and, Dr. Stillman, before we go any further, do you have a bundle G or your experts' reports in bundle G?

DR. STILLMAN: I do.

THE PRESIDENT: If you turn to the second tab there, you will see a document "Consumer welfare effects", it says at the bottom:

"Prepared by Dr. Robert Stillman."

If we go in the internal pagination to page {G/2/41}, internal page 37, is that your signature?

DR. STILLMAN: It is.

THE PRESIDENT: Thank you.

Then if we go further in that bundle to tab 4, you see:

"Second report on consumer welfare and on market definition and dominance."

In that document, internal page {G/4/43}, internal 40, is that your signature again?

DR. STILLMAN: That is also my signature.

THE PRESIDENT: I think sensibly, let us deal now also at tab 7 {G/7/1}. There is a further report in response to selected points in the report of Rachel Webster. At page {G/7/32}, internal 29, is that, again, your signature?

DR. STILLMAN: It is.

THE PRESIDENT: Is there anything in those reports that you wish to correct or amend?

DR. STILLMAN: I think I did indicate in the second report that I had misdescribed a portion of Mr. Sellick's spreadsheet. Excuse me, no, I am off. It would be in the second report that I have the correction. So it does not pertain.

There is a change in the second report pertaining to something the way I described Mr. Sellick's spreadsheet.

THE PRESIDENT: Yes.

DR. STILLMAN: With respect to the first report, and I guess this applies sort of in general to all my reports, I have been working on this for quite some time, so I have taken one approach at one stage and then some new information has come in, I may have modified my approach in some respects. So I do not think there is anything I would say, you know, that I -- that there is anything in those early reports that was different from what I intended to say at that time.

THE PRESIDENT: Right, but you have --

DR. STILLMAN: But I have reflected and modified in various ways, as is clear, I hope, from the reports and from the joint expert statements.

THE PRESIDENT: In other words, any correction, modification is included in the documentation?

DR. STILLMAN: I think if you look at the totality of the reports, including the joint statement, you have an accurate assessment or representation of my views.

THE PRESIDENT: Yes. Thank you.

DR. STILLMAN: Shall I try to find the specific change?

THE PRESIDENT: No.

DR. STILLMAN: I believe it was the second report.

THE PRESIDENT: That is fine. The joint statement is in a separate bundle I, I think, at the first tab. {I/1/1} It has not actually been signed, but the references under your name in that statement, those are your comments; is that right?

DR. STILLMAN: That is correct.

THE PRESIDENT: To the best of your belief, as modified in the way you have just explained, that represents your opinions and views?

DR. STILLMAN: It does.
THE PRESIDENT: Thank you.
Could we swear Dr. Jenkins. DR. HELEN JENKINS (affirmed)
THE PRESIDENT: Thank you, I shall ask you similarly if you will take your bundle {G/3/1}:
"Expert report of Dr. Helen Jenkins."
Do you have that?
DR. JENKINS: Yes, I do.
THE PRESIDENT: At internal page 19 at the top, page 21 in the bundle, is that your signature?
DR. JENKINS: Yes, it is.
THE PRESIDENT: Then at tab 5, the second report of Dr. Helen Jenkins. Then at page 21, is that your signature?
DR. JENKINS: Yes, it is.
THE PRESIDENT: Then at bundle I, the joint statement of the experts at tab 1, what is recorded there under your name, that represents your input into the joint statement; is that right?
DR. JENKINS: It does.
THE PRESIDENT: There is a correction I saw in your second report. Is there anything else beyond that that you wish to change or correct now?
DR. JENKINS: No, there is not.
THE PRESIDENT: That represents your honest views and opinions?
DR. JENKINS: It does.
THE PRESIDENT: Thank you.
Could we swear Dr. Majumdar, please. DR. ADRIAN MAJUMDAR (affirmed)
THE PRESIDENT: Thank you. If you sit down, please, and take the bundle tab 6, Dr. Majumdar. {G/6/1}
You see there "Expert report of Dr. Adrian Majumdar". If you turn to page 41, bundle page 42, is that your signature?
DR. MAJUMDAR: Yes.
THE PRESIDENT: In the joint statement in bundle I, {I/1/1} those comments that are recorded under your name, those are your comments --
DR. MAJUMDAR: Yes.
THE PRESIDENT: Is there anything you wish to correct or amend?
DR. MAJUMDAR: No, sir.
THE PRESIDENT: Does that represent your views and opinions?
DR. MAJUMDAR: Yes, sir.

PROFESSOR CARL SHAPIRO (affirmed)

THE PRESIDENT: Do sit down, please, Professor Shapiro. Do you have before you bundle H? {H/1/1}

PROFESSOR SHAPIRO: Yes, I do.

THE PRESIDENT: You see first the expert report of Professor Carl Shapiro, 27th July 2016. Do you have that document?

PROFESSOR SHAPIRO: I do.

THE PRESIDENT: At page 39 of the internal pagination, page 42 in the bundle, is that your signature?

PROFESSOR SHAPIRO: Yes, sir.

THE PRESIDENT: Then on in that bundle at tab 3, second report of Professor Shapiro of 23rd November 2016. Do you have that?

PROFESSOR SHAPIRO: Yes.

THE PRESIDENT: In that document, internal page 11, bundle page 12, is that your signature?

PROFESSOR SHAPIRO: Yes, sir.

THE PRESIDENT: Then in bundle I, the joint statement, the comments recorded against your name, are those your comments in that statement?

PROFESSOR SHAPIRO: Yes, they are.

THE PRESIDENT: Is there anything you wish to amend or correct?

PROFESSOR SHAPIRO: No.

THE PRESIDENT: Do those reports and those observations represent your views?

PROFESSOR SHAPIRO: They do.

THE PRESIDENT: Thank you all very much.

Thank you all of you for your reports, which we have read and done our best to digest, and thank you for your joint statement, which we found very clear and helpful. We appreciate the effort that has gone into producing that from each of you.

You will know that you are here to give your expert opinion as economists and you have all read the guide to the giving of expert opinion in English courts in Practice Direction 35. So although you are each of you retained by a party in this appeal, you are independent experts, and we are looking to you all today and later on this week to assist us by constructive discussion of some of the issues that we have to grapple with as a Tribunal and not to engage in advocacy for your client, and I trust you will appreciate that.

We realise, of course, Professor Shapiro, you were involved in assisting the CMA after the initial statement of objections, I think, and in some of the work that went into their decision,

and we appreciate, Dr. Jenkins and Dr. Stillman, you were involved in assisting respectively Merck and GSK in their response to the statements of objections and in the CMA procedure. But we have moved to a different stage now, a judicial procedure, and so we would ask you please to bear in mind your independence from those who retain you.

The process that we will follow is we will identify the questions that we would like you to respond to or discuss. We will address a question initially to one of you, and then invite others to comment. If you wish to speak at any stage, please indicate appropriately, raise a pencil or your finger, or whatever. But please do not speak across each other or to each other. Not only does that disrupt any orderly discussion, but, as you know, we are having a transcript and it becomes a nightmare for the transcribers if that starts to happen. You will all have a chance to have your say, so do not worry.

At various stages after we have completed a topic we will allow counsel to ask any supplementary questions of the expert retained by the other side; that is to say the appellant's counsel can ask supplementary questions of Professor Shapiro and Mr. Turner can ask supplementary questions of Dr. Stillman, Dr. Jenkins or Dr. Majumdar.

We will use your joint statement as a basis. As I said, it is very helpful. We may have some further questions. We will use the internal numbering. It is always a recipe for confusion; we have stamp numbering and internal numbering and they are never the same, so we will stick to the internal numbering.

We want to talk today about the conceptual issues that you have helpfully gathered in point 1. We are not sitting, as you know, tomorrow and we will deal with point 2 and the issues under that on Thursday. If we do not finish point 1 today, we can continue into Thursday.

We are particularly keen to talk about what has been called the pay for delay inference, and to look at it both conceptually, sort of divorced from the facts of this case, as to whether it is valid and what are its limitations, and then separately, to move on and say, well, is there anything about this case and the facts here that suggests that it should not apply and what do you think are any key facts that we need to establish as a fact-finding part of our role in order to determine to what extent it should apply, if at all?

So that will be the main part of what we want to focus on, but we think that initially we should spend just a little time, but not too much time because we do not think it is the main concern that we have, on what you have put under point 1, subparagraph 1, which is the question of the different levels, the effect on the different levels on the supply chain, NHS, pharmacies, wholesalers.

I will ask Mr. Glynn if he would like to direct the question on that.

MR. GLYNN: Yes, thank you.

The reason we would like, I think, to be relatively brief on this question is that it seems we are all agreed that the economic effects should be looked at in terms ultimately of consumer welfare. It also seems fairly clear that you all agree that apart from the NHS, the intermediaries in the supply chain are all involved in the competitive process.

So on that level, we seem agreed. It also seems fairly clear, as Dr. Majumdar has pointed out, that the competitive effects that we will be interested in include not only price, but also changes in suppliers, in volumes supplied and in quality as well.

Dr. Stillman, you have emphasised in your papers the importance of focusing on the NHS, but I understand that you also agree that effects on the supply chain can and perhaps should be taken into account as well. Is there anything you would like to say to underline the importance of not focusing on anything other than the NHS, or can we take it as broadly in line what I have said?

DR. STILLMAN: I would like to respond a little bit.

I think that this is a case in which, given the nature of the regulatory system, which is the real system that existed, in order to assess the effect of these agreements on consumer welfare, when I think of consumers I think of the final consumers, and I think of patients and the NHS, then really the focus should be on the effects of the agreements on the NHS and on patients.

THE PRESIDENT: Could you pause a moment. Sorry, can we have the live transcript on the --

(Pause)

Sorry, Dr. Stillman.

DR. STILLMAN: My focus on the case is, I assume, very clear from my papers on the impact of these agreements on the NHS, which I think is important given the special regulatory circumstances which existed in this market. If I go beyond that and think about the effects on intermediaries, which in this case would be the pharmacists and the wholesalers, as I have said, I think my first inclination is if we are moving away from final consumers and thinking about intermediaries, then it seems to me that we are really moving towards a standard that is away from consumer welfare and more towards total welfare.

If we are thinking about the impact of these agreements on total welfare, not just the consumers but the effect on all the players in the chain, then I do not know why we single out the pharmacies, why we do not consider the wholesalers, why we do not consider the suppliers as well as the final consumers.

So I go from consumer welfare to focus on NHS to the alternative of total welfare, which would be focusing on everybody in the entire vertical stack.

I know that the CMA in all of its analysis has focused on the impact on the input prices paid by the pharmacist; not really the pharmacist's welfare, the pharmacist's profits, but rather on the prices paid by the pharmacist for paroxetine.

So I have said, well, if you want to focus on that, and it is kind of foreign to me because I think of consumer welfare and total welfare, but if you want to focus on the prices paid by one particular type of intermediaries, I will engage on that and I will try to analyse and work with you on trying to analyse the effect of the agreements, and the supply agreements in particular, on those prices.

MR. GLYNN: If the underlying thought was that if you could find an effect on prices at some important stage in the supply chain, then sooner or later in one way or another, and to one extent or another, it would feed through into the final consumer, that would be a reasonable view, would it?

DR. STILLMAN: That is the typical view and an entirely reasonable view, and I think the view that economists routinely take when looking at the merger of upstream firms and how it might affect certain intermediaries.

There is an assumption in that that the pass-through is full enough and complete enough that it will work its way through to final consumers in the end. What I am saying, and I think I have said fairly clearly in my papers, is that is not in this case. Because of the nature of the way the regulatory operation worked, you had the possibility of effects at a pharmacy level being different from the effects on the people that I think competition law normally cares about, the final consumer.

MR. GLYNN: The effects might be different, but we would not be unhappy with the thought that if there are significant effects at an important stage in the supply chain, they are quite likely to have significant effects on the final consumer.

DR. STILLMAN: In a general case I would not be unhappy with that, but I am unhappy with that in this case.

MR. GLYNN: But on a conceptual general case level you would be happy with that.

Could I ask Professor Shapiro for a brief comment on what has been said so far?

PROFESSOR SHAPIRO: Thank you.

I think there is a fundamental difference in starting point. I am really focusing first on the competitive process, and I see what we have come to do as anti-trust economists for a number of decades now is we use consumer welfare as a guide in thinking about the

competitive process, because competition normally benefits consumers all the way down the chain to final consumers.

I would say you focus where the locus of competition is, to understand the competitive process. Here, that is occurring at the pharmacy level. The competition at issue in the case is between ultimately GSK and generics, in particular the possibility of independent generics. That competition we would see at the pharmacy level and we do see it eventually in this market and others, at significantly lower prices there.

So that is the place to look to see whether the competitive process has been disrupted, and that is the most natural and easiest and best place to look empirically to detect the effects on that customer.

I agree with Dr. Stillman that in this case the normal pass-through to the final consumers, say the NHS, is disrupted by the regulatory scheme, at least temporarily, through imperfections of that scheme. But I would continue to say that the focus should be, and mine has been, on the locus of competition which is at the pharmacy level.

MR. GLYNN: Dr. Jenkins, would you broadly agree with what Professor Shapiro 1has just said.

DR. JENKINS: This is not one of the topics I have spent a lot of time on in my reports. My view is I agree with the statement as you set it out initially, about the importance -- that one can look at all the elements of the value chain.

I think my understanding of the way the NHS reimbursement works is there are important features of that as products become genericised that deliver benefits to the NHS and consumers by changing the way in which that is reimbursed, and hence it is important to consider the impact on the NHS in this case as well as other aspects of the value chain.

MR. GLYNN: Dr. Majumdar?

DR. MAJUMDAR: Sir, my comment is that I have focused in my report on the impact on direct customers. The direct customers in this case are wholesalers, because they purchased from the -- by and large, the entrants sold to wholesalers. That is a very important level of the supply chain. Direct customers are also pharmacies because GSK from January 2002 sold direct to pharmacies. It is important to emphasise that the direct customers are both wholesalers and pharmacies, not just pharmacies.

THE PRESIDENT: Are you, just so I am clear, effectively agreeing with, or not dissenting from, what Professor Shapiro is saying with the important qualification that, yes, one looks at the direct customers, but there are another important set of direct customers, namely wholesalers who have to be considered as well?

DR. MAJUMDAR: Yes, sir. The approach I have taken is, as you say, to focus on direct customers noting, as you say, that wholesalers are direct customers as well as pharmacies.

MR. GLYNN: I think if you are content, I would like to move on from this at this point. We have understood the emphasis on the NHS, the final consumer is terribly important, but I think there is a broad agreement that we should be focusing on the competitive process, unless we have really solid reasons when we come to the factual things to think that the competitive process may not deliver consumer benefits --

DR. STILLMAN: I guess I would just like to pick up that last point because, you know, with respect to Professor Shapiro's suggestion that the primary focus should be the competitive process and that consumer welfare is sort of a guide, that is not the way I recognise the way competition economics and anti-trust economics has operated. The focus has been on whether agreements -- what do they do for consumer welfare and so when I think about separately trying to analyse the impact of competitive process, I do not really, as an economist, know quite what to make of that because I care about how the process is working for the consumers. So I get back to final consumers.

MR. GLYNN: Thank you. Mr president, could I move on to --

THE PRESIDENT: Yes.

MR. GLYNN: I would like now, if you would please --

THE PRESIDENT: Just one moment. Professor Shapiro did you want to come back?

PROFESSOR SHAPIRO: Thank you. I think that in most cases where you would have a regulatory scheme, so that the higher price to the intermediary, the pharmacy here, is not passed through immediately because of regulatory scheme. In this case, and in other cases I have seen, that is a temporary phenomenon and that is quite apart from the competitive process and I think Dr. Stillman and I just disagree on this. I think we have got direct harm here, if one finds direct harm to the pharmacies, then that tells me the competitive process has been damaged and this other thing that is going on further downstream is unintended, temporary and should not be part of the analysis in my view.

MR. GLYNN: Thank you. If I could ask you now, if I may President --

THE PRESIDENT: Yes, I think that has clarified the point of distinction sufficiently.

MR. GLYNN: If you could look at page {I/1/8} on the joint statement.

THE PRESIDENT: We think there is a clear difference that has been clarified between particularly Dr. Stillman and Professor Shapiro on this narrow point. We are going to move on. We do not feel any need for further questioning on it. Does any counsel want to ask on this point that we have covered, which is the point 1.1? (Pause). Yes Mr. Turner?

MR. TURNER: Sir, I have one or two questions but it may be the Tribunal will not welcome extensive questioning. I could perhaps put one or two.

THE PRESIDENT: We will not welcome extensive questioning, you are right in your assumption, but if you have one question you want to ask Dr. Stillman, we are not going to -- I do not think it would be right to stop you. (Pause). Questions by MR. TURNER

MR. TURNER: Dr. Stillman, you have explained that unless you consider the expected effects of the supply agreements on the NHS, you have to use the total welfare standard and you have also explained that the total welfare standard means also looking at the expected effects on the suppliers?

DR. STILLMAN: Yes, that is correct. In other words, if you are moving away from the consumer welfare, as it seems to me that one is when one starts to talk about the effects on the intermediaries, then logically the way I think about it, you are looking at total welfare, you are looking at the whole stack, which would include the suppliers as well.

MR. TURNER: I wanted to tease out one implication to fully understand it. If the effects of these agreements here was that it made GSK and the generics/suppliers better off than they would have been in the absence of these agreements, but assume that it made all of the customers on the other side, direct and indirect, worse off, but to the same extent, from your total welfare perspective, does that mean that this is neutral?

DR. STILLMAN: That would be the implication of the total welfare standard. I am suggesting we should be using the consumer welfare standard but the -- if you have a situation where the gains to the settling parties are greater actually than avoided litigation cost, then -- and you have no impact on sort of the volume of paroxetine that has been used over time, so you have basically other than the savings in litigation costs, you have the pie being basically fixed, then a benefit to a settling parties is matched by loss to the rest of the chain, although not necessarily to every level in the chain because that depends on the operation of the regulatory system.

MR. TURNER: So that is where it is matched. Under this standard, suppliers could also use their own increases in profits, generally, to justify harm being done to consumers, that is a problem with the total welfare standard?

DR. STILLMAN: It is not a standard I am recommending.

MR. TURNER: No. To follow through one second question, you saw in Professor Shapiro's report that he gave an example of collusion among suppliers of batteries for mobile phones, do you remember that?

DR. STILLMAN: I do.

MR. TURNER: He said, what if the mobile phone manufacturers have multi-year agreements with their customers so that during the cartel period the manufacturers cannot pass through the high battery prices to their own customers?

DR. STILLMAN: I did see it, I thought it was inapposite because in this case we have not the -- not the NHS having no effect, but the NHS being made better off by the agreements, but I did notice the example in the joint statement.

MR. TURNER: On your approach, if you take Professor Shapiro's example, would that imply that the cartel is not anti-competitive and is not of concern because the final consumer does not feel an impact during the cartel period?

DR. STILLMAN: No because I would still use a consumer welfare standard in that setting. I would agree that one should be recognising that the fixed contracts were a temporary phenomenon and that over time we would expect the prices to go up to the final consumers and the consumers would be worse off.

MR. TURNER: Sorry, I am not going to prolong these questions.

THE PRESIDENT: Professor Shapiro, do you want to comment on the batteries?

PROFESSOR SHAPIRO: A very brief comment. There would be another standard, what I would call the consumer welfare standard could look at the benefit, the welfare of all the customers together and not include the profits of the parties to the horizontal agreement. Dr. Stillman has given us two standards. This would be a third, that I would consider perfectly reasonable, consumer welfare standard in general.

THE PRESIDENT: So not just end consumers but all customers?

PROFESSOR SHAPIRO: Yes, if you were going to look down at indirect customers, you might look starting below the level at which the agreement occurred and adding up all the customers but not the suppliers or the parties.

I am not suggesting that here particularly, I just thought if you are talking about different standards it might be helpful for me to point out that would be another thing to consider.

THE PRESIDENT: Yes, thank you.

MR. GLYNN: Could you please looking at internal page 8 {I/1/10} of the joint statement and this is question 2(a) where the question is, to what extent is Dr. Stillman's annex 4 relevant to the economic assessment of the settlement agreements?

There is a brief discussion only in the paper here but Dr. Stillman, as I understand it, in annex 4 you are arguing that consumer surplus was likely to be greater if you have a royalty operating over a longer period rather than early entry and full competition, profits being the same. If a price regulator had set profits the same, then you could have a greater benefit to

consumers under the royalty type agreement or the price control over a longer period agreement than the short and sharp end to the patent?

DR. STILLMAN: Yes, that is correct.

MR. GLYNN: If I could just put the second part of the question to you. The other important point you have in that annex is that, if the first point is true, your second point is that you may only be able to achieve the consumer benefit from the longer royalty type arrangement if you have a value payment, is that also correct?

DR. STILLMAN: Yes, both parts are correct. It is the annex 4 -- I would like to explain --

MR. GLYNN: We --

DR. STILLMAN: You will ask me follow up questions, but I want to put that into context, those two propositions are correct.

MR. GLYNN: My question is do you still regard those as important for us to understand in this case?

DR. STILLMAN: Less so than when I wrote it.

MR. GLYNN: So you are happy for us to ignore that point?

DR. STILLMAN: No. I do believe that here is a situation where Professor Shapiro and I have, I think, converged and that is that, the general point that I was making in annex 4 was that one cannot look simply at the existence of a value transfer and conclude from that alone that the settlement in question was likely to reduce expected consumer welfare, where in all of this analysis I have been accepting the framework of treating basically the pharmacies as the consumers.

So the way I showed that in annex 4 was through one type of settlement agreement, of the type you just described, and I demonstrated that here is a class of settlements that produces better welfare for consumers, actually increased total welfare, but required a value transfer settlement.

But what Professor Shapiro has done has come back and said, actually, if you consider a different type of settlement, one with fixed -- rather than a royalty rate, assumed there had been fixed volumes given to the supplier, you can still get a settlement that is better for consumers than an early entry agreement, but you no longer need the payment. To get that second type of settlement, you do not need the value transfer from the originator to the generic.

My view is I was simply trying to establish that one -- that value transfer by itself is not sufficient to establish that a settlement would reduce expected consumer welfare relative to this alternative type of settlement. That remains my view. However, since we seem to have

come to the agreement among the experts and I think with the CMA as well that the CMA's case is not simply based on the existence of a value transfer, but also based on an analysis of the supply agreements, the further analysis piece that has been referred to, then I think we are where I am happy for us to be, namely, that you cannot look at just value transfer -- even if you are treating pharmacies as consumers and looking at the expected welfare of the pharmacies, you cannot go simply from the fact of a value transfer above avoided litigation cost to a conclusion that the settlements are going to reduced expected consumer welfare. One needs to do more. One needs to consider the effects of the supply agreements and I am on board with that.

MR. GLYNN: It is clearly an extremely important point that we will come to very quickly. Professor Shapiro, could you comment?

PROFESSOR SHAPIRO: Thank you. We tried to avoid having a discussion of annex 4 here today but I think we failed. I would make several points and not belabour it I hope. I think the model that Dr. Stillman makes in annex 4 does not match the facts of this case, does not fit this case --

MR. GLYNN: Forgive me for interrupting, we are trying, as the President has said, in this session of this case to concentrate on theory and general principles and not be looking into the facts of the case too much. But as a general proposition, you are happy with the idea that you can have consumer benefit from an arrangement which is other than immediate or rapid entry or end of the patent, if I can put it like that?

PROFESSOR SHAPIRO: In general, if you want to talk about level, there are a myriad of ways of types of business arrangements, including settlements of patent litigation, that people could settle their patent dispute and it is very hard to say in general what the effects of those will be.

You could just agree on a royalty, that would be fine. When you start to talk about the value transfer element, that is the red flag, if you will. That is the key element. What my view is, and I have said this in my published work and in my reports, if it is not cash, you need to look to understand what is going on, the way it is operating in context.

So, one question to look at, is it economically equivalent to a cash transfer? Then the analysis is quite I say truncated or simple, if it is not then you need to look further.

THE PRESIDENT: We are just deciding at what point to break because it is almost 1 o'clock.

MR. GLYNN: What I would like to suggest, if it is agreeable, is that we regard the discussion specifically on annex 4 as having been sufficiently covered by the exchange that we have

had because we can then I think move after lunch into the other questions which seem more fundamental.

We will just thank you for your comments thus far.

THE PRESIDENT: We will resume at 2 o'clock. As I expect you know, you are not permitted now you have started giving evidence to discuss the case or your evidence with anyone else. You can have lunch with your solicitors who instructed you or indeed with each other, but you must not talk about the case. 2 o'clock.

(1.00 pm) (The short adjournment)

(2.00 pm)

THE PRESIDENT: We want to move on to talk about the pay for delay inference, first, as I indicated this morning, at the conceptual level and then subsequently to think about the circumstances of this case and the settlement agreements that we have here, and so on.

We appreciate, Dr. Majumdar, that you have not addressed this directly in your report, but you are here and we would welcome any observations you wish to make and any views you can express on what the other experts said.

DR. MAJUMDAR: Thank you, sir.

THE PRESIDENT: Can I just start with some basic points to see if we have understood this.

To understand this conceptual framework, there is reference a lot to a payment in excess of the patent holder's avoided litigation costs, and as you will know, here the successful party in civil litigation will recover a proportion of their costs, not all their costs. So by avoided litigation costs, we understand that that part of the patent holder's cost, it would not recover if it were successful; is that right? Professor Shapiro, you used the expression particularly, is that what you effectively mean?

PROFESSOR SHAPIRO: I mean not exactly what you said. I would say taking the patent holder's perspective, what expected costs would they incur simply from pursuing a litigation, a litigation cost, which would be certain level of costs if they won, another level of costs if they lost, and then you would weight those in principle by the probabilities of winning or losing, not that we can observe those. But that would be the concept.

THE PRESIDENT: Would there be some allowance for some notional cost of management time and effort that would be devoted to pursuing the litigation?

PROFESSOR SHAPIRO: Yes, I think it would be reasonable to include costs other than out of profit costs.

THE PRESIDENT: That is something that one will not have a precise figure for, not only ex post, but given anyone entering into a settlement agreement, that will be a range of possible costs and one would take that sort of broad range as the concept. Is that my understanding?

PROFESSOR SHAPIRO: I would say a reasonable accounting for accommodation that there is some -- different words would be used -- business costs, disruption costs, management time, a reasonable factoring of that in that could in principle be something that a company would pay to simple avoid that.

THE PRESIDENT: Yes. Then when one talks about a payment in excess of that figure, whatever it is, that estimated figure and the value transfer, a value transfer could be payment in cash or it could be some other kind of transfer equivalent to cash. Is that what you mean by a value transfer?

PROFESSOR SHAPIRO: Those --

THE PRESIDENT: It could be structured in different ways, but that is what it amounts to, is that the concept?

PROFESSOR SHAPIRO: Well, cash is the most sort of obvious or most straightforward form of value transfer, or something equivalent to cash. There are other modes of value transfer that could get more complicated. That is not what I think we need to do here, but in principle there would be other ways of transferring value in addition to cash or cash equivalence.

THE PRESIDENT: Yes. This is just really to understand the terms. Does anyone else want to comment on that?

MR. GLYNN: Could I just follow up on that? Is there a difference between the payment in excess of the patent holder's avoided litigation cost as defined and the term "value transfer"? Do they mean the same thing?

PROFESSOR SHAPIRO: I would say the value transfer would be the gross amount that the patent holder gives up, and then we compare that to the avoided litigation cost to see if there is an unexplained portion.

MR. GLYNN: Just in terms of the terminology, if we think about a payment in excess of those litigation costs and we think of a value transfer, that is the same thing? The same sum?

PROFESSOR SHAPIRO: No, not quite. I would say, suppose the value transfer was £1 million and the avoided litigation costs were £100,000. Then I would say the excess that is unexplained is £900,000.

MR. GLYNN: Okay. That is very clear.

THE PRESIDENT: That is the value transfer, the 900 --

MR. GLYNN: Is the net of the two.

PROFESSOR SHAPIRO: I am sorry, the £1 million is the value transfer.

THE PRESIDENT: Yes.

PROFESSOR SHAPIRO: 100,000 of it can be justified or potentially explained based on avoided litigation costs. The remaining 900,000 remains unexplained.

THE PRESIDENT: We understand. The next thing I want you to clarify is anti-competitive outcome, and we appreciate from the discussion before lunch that Dr. Stillman sees an anti-competitive outcome in terms of harm to consumer welfare, and others may see it, particularly Professor Shapiro sees it, in terms of harm to the competitive process.

But parking that difference, just anti-competitive outcome, in either of those senses, from a patent settlement would be one that reduces or harms competition or consumer welfare, if you like, over the period during which the settlement applies, compared to the situation which would have obtained over that period in the absence of the settlement. That would be the counterfactual against which one is assessing it. Not relative to the situation that existed before the settlement; is that right?

Professor Shapiro, is that how you would look at it?

PROFESSOR SHAPIRO: Yes, that is correct.

Two comments on that. First, we then would need to discuss, in terms of effects, what that counterfactual might be. But that would be the comparison. The second, just to emphasise how important this is, in most cases, maybe inevitably, the status quo is the absence of generic competition, and so that is not the comparison point because the whole notion we are exploring is whether additional competition may arise if not for the agreement.

THE PRESIDENT: Yes. Again, conceptually, Dr. Jenkins, would you agree it is by that counterfactual that one should ask the question: is there an anti-competitive outcome?

DR. JENKINS: Yes. I think the way you phrased the question, which was against the period over which the settlement applies or potentially affects, because it may have impact beyond the point at which it applies, but the principle which says we are forward-looking and we are looking at a counterfactual for the future period and thinking what would happen with or without the value transfer, then I agree.

THE PRESIDENT: Yes.

Dr. Stillman?

DR. STILLMAN: I agree with your phrasing of it as a good description of basically the pay for delay inference framework.

I guess I would make one point, and that is -- and I will not mention the NHS in this discussion, we will take that as read, and I will focus on basically consumer welfare as being equivalent to pharmacies for this discussion.

This comparison of the outcomes that you have with the settlement, relative to what you would have if you had no settlement, typically, in the literature, its focus is exclusively on the market in question and where the settlement is taking place and the consumers in that market.

When one thinks about competition policy towards settlements, I think it is fair for a competition authority to be considering potential broader impacts on incentives to settle in other cases, (inaudible) innovation incentives, of generics and of originators. So the discussion we are having on this pay for delay is not unimportant, but in a constrained environment.

THE PRESIDENT: Dr. Majumdar?

DR. MAJUMDAR: So I agree with your description of the counterfactual. I would just highlight that when we are talking about prevailing conditions, that still will be in my opinion an important benchmark. It is not the counterfactual, but it is an interesting question to ask: do we expect or has competition gone up relative to that benchmark? That will be an important question to ask when assessing and when thinking about the issue in hand.

THE PRESIDENT: Yes.

MR. GLYNN: I would just like, if I might, this term "benchmark" is quite often used to mean the same as counterfactual. I would like it to be clear that we are distinguishing the two, that you are in agreement with us and the other speakers so far that the relevant comparison is with the counterfactual and not with the status quo per se.

DR. MAJUMDAR: Yes, sir. What I am saying is in terms of the counterfactual, I agree we look at the expected outcome if there were not the supply agreements. But what I am saying is to get to that -- in answering that question I consider it helpful to think about whether the agreements in question increased competition relative to prevailing conditions.

THE PRESIDENT: I then want to think about possible anti-competitive outcomes. One could be -- and, again, thinking generally, not about this case -- if a patent which the court would find invalid was effectively extended for its full period, could be by collusion between patent holder and potential entrants or because potential entrants did not, for some reason, mount effective challenges, that could be an anti-competitive outcome. Would that be right?

PROFESSOR SHAPIRO: You are looking at me so I will -- thank you.

Absolutely. If the patent is improperly granted and would be invalidated, then we have every reason to believe in many markets, and certainly in these pharmaceutical markets, that there would be substantial benefits to consumers. Losing that would be highly anti-competitive.

THE PRESIDENT: Does anyone dissent from that general point?

DR. STILLMAN: No.

THE PRESIDENT: Would it be another anti-competitive outcome if there was a valid patent, in other words a patent that had been properly granted, and it was rendered ineffective because there was entry onto the market that was agreed or paid for? Would that be, Professor Shapiro, also an anti-competitive outcome given the purpose of valid patents?

PROFESSOR SHAPIRO: No, I do not believe so. The patent holder in general has the right to license or to otherwise enter into arrangements that would facilitate some other use of the patent. So I do not see why such an agreement would be anti-competitive.

THE PRESIDENT: Does anyone else want to comment? Dr. Jenkins?

DR. JENKINS: It was unclear from your question whether there was any form of compulsion in the entry. You said it was paid for. That is on the assumption that the originator is willingly entering into that agreement, then I would agree with Professor Shapiro. If there is any sense of compulsion or the fact that they are not given the choice to preserve their patent rights in the standard way that they would prefer to, if that patent is valid, then I would agree with you that there may be some anti-competitive harm from that, from the fact that that may affect the incentives to innovate in that broader context.

MR. GLYNN: Could I make a follow-up version of this question.

Supposing that the entry was illegitimate in some sense, that it was improper entry, so that the patent which, on the assumption of this question, was valid was rendered ineffective by improper, illegitimate entry. Would you all agree that that is equally to be described as an anti-competitive development? Dr. Jenkins first.

DR. JENKINS: I think I would describe that as harming the dynamics of innovation competition. So the purpose of the patent is to ensure that firms are rewarded for the investment that they make in innovation, which is a risky and difficult activity. To that extent it is harmful to consumer welfare to have a system whereby you allow patents that are indeed valid to be harmed by inappropriate entry by a generic. So it would be harmful to consumer welfare.

MR. GLYNN: And to the process of competition?

DR. JENKINS: And to the process of competition in the innovation market.

MR. GLYNN: In a different way entirely, but either of those two undesirable situations should equally be thought of as anti-competitive.

DR. JENKINS: Precisely, the word "undesirable" would be how I would describe it.

PROFESSOR SHAPIRO: I would take issue somewhat with that, or have a different way of describing it.

So I would say if -- and your hypothetical is a little bit incomplete from my point of view, that is -- let me fill it out. Maybe this is what you meant. A generic company comes in, they infringe a valid patent and, for reasons unexplained, they are able to get away with it without suffering damages or injunctions.

MR. GLYNN: Yes.

PROFESSOR SHAPIRO: Okay. I would view that as a failing or a weakness, whatever word you want to use, of the patent system. Something has gone wrong with the patent enforcement system as intended to operate to protect that patent holder.

I would not view that as an anti-competitive outcome. Companies are naturally always trying to compete by inventing around patents, by challenging patents. That is the competitive process. The patent system is designed to establish rights that the patent holder can stop certain a type of competition in order to protect innovation. If that patent system fails, that is not an anti-competitive outcome, as I would use the words. It is still an undesirable outcome, but I would not call it a failure of competition. I would call it a failure of the patent system.

THE PRESIDENT: Anyone want to comment?

DR. STILLMAN: Eyes are looking at me so maybe I should speak up.

It is an interesting hypothetical. I was thinking along the lines actually that Professor Shapiro was thinking about it. It is an unusual hypothetical. It is basically, as Professor Shapiro suggested, a scenario where a generic comes in and infringes, but for whatever reason the originator decides not to defend, and it is a valid patent and you have to ask yourself why did they not defend? But maybe then it is an unproductive outcome.

Could we imagine actually the Competition Authority coming along later and trying to attack the generic for having engaged in anti-competitive entry? It would be an odd case I guess is my reaction.

MR. GLYNN: If we now move to the main issue which we want to hear you all discuss, which is the pay for delay inference.

I have only just one more of these sort of semantic-type of questions at the start. The word "inference", particularly if one thinks of it as a strong inference, to my mind implies it is a

logical necessity to accept it, that if you have some facts established and there is an inference, then the conclusion follows.

There is an alternative term which is often used, which is "rebuttable presumption". Am I right in thinking that we should more usefully think of the pay for delay inference as the pay for delay rebuttal presumption, taking the distinction that I am drawing between inference and rebuttable presumption?

PROFESSOR SHAPIRO: I have used both terms in different contexts. I think of the rebuttal presumption as more of a lawyer's term, a legal term, in terms of burden of proofs and shifting of proof. So when I have written with co-authors who have been lawyers you will see that term.

The inference I think of as an economic inference. I would say it is a one example of what economists would call revealed preference, which basically is we see that somebody does something, we know it is in their -- we assume it is in their commercial interest --

THE PRESIDENT: Could you say the term again?

PROFESSOR SHAPIRO: Revealed preference. This goes back at least 100 years or longer in microeconomics. The notion is our methodology is, in a commercial context we assume each of the parties is operating in their own commercial interests. So if we see them do something, we can infer that is in their interest, and so in this case if we see a large value transfer, we can infer that as in the commercial interest of the patent holder, the branded firm.

If we cannot find any other reason why that would be worthwhile for them, we would infer that they are getting something in exchange for it, and so if we see a restriction on competition, we infer that that is what they are getting in exchange.

Again, this is an economic inference that is a type of inference that anti-trust economists obviously would generally make from we see commercial activity, we are trying to understand it.

MR. GLYNN: The reason I wanted to have this discussion is that the thing I am trying to get at is that the inference in the way you are using the term is one which suggests that something is likely to be the case, for reasons we can come to in discussion and well understand, but is not something which is necessarily the case. It does not follow from the fact of, for example, a value transfer that there is an anti-competitive outcome.

To go back to what an economist would say, it is a rebuttal presumption, it is something which is a good theory, there is good reasons for supposing it might be so, but it is able to be rebutted if the facts contradict it.

PROFESSOR SHAPIRO: I think that is fair. I mean, there is some -- different people who have worked on this both in academia and in practice differ in how strong they think the presumption should be or what might be sufficient to rebut it or how strong the inference is. But within that zone, I think we are talking about a presumption that there is -- the value has been exchanged, been given in exchange for a restriction on competition and -- but I guess in my writings, particularly earlier, as I have been learning over 15 years doing this, open to the notion there may be some explanation we are missing, either in general or in particular cases. So that is why it is potentially rebuttable.

MR. GLYNN: Yes, thank you.

Dr. Jenkins?

DR. JENKINS: I just wanted to add something on that.

I think when Professor Shapiro was giving his answer he said we observe a value transfer and if we see a restriction of competition, then we infer that the value transfer paid for the restriction in competition.

I think at times certainly there is an added level of that inference, which is if one observes the value transfer it is inferred that the settlement has a restrictive element, which is slightly different from the way it was put. That is my understanding of the pay for delay inference, that the existence of a value transfer is sufficient. That is the allegation, that the existence of the value transfer is sufficient to conclude that that settlement agreement is likely to have a restrictive element.

THE PRESIDENT: Yes.

PROFESSOR SHAPIRO: I would disagree with that.

As my thinking, particularly in my first report, makes clear, the markers of these kind of anti-competitive agreements is the combination of the value transfer and the restriction on competition, both of which are observed in the contract, the agreement, in most of the cases and certainly in this case. There is no inference about the restriction on the generic company's ability to compete. That is in the agreement.

MR. GLYNN: So if one has the value transfer and one did not also have something which you could conclude was a restriction of competition, then you would not have the pay for delay rebuttable presumption would not apply, or it would have been rebutted?

PROFESSOR SHAPIRO: So that is a different case. I am happy to talk about it.

I think there are cases where what Dr. Jenkins has described would apply. That is if the patent holder is making a substantial payment and the payment, let us say, is on a monthly or annual basis, and it may not be in the contract, but it may be understood that if you are

the generic, if you enter independently, I will stop paying you. So it is conditional on your not entering, even though we did not write that down in the contract.

That could be economically equivalent although it would be a slightly harder case for the plaintiff or the agency because we would not see the explicit entry restriction in the agreement.

DR. MAJUMDAR: Sir, I think just in terms of clarification, I had understood the meaning of the pay for delay inference to be that there is an existence of a value transfer and not necessarily restriction of competition, but a clause that restricts a certain element of the entrant's freedom.

For example, it might be that the entrant can come into the market, but there might be a cap on its volume for its product, which does not necessarily mean there is a restriction on competition, it means there is a restriction on what the entrant can do. So I think there is an important distinction there on terminology.

THE PRESIDENT: The inference is summarised in the joint statement on internal page 10 at point 1 {I/1/12} at paragraph 1:

> "Professor Shapiro's 'pay for delay' ('PFD') inference is a proposition that patent settlements with value transfers from the patent holder to the potential generic entrant in exchange for an entry restriction ..."

Is that the point you are making there, that there is an entry restriction in the agreement, or express or implied? That is the point that then gives rise to the inference?

PROFESSOR SHAPIRO: Yes.

THE PRESIDENT: Is that a fair summary of it?

PROFESSOR SHAPIRO: I am sorry, yes, it is.

Let me just say a little more given what Dr. Majumdar said about entry restriction.

So if the generic firm is allowed to come in but with a restricted quantity, I would consider that an entry restriction. They in some way have agreed to limit their competitive efforts in time, in quantity, in geography, whatever it might be, and that is the restriction on competition that is of concern.

THE PRESIDENT: Yes, it does not have to be a complete restriction on entry, and it does not need to be for the entirety of the unexpired duration of the patent if anything that limits their freedom to fully challenge the patent and seek unrestricted generic entry would be an entry restriction; is that right?

PROFESSOR SHAPIRO: That is exactly what I mean, yes.

THE PRESIDENT: Dr. Jenkins?

DR. JENKINS: Sir, I think this is the distinction that I was seeking to draw out, that in the earlier answer to the question, I think, Professor Shapiro said "and if we see a restriction of competition". I agree that what we are talking about is where there is some form of restriction in the contract. But the question of whether or not it is a restriction of competition is precisely the question that we are looking at here, and for that you need to think about the counterfactual, which is where you started your questioning.

I think my view is that the inference does say that in the presence of a value transfer you infer the restriction of competition. That is what you are inferring, the restriction of competition against the counterfactual. No doubt we will come to discuss views on whether or not that is correct.

DR. STILLMAN: I am satisfied with Dr. Jenkins' point.

PROFESSOR SHAPIRO: I would, again, differ.

To my way of thinking, if the generic firm has agreed to limit their ability to compete in some way, non-trivial way, that is a restriction on competition. We do not need to look further and make it more complicated. We do not need to get into, at this point, counterfactuals. We have not got there yet, we are just talking about what the elements of the agreement itself contain. A restriction on the generic firm's ability to compete, that is a restriction on competition, as I would use the term.

THE PRESIDENT: That is the inference, that you infer that it has that restriction on competition; is that right?

PROFESSOR SHAPIRO: So I observe that the entrant, generic firm, has agreed to limits on their freedom of ability to compete. I observe that the incumbent patent holder has paid significant value, money, to them.

THE PRESIDENT: Over avoided litigation cost.

PROFESSOR SHAPIRO: Always. Yes, correct. That is what I mean.

So, yes, the notion that this is some extraneous restriction that does not really affect competition strikes me as fanciful at that point. This is a restriction on the generic firm's ability to compete. It is a restriction on competition and the competitive process, and I do not need to get into counterfactuals to describe it that way and for this inference to be triggered, in my opinion.

MR. MALEK: You say that has been purchased, that restriction has been purchased by the value transfer?

PROFESSOR SHAPIRO: Correct.

DR. STILLMAN: I would like to jump in, please. The payment is to achieve a settlement; that is the first thing. So we have got the elimination of the litigation threat, and then the question in the pay for delay inference world is: what else can we conclude about that payment? What else is it buying?

What I think Professor Shapiro's view is, and I understand the view, it is a suggestion that if you have a payment that is in excess of avoided litigation cost, then you are necessarily paying the generic to do something that it was not otherwise prepared to do, to basically -- and that that is -- that might involve agreeing in the extreme to wait until the patent expires, it might be agreeing to wait until some particular date, it might agree to enter but only on certain terms. But the idea is that there is that additional payment that the originator is purchasing and that that is a movement that is -- that produces less expected consumer welfare than if you had had continued litigation, which takes us back into counterfactuals.

MR. GLYNN: The point in this that is very important, is if we observe the value transfer in excess of the litigation costs and so on, we observe that there is a settlement which includes some clauses, some of which will be described naturally as restrictive in various ways. Have we, at that stage, reached a conclusion that what we are seeing is anti-competitive or do we still need to know whether the agreement, the terms of the agreement, are objectionable, as it were, in themselves?

DR. STILLMAN: I would say that if you are focusing exclusively on the consumer welfare in the market in question, then I would agree with Professor Shapiro, at that point you have an inference or rebuttal presumption that you have an agreement that is likely to produce expected consumer welfare less than you would have if the parties had gone to litigation, gone through the litigation.

That is subject to some important conditions, and Dr. Jenkins in her reports talks about various circumstances in which that might not be true, and I am sure you will be exploring that with her. I would emphasise again that that is against a particular benchmark of what we mean by competitive or anti-competitive, and namely it is a focus on the consumer welfare in the market in question and does not consider other aspects of the overall economies that might be affected by policy towards patent settlements, such as the ability to do settlements, the incentive to enter settlements and possibly various effects on innovation incentives.

MR. GLYNN: What we were thinking of doing now is to ask you, Professor Shapiro, to take five or ten minutes to explain to the court what your pay for delay rebuttal presumption is. We

would then like to ask Dr. Jenkins to lead the discussion on that, explain why it is that you disagree. The others will ...

PROFESSOR SHAPIRO: Thank you very much. I do appreciate that.

For future reference, I would say that in section 4 of my first report, which is entitled "Pharmaceutical patent settlements with value transfers: general principles", that is where I really walk through the core economics here that I am now going to explain in shorter form. Okay? I just want you to be aware of that and where that is in the record.

Let me walk through, actually, this will track subsections of that section 4 without belabouring any of them, I hope.

So the first is context in the industry. When independent generic entry occurs, we all agree that there is a market drop in prices, and the pioneer firm, the branded firm, the patent holder, loses a very large share of the profits they have been earning and, critically, the total profits to be had fall dramatically.

Consumers are the beneficiary of that. So that is the first observation.

Then the second point is when we think about a patent holder and a generic firm who is threatening to enter sitting down at the table together, in general when companies sit down together they try to negotiate deals that can maximise their profits together and then figure out how to achieve great(?) value and then split it up in some way based on negotiations.

In this particular situation, how do they create value, where I am using the term advisedly to the highest total amount of profit? The way to create that is not to have generic entry take place, because as I explained, independent generic entry will cause the profits to fall substantially.

So the joint incentive, commercial incentive, very powerful incentive, we see this throughout the industry, different countries, is to find a way if they can to agree so that the generic entry will not take place.

This, of course, is where competition policies will come in, because the temptation then is to agree and the simplest form would be for the patent holder to just tell the generic, "Look, I will pay you a bunch of money, make it worth your while, I will pay you maybe as much money as you might get from coming in and I will still make a great deal of money because the monopoly will be protected".

The point there is simply there is a strong incentive for the two companies together to come to a deal to delay or entirely prevent or perhaps weaken the generic entry.

If they were unfettered by any competition laws, and let us just consider one payer now and not other generics, the story gets more complicated, but -- the basic story would be what we

would do if there were two of us, would be I will pay you, you agree to stay out until the patent expires and the monopoly would be continued through patent expiration, after that generic entry is going to happen. We all know that.

So that would be the temptation. The way to do it if there were no competition limits would be the most straightforward way: a cash payment and an agreement by the generic not to enter until the patent expires.

We did see some of those historically before the competition authorities caught onto this and started to know about it. So, the -- now let us add in the complication that we do not know whether my patent is going to be valid or not. I have challenged you, you are threatening to come in, you will play the role of the generic now, if you do not mind, and we are sitting at the table, but we do not know what is going to happen in this litigation. Inevitably, invariably uncertain. Even the strongest patents sometimes fail and we know historically there is a lot of very uncertain outcomes.

So now the situation is still the same. What is changed is if I am the patent holder, it is not that I know you are coming in for sure and I want to pay you to stop, you are only going to come in if you win the case. So there is a probability that I am facing this threat, but it is probabilistic.

Of course different parties will have different assessments of their prospects and they may disagree. But -- and this is what the literature has developed and it is in various of my writings and others -- the same basic economic dynamic that I described previously without uncertainty applies here as well.

So think about it this way: suppose somebody was going to flip a coin, and if the coin came up heads you were allowed to come in and the profits would go way down with generic competition. If it is tails, you are not allowed to come in. Basically, maybe I will pay you half as much as I would otherwise because there is only half a chance of you coming in, and you will take half as much because you only had half a chance of coming in. In comparison with the case where you are on the doorstep and could come in for sure and I can pay you to stop.

So the same joint incentive for the two parties to agree to limit or defer generic entry arises in the presence of this uncertainty, in the presence that both side parties face. You will see this described by the patent holder as avoiding risk, eliminating the risk, creating market stability. Because if the entrant comes in, it is a very different market. But the basic incentive is still there.

So this is the guts of it. If we just had cash, sometimes called a reverse payment, this would be the payment of cash and then the agreement on the part of the generic party not to enter for some period of time or some other limitation on ability to compete such as we were talking about 5 or 10 minutes ago.

You might ask, given this analysis, why do not all these agreements involve no generic entry at all until the end of the patent, because that is what I said was the highest profits? We can come back to this, but I think, just conceptually, we see a lot of companies are concerned about anti-trust exposure and so they have not gone to that extreme.

The other things they have done is -- this is developed over time as cash deals, particularly in the US, have become pretty clearly illegal, is they have moved to non-cash forms of the value transfer. So the same basic economic forces apply, but the payment can be made in other forms.

That does create two complications I describe in my report that do not occur with cash. First we have to value the transfer. If it is not in cash form, it is in some other form, how much was the value?

That may be difficult. In this case not so difficult I would say, but that is an issue. The second potential issue is whether the value transfer actually creates some meaningful competition, in which case the analysis is more complicated. But to go back, and we will at some point, maybe on Thursday, want to get into that, but the gist of it is we have these strong incentives for both parties to agree to restrict entry because that drives down profits. The generic will not agree that unless they are compensated sufficiently so that the agreement is more attractive than continuing in court, and critically, in order to assess this and trigger this presumption now, there were the inference, we do not need to evaluate the strength of the patent.

This, many people find a bit surprising or counterintuitive. But the key point is no matter what I think the strength of my patent is, if I am paying you a significant quantity of money I must be getting something in exchange for that. If my patent was -- if I was completely confident I would win, I would not pay very much money, I would just go to court and win, or I would not pay more than the avoided litigation costs. If my patent is very weak or I am concerned, then naturally I would pay more. But if we see a payment in excess of an avoided litigation cost, that through this revealed preference, economic inference, assuming that that is in the interest of the patent holder to make that payment, we can infer that they are getting a restriction on competition in exchange and we do not need to quantify patent strength in order to make that inference.

THE PRESIDENT: Before we ask the other experts to comment, can I just pick up this last point. You say we do not need to value strength of patent and we cannot, but what is the significance, if any, of the size of the payment once it is above avoided litigation cost? Does it matter? You said a significant quantity of money. Do you just mean a non-trivial excess over avoided litigation, or can one draw anything from the fact that it is very much more or just a small amount more, or is it irrelevant?

PROFESSOR SHAPIRO: No, you can draw conclusions from that.

First, I would be uneasy with a case where the payment was right very close to avoided litigation costs because who could be exactly sure, and you mentioned before there are non-cash costs to the company. So if it is very close, I think, you know, one would want to be -- look for other evidence and not rely as heavily on the inference for starters.

If you measure a significant quantity of payment above the avoided litigation cost, then that does tell you -- give you additional information. Again, all of this building on the assumption, the fair assumption, that the person who made -- the party to made the payment, it was in their commercial interest to do so.

Basically, what it tells you, Mr. President, are a combination of: there was a large quantity of profits that were protected. There is two variables that come in, I guess. One is how much were the profits that were at risk. In other words, in this case, if I may, how much would GSK's profits fall if independent generic entry occurred. That is one variable.

The other variable is how likely is it that that would happen if they went to court.

So, roughly speaking -- and I do not know that the decision in this case specifically relies on this, but I am talking conceptually now. The value to the patent holder of restricting the -- of the restriction they were getting would be how much profits are protecting times the probability that those profits will actually be wiped away by a loss in court.

So this excess payment, if we can call it that, would tell us that the probability of losing from the patent holder's point of view times the profits, the risk must be at least as large as the payment that was made.

MR. MALEK: In addition to looking at what the profits are at risk, you are saying that in deciding the amount of the payment, the parties are making their own evaluation of the likelihood of the outcome of the litigation?

PROFESSOR SHAPIRO: Absolutely. I would think in general it -- and it would apply to GSK here, the amount they are willing to pay will depend on their assessment of their prospects in court. Yes.

THE PRESIDENT: So looking at the amount of the payment is relevant in some respect, is it not, on that view?

PROFESSOR SHAPIRO: Well, relevant to what? I guess if you observe the payments significantly above the avoided litigation costs, then according to this inference you may infer that there was an anti-competitive effect or purpose/effect, both really. The magnitude of it is now what we are talking about.

But that would not arguably influence one's determination about whether it was actually anti-competitive. It would affect damages, for example, in a private action.

THE PRESIDENT: Yes. What is needed to rebut the inference or presumption?

PROFESSOR SHAPIRO: It could, depending on how that rebuttal was proceeding. For example, suppose the parties tried to defend the agreement by saying, "Well, there is actually some other value that the patent holder received that you have not properly accounted for". How much is unexplained here that needs to be accounted for by this other factor?

So it could. If that was clearer.

MR. MALEK: Is this an inference that can vary in strength? The higher the payment relative to the amount of profits which would be lost on an early entry, the stronger the inference, or not?

PROFESSOR SHAPIRO: To my way of thinking, the inference applies as long as you are confident that the payment exceeded avoided litigation costs, and what you are getting as that excess payment, if I can use that term, grows, I guess -- the way I think about it, you are getting more confidence that you have not made a mistake just by measurement. You are also getting more concerned that the effects are significant and not minor in terms of how much this restriction was worth to the patent holder and, the flipside of that, how much consumers are therefore being deprived of competition.

So the sliding scale, I would say, is not about making the inference, but it is how or what are the anti-competitive consequences of the deal? Were they moderate, large, extreme? So if you had cases with private damages, or in the US we have cases with disgorgement sometimes, those monetary measures would be very much linked to the magnitude of the payment, but not the determination of liability.

THE PRESIDENT: Can I go first either to Dr. Jenkins or Dr. Stillman.

DR. STILLMAN: I just want to follow up on the point about what you can infer from the payment about patent strength and to say that I certainly agree with Professor Shapiro's descriptions of the framework.

I would like to put a marker down, which is I have read the transcript of the discussion on Friday and Monday regarding some of the parameters - about the payment, against what should be compared, against the (inaudible) case loss - and I have looked at these numbers. So at some appropriate point I am happy to give my views on what the data in the case actually do seem to suggest about how you should be conducting the analysis on trying to infer patent strength from the data we have available to us.

I think it is probably not the right time now, I just wanted to flag that, that I am ready to discuss that.

MR. GLYNN: As the President said, we are hoping to keep this afternoon on the conceptual level, but then at the end of this we will be asking each of you what you conclude from the discussion are the key factors which we should be looking at.

Thank you very much, Professor Shapiro.

THE PRESIDENT: It was very helpful.

DR. JENKINS: Thank you. I should start by saying I do not disagree that Professor Shapiro's framework is useful for understanding dynamics in this market and could be a useful framework for looking at any particular agreement.

What I disagree with is whether or not you can use that framework and draw an inference from it in the way that simply observing the value transfer above litigation costs is sufficient to conclude anti-competitive harm.

In my evidence, there are two main themes, which I will elaborate on. The first of those themes is that I do not think the framework as it stands deals with the genuine uncertainty that is embedded in a patent litigation in a way that matches well with probably the legal test and what happens. I will explain that in a bit more detail. I see where that has an impact is in the counterfactual assessment.

My second critique of the framework relates to the framework itself, which says even if I operate within Professor Shapiro's world and how you treat uncertainty, then there are other factors which are important which are more aligned with what you would expect to see in the real world, and unlike the simplifying assumptions that you have to use to get a tractable economic model, and when you take those simplifying assumptions out of the picture then you no longer get the straightforward inference.

If I go back to the first point, which is about the treatment of uncertainty, I think the best way to start with this is to think about the counterfactual. So the counterfactual in the framework underlying Professor Shapiro's inference is the expected date of entry. That is a phrase you will see. You will see it in the joint report.

What that means is not the date at which, if litigation were to continue, you would expect entry. Even though that may sound counterintuitive. It is an economic construction that is about the expected impact on consumer welfare. This approach to treating uncertainty and decision-making uncertainty is very commonly used in economic modeling as a way of translating uncertainty into single point estimates.

So what we have here, and I will simplify, let us think we have a patent, there is uncertainty about whether or not the generic can enter because we do not know what is going to happen. Therefore, there are two potential states of the world. There is the world that the generic prevails in the litigation and then there is the state of the world where the brand prevails, so abstracting from all sorts of additional complexity.

We know the date of the judgment, when this is going to happen. We call that time zero and we say the patent has 10 years to run.

If the generic prevails, you get entry at point 5, and if the brand prevails you get entry at 10. Say we know there is a 60% chance of the brand prevailing. Then the counterfactual, in the Professor Shapiro's framework, is six years. It is 60% times 10 years; it is 6 years. That is a counterfactual that does not ever actually occur in the real world.

In the real world, there is either generic entry or there is no entry until patent expiry. Now, when we talk about the expected impact on consumer welfare, all of that analysis is against the benchmark of that 6-year expected date of entry, and that is the way that an economist will often think about decision-making under uncertainty.

The question is whether that is a relevant benchmark for the question that you, the Tribunal, have to answer. One could see that if the patent is weak, so that you think that then when a court came to actually make the judgment you would be more likely than not to find yourself in a situation where the generic would win and would prevail and that the settlement agreement that we are discussing will, therefore, be restrictive against that benchmark that we have had, which is what would happen if litigation continued.

But in the event that you have a patent that is not weak, then the counterfactual in the continued litigation scenario is actually that you would have no entry prior to patent expiry.

So this question about what is the relevant counterfactual, it matters very much how you consider uncertainty should be treated in this world and whether or not you think the inference stands.

THE PRESIDENT: Just to clarify, you explain what you meant by expected date of entry being the counterfactual. You said, if I heard it correctly, if the patent is not weak, say it is 80%

chance of success, then the counterfactual is there would be no entry until expiry. But I thought you said the counterfactual would then be, if it is ten years, eight years.

DR. JENKINS: There are two counterfactuals you can think of. You can think of what is the expected date of entry, which is the construct. Then, there is what -- if we are thinking about a counterfactual as in what do we think we will observe in the absence of this settlement agreement, what we will actually observe is either entry or no entry.

From an economist's perspective, when you are thinking about let us think about these settlement agreements, let us think about their impact on welfare, it is a very common modeling construct, with which I agree in terms of thinking about decision-making under uncertainty, to use that construct and think about expected consumer welfare. But I think there is a question about whether that is the right counterfactual and if you are thinking about a particular agreement and you are asking yourself the question of whether this particular settlement agreement has indeed been restrictive of competition, that depends whether what you think is relevant is what the expected date of entry is or whether you think what is more likely than not to have happened were the litigation to have continued.

MR. GLYNN: What would be the reasons why you would use the either/or counterfactual rather than the probabilistic counterfactual?

DR. JENKINS: Because in the real world that is what would happen, the either/or. If the question is what do we think would happen in the absence of this settlement agreement, and if we say it would continue to litigation, then we would have to ask ourselves what would happen in that litigation. That tells us what would happen. Indeed, whether or not this settlement agreement is restrictive or not. It depends what that counterfactual is.

MR. GLYNN: That would mean the court could not answer the question because we would not know what the outcome was. We might be able to infer what the probabilistic outcome was from contemporaneous evidence or views of counsel, or whatever. But we would not know whether it would have succeeded or not, we definitely cannot know that, so we cannot then proceed.

DR. JENKINS: You may be able to look at the evidence and determine whether or not it was more likely or not to go one way or another.

The first point is around this uncertainty point.

THE PRESIDENT: Pausing there. When looking at the evidence, where they are more likely to go one way or the other, would the size of the payment be relevant evidence in that regard? If there is a small payment, that might suggest -- and they agreed on a small payment, that both sides felt the patent was strong. If it was a very large payment, it might suggest that

(inaudible) from that was extracted from the commercial bargain felt the patent was weak. Would that be a way of looking at it?

DR. JENKINS: I think the question of what is small and large in that context would require one to consider some of the other aspects which I am going to come onto.

THE PRESIDENT: I understand that. It might not be easy to work out what is large, but as a conceptual approach.

DR. JENKINS: As a conceptual approach I do not think you can infer directly from looking at a value transfer and saying that is a large one, but embedded in the willingness to pay, as I agree with Professor Shapiro, embedded in that will be the branded company's perception of whether or not they were likely to win.

Again, I recognise that the challenge is between perception and what would actually happen in a courtroom, but it will give you an estimate of their perception of their success.

MR. GLYNN: If you found from that kind of thinking that they were paying quite a lot of money for what they must have thought was a reasonably large chance of a court deciding against them, would you agree with Professor Shapiro that one could think that that was a rebuttable presumption that it was anti-competitive?

DR. JENKINS: If there was evidence that the patent was weak, as in both parties --

MR. GLYNN: Leaving aside any view the court or the experts might have formed among themselves about the patent's strength, just looking at that as an issue, but just looking at the fact of the substantial value payment in excess of --

DR. JENKINS: I think you would not just be able to look at the value transfer on its face and know that. You would need to do quite a lot of work and know quite a lot about the situation in order to be able to conclude that the value transfer on its own basis was an indicator of a weak patent.

MR. GLYNN: Just for the sake of thinking that you had done all that work and there was not anything else to be said about it, other than that this was a large payment and the outcome was that the generics no longer tried to enter, would that be a strong rebuttable presumption? You still have to do some more work, I am sure, but would that be a strong presumption that it was anti-competitive?

DR. JENKINS: So your hypothetical is that you have ascertained --

MR. GLYNN: You have found out there is nothing very complicated, you are not getting lorry services or technical, you have just worked out that there is a lot of money being paid, there is nothing that you can find out so far which says that the value in any normal commercial sense has been received in return for that other than the settlement of the claim. So

whatever the probability was, that probability of losing has gone away. Professor Shapiro is saying that that entitles us to assume that that payment is for anti-competitive purpose.

DR. JENKINS: My view is that you can get to a point where you can conclude that a value transfer is anti-competitive. I think my view is that that is not a rebuttable presumption, because I think you would have had to go some way down the road of assessing the actual evidence, and therefore it is not a rebuttable presumption in that way.

You cannot just look at it, look at the agreement and on its face, say yes, that is a problematic agreement because of the size of that value transfer. If you have done the work and you have said that all the particular issues -- and some of these I will come onto elaborate -- none of those are present in this case, and given the size of the market at risk you can infer that the branded company thought its patent was weak, then yes, I would say you would be in a situation where you would be thinking this was a problematic agreement.

MR. GLYNN: Would your thinking at that point be changed by your point that in the real world it is neither/or rather than a probabilistic outcome?

DR. JENKINS: No, because obviously a judgment needs to be made ex ante about it. So you have to make a judgment about what you think is more likely or not. Of course that may be wrong, but you still have to make that judgment.

MR. MALEK: You keep coming back to patent strength, whether it is weak or strong. If you have a scenario where both the patentee and the competing entrant take the view that there is a 45% chance of the court finding that the patent is invalid and they enter into a settlement where a large transfer is being made from the patentee to the generic, are you saying that is all right or do you accept that would be anti-competitive?

On your counterfactual, if a matter went to trial, the patentee would have won because you are saying they both assessed it at 45%.

I am saying, on that basis is there anything wrong with the patentee paying the potential rival or potential entrant a large payment for them to stop that challenge?

DR. JENKINS: In that situation, if the fact is that it is 45%, and if it went to court the court would rule in favour of the patentee and say it has a legal patentee, then there would be no restriction of competition.

MR. MALEK: That is how I understood your position. That is right.

DR. JENKINS: There would be no restriction of actual competition in that situation. In fact, depending on the terms of that agreement, it may in fact allow for entry earlier than it would otherwise come about.

So if actually the agreement was it could come in at year 7 out of the ten years and there was no litigation but the agreement was to enter at year 7, then you would had have that entry three years before you would have had it if the litigation continued.

THE PRESIDENT: I think we should let Professor Shapiro comment on that and then we must come back to your other factors.

You have been talking about the uncertainty factors, but you have other factors.

PROFESSOR SHAPIRO: Thank you. I was going to say something similar to what you said, sir.

This notion that the answer should hinge on what was more likely than not as best we could judge, which may be as crude a thing as we could do without having the patent trial occur, I think is really mistaken and does not have a sound economic basis.

So just to crystallise what I think your question was going to, if we all agree the patent holder was more likely than not to win, maybe 60% I will say, but there was a substantial, 40%, chance they would lose, from my way of thinking there is a -- if they went to court there was a 40% chance that consumers would get this very large benefit from generic entry. The settlement has extinguished that, and that is anti-competitive even though it was only 40%, and the large payment tells us that that 40% times what is at stake in this market justified that payment.

So I completely do not accept the notion that 50% is somehow an important threshold. The notion of eliminating the risk that competition will break out, that is anti-competitive.

The other thing I would say very briefly, Dr. Jenkins, I believe she said that the pay for delay inference rests on a certain counterfactual about entry at a certain six years. That is not correct. The inference was simply we know this was a profitable business arrangement for the patent holder. From their perspective it was worth paying this money to get a restriction in comparison with going to court. That is what we know.

So what probability they assessed exactly the patent holder of winning, we do not know. If you had to go to a counterfactual, the ongoing litigation counterfactual would be one of two outcomes: it is a probabilistic -- either the patent holder wins, and in our conceptual example there is no competition for the rest of the life of the patent, or the patent holder loses and there is immediate generic entry.

That is the counterfactual inherently has uncertainty built into it because the litigation uncertainty. That is the business reality that both sides in this negotiation, of course, fully recognised.

I do not have to specify a particular counterfactual in order to apply the inference, but if you wanted to push me, if you wanted to say: what is the logic? The logic is the patent holder would have been thinking, inevitably, "If I do not settle and if we go to court, what is going to happen?" and it is uncertain.

THE PRESIDENT: Dr. Stillman and then Dr. Majumdar.

DR. STILLMAN: I just want to jump in. Maybe I did not hear Professor Shapiro correctly or maybe I misunderstood, but I thought I heard Professor Shapiro say the elimination of the risk which someone achieves is what makes the settlement anti-competitive. Any settlement would do that, so I am sure Professor Shapiro means to couple this settlement with the idea there is a payment and a restriction on entry. It is not simply that if a settlement eliminates the risk of generic entry -- we cannot assume from that alone that we have an anti-competitive agreement because any settlement would eliminate -- end the litigation.

THE PRESIDENT: When you say any settlement --

DR. STILLMAN: What I mean is any settlement that -- we have an ongoing patent dispute, and what we then have is there is an agreement which one of the core elements of course is that that litigation will be dropped. So therefore we have in that sense lost the chance that in litigation we would have a possibility of the patent being overturned or the generic being found not to infringe, and would have had the possibility, the 40% probability, or whatever, of generic competition taking place. That is going to happen with any settlement.

But what I understood the objection to be is to say, well, if we have a settlement that has a payment and it is a -- excess of avoided litigation costs and that settlement then includes -- understandably, of course it is going to have this -- some kind of limitation on the generic's ability to come into the market, that payment coupled with the understandable ancillary restrictions that would, in Professor Shapiro's approach, render that settlement one that reduces consumer welfare relative to a litigation counterfactual.

PROFESSOR SHAPIRO: So I was referring to the payment, the value transfer was paid to eliminate the risk of competition breaking out, 40% chance, whatever it may be. That was the context in which I used it. You are quite correct, Dr. Stillman.

I should say that let us -- I think it is important to compare these type of anti-competitive settlements we have been talking about with a more conventional settlement that would not raise these problems. Because any settlement, the whole point is not go to court and instead get on with business. So let us take a settlement where I am the patent holder and I say "I

think I have a very strong patent, but let us not go to court, instead I will agree to license you and you will pay a royalty rate".

In that case, of course, the stronger my patent the higher the royalty rate you are likely to agree to, and the higher royalty rate the higher your costs are going to be. Not as competitive as if you had a lower royalty rate, but that higher royalty rate reflects the strength of the patent. It is the bargain. If my patent is weak and I try to get a high royalty rate you will say no, you will not agree to it.

Now if I say, "I tell you what, I still want the higher royalty rate but I am going to pay you a lump of money" to get you to agree to the high royalty rate, that becomes anti-competitive now because, again, I am giving you money in order for you to agree to limit your own competitive vigour. That is the problem.

MR. GLYNN: Perhaps this is where we come to the risk aversion element in your argument, Dr. Jenkins.

DR. JENKINS: Indeed.

DR. MAJUMDAR: It is just to comment on something Dr. Shapiro said earlier where he said in his scenario, ideally for the parties settling, there would be no entry at all because that would maximise the size of the bargain pie. But sometimes that is not the case and entry is not fully excluded. Then he went on to say that within non-cash transfers and, indeed, with value transfers that create some competition, things become more complicated, and to my mind that is the key.

If I expect or I see some increment in competition, relative to prevailing conditions, then to my mind I do not make that inference. I probe further and I say to myself I need to understand more about the context of this agreement. I cannot make an inference that is necessarily anti-competitive because there has been some increase in competition.

MR. GLYNN: We might need to come back to this, but the point that is troubling in that comment is that the comparison is with the status quo and not with what otherwise would happen.

THE PRESIDENT: I think that is the next stage after this.

I wanted to go back to Dr. Jenkins because we have explored you said there are two aspects that trouble you and where you cannot agree to the pay for delay inference. The first was it does not deal with genuine uncertainty, and I think that is what we have been talking about.

Then you said there are other factors that apply in the real world, which I suspect may be risk aversion from your report and other things, but would you like to expand on those?

DR. JENKINS: Yes, thank you.

As you summarised, the first point I have made is this question about what is the relevant counterfactual in a continued litigation scenario with respect to the genuine uncertainty about the patent?

We have explored that. Going forward, what I adopt is the standard economic approach, which is to use the expected date of entry, so this probabilistic approach, and say we will assess against the expectation that in the counterfactual if you allowed the risk that is inherent in continued litigation to unwind, we assume that the benefits to consumers come in at that expected date even though in fact you would never actually observe that point.

Turning then to the theoretical modeling, just an aside before I get into that. I think Professor Shapiro just said that for his inference he does not need his counterfactual. I think that is one of the things we did agree in the joint statement, that in the context of Article 101, certainly in terms of economics and thinking about what are the effects of these agreements, you do need to have a counterfactual in your mind and, indeed, what I will discuss now is with respect to counterfactuals, and I hope I will be careful to identify the relevant one at each point.

I will also start by the initial discussion that Professor Shapiro described where two entities sit down and they want to bargain and their first task is to agree on what the joint profit maximising opportunity is for them. I think this was a point that Dr. Stillman made as well. These are settlement agreements and those settlements take place in terms of contentious litigation and businesses trying to decide what is in their own best interest and what are they going to achieve.

I do not disagree with Professor Shapiro's concerns that, in that situation, there may be pressures and desires for high value transfers to be made that may result in problematic agreements. The way these come about is in terms of a branded company with a patent that it considers to be valid and/or infringed and it wants to protect that patent. It has invested in the product, it thinks it has the right to continue to exploit that for a period, and its negotiations with the generic are driven from a desire to find a suitable outcome to that settlement negotiation.

I just thought it is worth just reminding ourselves, especially as we have seen quite a lot of the evidence, that it does not come across to me that those two parties are sitting down to discuss in a cosy room about joint profit maximising opportunities.

THE PRESIDENT: We are not talking about this case, we are only looking conceptually.

DR. JENKINS: Even still, even conceptually, the point is you have two parties who are in contentious litigation and they are trying to find a route by which they get to an agreement.

Obviously any agreement needs to be mutually acceptable, but the purpose of that is profit maximising, I do not think I necessarily agree with.

Then let us look at the assumptions that underpin the economic theoretical framework that sits below the inference. I have highlighted in the work that I have done three assumptions that are implicit in the simple framework that make it tractable to draw the conclusions that the inference can be drawn such that you can infer from the presence of a value transfer that in the absence of that value transfer you would get an outcome that has higher expected consumer welfare.

That is what that framework tells you. The three assumptions I've highlighted are risk neutrality on the part of the originator; symmetric and common information between two parties; and efficient bargaining. Those sound like jargon words that economists use. If we think about the way in fact that businesses make decisions, these are actually important aspects of everyday real world behaviour. So it is important to take them into account even though risk aversion, which is the flipside of risk neutrality, asymmetric information and inefficient bargaining are actually what one would expect to see in many real world situations.

If you have a situation where the two parties have differing views about their likely success if litigation continues, or they have different views on the profits that they will earn in the event that the litigation resolves whichever way, they have different views about the future, then what can happen is there is no way to reach an agreement without a value transfer. So there is no way for them to get a settlement without that value transfer.

That is something that Professor Shapiro and I agree on, and that is in the joint report in section (c), where Professor Shapiro agrees that if there is asymmetric information which leads to inefficient bargaining, you may not be able to reach a settlement agreement, and then what that means is you have to continue litigation. That is the counterfactual that you are then in, in the presence of this type of asymmetry.

That is the first criticism that I have, is that you need to know whether or not you have that symmetric information or not.

You then have the fact that the originator may be risk averse. If the originator is risk averse, what that means is that they put a value on being certain about their future outcome. In a sense this means they are not profit maximising in the specific sense that we might understand it, because they are willing to give up some of their profits, give something to the generic on the other side of the table in order to avoid the uncertainty associated with the litigation.

What they are giving up is it may be cast as some sort of restriction on entry, but it may well be a relaxation as compared with the counterfactual of no entry until patent expiry. So they are giving something, whether it is early entry or, in this case, authorised entry, that is immediate, but with some restrictions on that or some form of royalty arrangement. Whatever the alternative is, the originator company is willing to give that to the brand -- to the generic, apologies -- in order that they no longer face the risks that come with the litigation.

MR. GLYNN: So simplifying, your argument here is that we observe a value transfer, a significant one. It may be for anti-competitive purpose, according to the possible inference, or it may be for something different, which is risk aversion.

DR. JENKINS: Risk aversion or asymmetry of information, because it may be that without the value transfer you could not get the settlement.

So part of the value transfer is bridging the gap between the two parties to enable that settlement to take place. Those two reasons can motivate a reason for a value transfer.

MR. GLYNN: Could I ask Professor Shapiro for a comment on that?

PROFESSOR SHAPIRO: Certainly.

So as I understand the objection here, Dr. Jenkins is concerned that I am assuming risk neutrality, symmetric information and efficient bargaining. I am making none of those assumptions. That is not correct.

It is true that in some models in the literature those assumptions are made, such as in my 2003 paper in the Rand Journal of Economics. That is correct. But the broader (inaudible) or pay for delay inference I have written about more recently, and building on those models but not relying just on those models, does not make any of these assumptions.

It is as I described to you all in the last hour: it is simply noting that the originator, the patent holder, finds it worthwhile to make this payment in exchange for a restriction on competition and, of course, that originator, the patent holder, may have different information than the other side. The whole point is they may not bargain efficiently and may end up in court and may be risk averse, certainly.

So the criticism of what I am doing here based on those assumptions does not apply, it is not making those assumptions.

MR. GLYNN: If the pay for delay assumption, for instance, is if we observe the value transfer we should probably think there is an anti-competitive purpose, you say that is not eroded or weakened by the fact or by the thought that part of the payment may not be for an anti-competitive purpose, but for one of these other three factors for certainty in itself?

PROFESSOR SHAPIRO: I do not quite know what that would mean, I guess. Let us talk commercial reality. The patent holder is making a payment. The amount they are willing to pay certainly may depend on their information, their beliefs about the strength of their case, maybe risk aversion, how concerned is the management about the risk they are facing, the magnitude of the risk. I think that is all agreed.

But you do not pay for those factors. The payment is made because the judgment is on the part of the patent holder that, considering the risk and the commercial implications of losing, the payment is worth making, and they are getting a restriction in exchange.

MR. GLYNN: You do not distinguish between the anti-competitive effect, call it a benefit to them that they would be getting, and the removal of uncertainty as a separate thing; you think they are the same thing?

PROFESSOR SHAPIRO: I do. For example, let us take one of the elements, risk aversion. I would say if the patent holder is highly risk averse, that by definition of risk averse means given how much profits are at stake, but probabilistically, they will pay more to avoid that risk. So I would accept that. So we see a certain payment.

The inference about the magnitude of harm they were facing would be slightly different with risk aversion. My previous discussion for you, multiplying the probability by the magnitude was a risk neutral calculation, which is a good guide. But you might pay more than that if you are risk averse.

So that would come into our consideration, the secondary or additional considerations that the President was asking about based on the magnitude. It does not change my fundamental point that the payment was made to reduce or avoid this risk, and that is the anti-competitive effect.

MR. GLYNN: Supposing, just to make a ridiculous extreme, there was no risk at all that the patents would be lost but the litigant attacking was there and there was a court case and there was a risk that the judge might be erratic, there is some --

PROFESSOR SHAPIRO: Judges erratic, I cannot imagine such a thing.

MR. GLYNN: Can you not? It is very nice to hear.

So if they were paying to remove those elements of uncertainty which had nothing to do with any realistic assessment of the strength of the patent, would that still be a pay for delay inference in your terms?

PROFESSOR SHAPIRO: I struggle a little bit with your example. I guess I would say this. In general, as an anti-trust economist I put a lot of weight on what the business people

at the time thought they were doing and understood of the context they were operating in, and that would apply here too.

In your example, if the company was paying because they perceived some risk of losing, I would tend to accept that as a real risk. So I am finding tension between that and your statement that there somehow was no risk. This is definitely done from the patent holder's point of view, their perspective, the risk they perceived. I do not know what else to say.

THE PRESIDENT: We will have one comment and then we will need to take a break and you may continue.

DR. JENKINS: Just to elaborate a little further on this. We keep talking about we make a payment, they pay the generic, there is a settlement agreement and that agreement, it has some form of entry restriction as in Professor Shapiro's reports.

In the simplified model that I have critiqued in my report, the characteristic of that settlement agreement is a date for early entry, so entry prior to patent expiry. That, in itself, is something that brings competition, as compared with patent expiry. The particular agreements we have here are of a different form. I will not go into detail about that. It is authorised entry, immediate entry, but with some restrictions on the pricing flexibility there.

I think in this theoretical construct that we have, there is a payment, there are some restrictions, and Professor Shapiro's theory is that if you take away the value transfer, you will get a more competitive outcome. So he says either that value transfer has paid such that that entry is later than that which would be expected, so you actually have a settlement agreement with a date that is later. So that is his version of the world.

The value transfer gets you an outcome that is worse than if you did not have the value transfer. He discusses two potentials. One is that if you took the value transfer away you would get a settlement agreement and it would be less restrictive, or you would get no agreement and then you would continue to litigate. That is his version of the world, of what would happen between these parties if you did not allow the value transfer.

In the presence of risk aversion and asymmetry of information, so in particular if we start with asymmetry of information. In the presence of that you cannot achieve one of those counterfactual outcomes. You cannot get a less restrictive agreement than the one we are looking at because you cannot get the two parties to agree.

So then what you fall back to is, okay, in Professor Shapiro's world, that the value transfer is therefore paying for something that makes it worse than continued litigation. Again, what the critique I have done shows is that in the theoretical modeling you can show in the value

transfer you can get a better outcome for consumers than you would get if litigation continued even if you take the expected value world.

That is a sense in which you cannot just look at value transfer on its own, there will be agreements that would be pro-competitive, that would be beneficial to consumers in expected value terms that are no longer available to you in a theoretical sense, and that is before we go to the question of non-cash value transfers.

THE PRESIDENT: We will take a five-minute break.

(3.37 pm) (A short break)

(3.52 pm)

THE PRESIDENT: Yes, Dr. Jenkins. I do not know if you had finished or wanted to wrap that up?

DR. JENKINS: So is it worth having any more discussion about risk aversion?

MR. GLYNN: I think it is. Sum up for us, if you would, your view about why it is that the presence of risk aversion means that the pay for delay inference or presumption is invalid.

DR. JENKINS: That in the presence of risk aversion, then the originator is willing to trade something to get the certainty of the outcome, what it is willing to trade is indeed potentially some money, but also a less restrictive outcome than would be expected in the event that they were risk neutral.

So the payment is part of that, and it means that what you end up with -- in my report I show it as a green triangle in my report, which is an area of agreements that involve a value transfer but also involve entry by the generic at a point -- an expected point earlier than that that would be expected under continued litigation. So it is more competitive.

The reason for it is the originator, rather than seeking to profit in that standard sense, is actually willing to give something in order to achieve a more certain outcome for them.

The reasons for that could be because they are worried about the impact on the business, they are going to have to change something about the business and they do not want to do that. It may be that the individuals doing the negotiations may be risk averse about the impact on themselves, so that they want to give more than that rather than do it in a perfectly risk neutral way because they want to be able to have a smooth transition in their business.

The essence of the risk aversion is they are actually giving something; they are giving a less restrictive outcome. In the diagram that has the green triangle, it also has some red areas. I am not saying that the presence of risk aversion will always get you that outcome, but it may get you that outcome, and therefore if you are looking at any particular agreement,

these are things that you do need to take into account. You cannot just conclude on the face of the agreement that the presence of a value transfer means that by its very nature that settlement agreement is going to be restrictive of competition.

THE PRESIDENT: Can I just understand the way you are using "less restrictive outcome".

If we take it very simply, suppose there is patent litigation. The patentee considers their chance of success is 80%, the generic challenger thinks its chance of success is 50%. So you have got this information asymmetry.

They settle the litigation, there is asymmetry. You would say they settle it through a payment from patentee to generic which is over avoided litigation costs. Are you saying because of the asymmetry information -- and they settle it on the basis that the generic drops its challenge and will not enter for the duration of the patent. So the integrity of the patent is preserved completely.

That would not settle without the payment because of the asymmetry of information. The patentee is risk averse, so it is willing to make the payment even though it has an 80% chance of winning. Are you saying you cannot, from that, infer that that is harmful to competition because the counterfactual may be that the patentee was right and would have won because it had an 80% chance, and if it won, that also would preserve the integrity of the patent, so there is no harm to competition, there is no benefit, there is no harm? Is that the point you are making about risk aversion, asymmetry of information, or does it all depend on having a less restrictive alternative in the agreement which is what you were talking about just now?

If you take the first one first.

DR. JENKINS: In the first one first, yes. Then I think the way you set it out, which is that the agreement has two elements, there is a payment and there is restriction all the way to patent expiry -- so there are two elements of that -- it is not solely the value transfer itself.

There I think the question of whether it is restrictive or not does then turn on the fact that if the patentee is correct, if they are the one who is correct with the 80% chance, then you are more likely than not to see no entry prior to patent expiry in the event that you had continued litigation, and therefore it is no less restrictive.

In the event that you prefer a benchmark which is: what is the expected impact? Then that would be restrictive against that benchmark. In this scenario, if there is risk aversion on the part of the patentee, that might explain some of that value transfer, that is right. But what they have preserved is that they have got the generic ruled out all the way to patent expiry.

So they have not given something on that dimension in terms of generic entry, they have given it -- they may have given something in terms of an additional payment to the generic to achieve that.

THE PRESIDENT: I think Professor Shapiro would say, but we will give him a chance in a minute, that what they have achieved is they have, by payment, avoided the 20% risk of full generic entry; therefore, it is a potentially less competitive outcome.

DR. JENKINS: Yes.

THE PRESIDENT: Is that right?

PROFESSOR SHAPIRO: You do not even need me here anymore.

THE PRESIDENT: I am sure we do. That seems to me the difference between you.

DR. JENKINS: On that scenario, where you have got the generic locked out until patent expiry, then the question comes down to: what is the appropriate counterfactual in that case? Is it an expected entry date or is it the more likely than not actual entry date?

THE PRESIDENT: You say it is the more likely --

DR. JENKINS: I am not sure it is my position to tell you what is the most likely counterfactual, but it seems to me that the economic modeling which takes this decision-making under uncertainty probabilistic approach, which is a way that economists like to model these questions, may be different from the actual test under Article 101, where you are thinking about: what is the counterfactual? What do we think would actually happen in the future? That, for me, is the genuine uncertainty point which makes it different from a standard market sharing agreement. Right, a market sharing agreement, you do not have the sort of potential to actually say this patent is valid and it is illegal for someone to come in. That is why it is different.

The question of which of those counterfactuals is the correct one, I certainly think there is force in the one that says you do actually need to think about what will actually happen in the market and that should be your test, which was the earlier discussion upfront this afternoon.

So if we then move --

MR. GLYNN: Professor Shapiro?

PROFESSOR SHAPIRO: Thank you.

I think there is some confusion, or I fear that it is does not help the Tribunal. There are two conversations going on. You asked this part to be conceptual and not speak to the particular agreements at hand.

What Dr. Jenkins is discussing is an analysis of what are called early entry agreements, which are one form of agreements that triggered some of the literature including my paper in 2003. Those agreements are of the form where the patent holder pays the generic value, let us say cash, and they agree on a date when the independent generic entry can occur. Okay? So there is early entry agreements with cash payments. If you want to talk about those agreements, there is a strand of the literature and that is what Dr. Jenkins, so far as I can determine, that is what her model -- I know that is what her model is about. It is built on my model and she is talking about that and risk aversion is an issue in that model. Those are fair issues in the literature conceptually.

It is my view -- first off, those are not the type of agreements in this case and I don't believe that analysis is applicable in these terms. There are other aspects of the broader pay for delay inference are applicable here.

If you want to spend time, as much time as you want -- obviously you are the Tribunal -- on that model, we can and I can respond. I do not think it is relevant, but that is up to you.

THE PRESIDENT: That is why I am asking about the simple case, where there is complete exclusion for the duration of the patent, but risk aversion and asymmetry of apprehension of the outcome.

PROFESSOR SHAPIRO: I am with you, I believe, Mr. President. So complete exclusion would be a special case of an early entry agreement where it is not really early. The generic agrees not to enter until patent expiration. That is the -- the answer there is so obvious that the literature did not need to dwell on it. That is anti-competitive, the consumers are unquestionably deprived of whatever chance there was, large or small, of generic competition taking place.

So, in those cases where there is no early entry and simply a payment and a agreement not to enter, effectively, risk aversion is irrelevant. These arguments are irrelevant. They are relevant for early entry agreements. Again, that is the model, but I do not -- that is not this case.

THE PRESIDENT: Can I just ask Dr. Stillman and Dr. Majumdar, if you have that simple form, namely effectively the generic gives up the challenge and agrees to respect the patent for duration, but gets a significant payment, would you accept Professor Shapiro's view and without the payment the litigation would not settle, it would go on, and one is not sure of the result, that that gives an inference or presumption that it is anti-competitive? Or do you think one cannot reach that view without knowing a lot more about what is behind the agreement?

DR. MAJUMDAR: Yes, sir. So if I understand the question, it is in the situation where there is a ten-year patent, the originator makes a payment to the generic, the generic stays out for the entirety of the ten years, in that situation there is no increment in competition relative to the no entry scenario, and so, in that case, a presumption of harm is valid.

THE PRESIDENT: So you would agree with Professor Shapiro in that case. I appreciate it is not this case.

Dr. Stillman?

DR. STILLMAN: Basically I would agree. I think I would still, even in that case, be interested in terms of the effect on the final consumers, but I would certainly be persuaded that there would be a heavy burden to get past if it was the case that you had an agreement basically in which the generic agreed not to enter until the patent expiry.

I would also add that even in that setting one might still consider broader effects of a settlement policy towards incentives to reach settlements in other cases towards innovation incentives. But in terms of the effect on the market in question, and especially if there is none of this regulatory aspect that I have been talking about before, I think I would agree, in fact I know I would agree that that would be an anti-competitive agreement.

THE PRESIDENT: Dr. Jenkins, anything you want to add?

DR. JENKINS: No. Against the benchmark of expected consumer welfare, I agree with that.

Against the benchmark of what you might expect to occur, that would -- you would not get a restrictive effect in that scenario.

THE PRESIDENT: I did not get the last point, sorry.

DR. JENKINS: Sorry, that was shorthand.

THE PRESIDENT: Expected consumer welfare, you would agree --

DR. JENKINS: Which is the benchmark in the models. But if instead you were to say what do we think is more likely than not to happen under the continued litigation counterfactual, in your scenario where you had the probability of success was 80%, then, in fact, what you might observe is that under continued litigation the generic was not able to enter until patent expiry in any case, and therefore the effect of that agreement would have been to not restrict competition because you had the same outcome.

THE PRESIDENT: Yes. But all you know is there is that 80% chance.

DR. JENKINS: Yes.

THE PRESIDENT: You do not know what would have happened.

DR. JENKINS: Indeed.

Perhaps, then, making it slightly more complex from your example and addressing the question of whether the fact that the modeling that I presented is based on early entry agreements is or is not relevant in this case, so the essence of the analysis that is around early entry agreement --

THE PRESIDENT: Sorry to interrupt you, but you accept that that is the basis --

DR. JENKINS: Yes.

THE PRESIDENT: Thank you.

DR. JENKINS: The essence of the early entry agreement is that there are some benefits to consumers from the settlement agreement. There is early entry. The inference then tells you that in those entry agreements, if you also observe a value transfer, then that value transfer is harmful.

So even when you do not have lock-out to patent expiry, if you observe an agreement which has some consumer benefits, and in the simple stylised modeling that is codified as early entry agreements.

My view is that the intuition behind that model and therefore the critiques of it, risk aversion and asymmetry of information, are then generally applicable for any type of agreement you might want to think about which fits that scenario, which is you are now looking at an agreement that does not involve full lock-out to patent expiry; you are looking at an agreement that has some benefits to consumers and you are also observing a value transfer. Then you ask yourself the question: is it sufficient to look at the value transfer and conclude this is harmful? That is where I say in those situations, the elements of the fact that there may be risk aversion on the part of the originator, they may have asymmetry of information, means that you cannot conclude just from looking at the agreement and the presence of the value transfer that it will be harmful to competition.

PROFESSOR SHAPIRO: So I think I at least in part agree with Dr. Jenkins here in the following sense. Just to be precise about it, if you have an agreement with a value transfer and an aspect of the agreement materially increases competition in the relevant market, then in order to evaluate the effects overall you need to do additional analysis.

The early entry agreements always have that feature because early entry means the generic can enter independently before the patent expires. That is a real benefit to consumers, no question. So those agreements all have the nature that we can see by the terms of the agreement a substantial consumer benefit associated with them, and so there is additional work that needs to be done.

Maybe one of the results that I approved in 2003 in that model was that notwithstanding that, with risk neutrality you would still conclude that such agreements were on average bad for consumers. Not an obvious conclusion at all.

MR. GLYNN: That is on average bad for consumers, but --

PROFESSOR SHAPIRO: Expected --

MR. GLYNN: The conceptual possibility is there, which is what your point is, is it not? At a conceptual level it is possible that we have a consumer benefit despite the fact of a value payment and an agreement which includes some restrictive elements.

PROFESSOR SHAPIRO: Forgive me, let me finish -- I do not understand the question, so if you could rephrase it again after I say a couple of things, I will try and answer.

If you have an early entry agreement, let us say the patent expires in ten years, entry is allowed after six years, we know that is a significant consumer benefit. The surprising result that I was able to show and model was that if the patent holder was -- if there was a cash payment, then if you compared how consumers did under that early entry agreement where they enjoyed four years of generic competition, they would be better off if the two parties had gone to court instead, whatever -- and that was the conclusion.

But in order to reach that conclusion, I did need to assume risk neutrality in that model in that scenario, and so then the question arises in the literature: if you do not have risk neutrality, would that result hold up or could it be disrupted?

Like I said, that is an interesting theoretical debate. But all of that is only triggered in -- if you want to analogise, as Dr. Jenkins says, to other agreements that create significant consumer benefits by allowing substantial competition -- by enabling substantial competition prior to patent expiration, such as an early entry agreement, if you have an agreement of that sort then some additional analysis is needed. I think we know the answer for early entry agreements but not for all other types.

In this case, I am going to argue when we get to the specifics that we do not have such significant consumer benefits enabled or competition enabled by the agreement, so we do not need to go there. So this is where conceptually we can -- there is some interesting questions. In the end I think it will not be relevant for your decision, but I understand you want to understand the waterfront.

MR. GLYNN: To repeat my question, completely at the conceptual level, if we have an agreement which has some elements in it which are restrictive and some elements which seem to be attractive for the consumer's or competition point of view, and you have a value payment, you cannot conclude simply from the value payment that the agreements are anti-

competitive, you need to work out whether or not the agreement that we have got in front of us has benefits compared with some reasonable alternative?

PROFESSOR SHAPIRO: It is difficult for me to give a simple universal answer to that. It depends on the counterfactual you are using.

I wish I could give you a crisper answer, sir. In comparison with -- suppose you believe that without the value transfer it is likely the two parties could have settled the case anyhow. You look at the evidence and you think there is no -- then you might very well conclude that the settlement without the value transfer would be more competitive.

In another case you might think, well, I do not know -- I think for some reason they would not be able to settle, so the counterfactual I would rather focus on is on going litigation or depending on the facts of the case. In that case I would say the analysis is trickier. I would still be -- based on the modeling I have done of the early entry agreement -- somewhat sceptical of those.

I think if you are talking conceptually about the whole range of agreements, I would need to look at the specific one to decide how hard it was to reach a conclusion.

THE PRESIDENT: If we then go to the issue you discuss at point 6 in your joint statement about the value transfer taking a non-cash form, you say, Professor Shapiro, in that case it may be necessary to determine whether the arrangement comprising the value transfer could be expected to lead to a meaningful increase in competition, which would predictably benefit customers. But the presumption still holds, it is just it might be rebutted and you have got to look at it more carefully.

Can you just explain what you mean by that? Are you talking about the form of the non-cash element?

PROFESSOR SHAPIRO: So the concept here is the same one that I was just speaking of, Mr. President, in terms of the need to look more closely.

Let me give you an example I think that may help. Suppose I am the patent holder, you are the generic and, you know, we are in court and we settle, and I say, look, I know that you actually are very good at selling this drug to paediatricians. You have good distribution and knowledge of paediatricians. I am not so good in distributing in that market. So part of the settlement will be I am going to give you the right to distribute the product to paediatricians, but not to other types of doctors, for example.

There could be pro-competitive aspects of that, because maybe I am not penetrating the paediatrician market very well, and you, maybe you are selling other generic drugs, you are selling other drugs, you have a distribution for us, it would make commercial sense. I am

transferring some value to you because I am giving you those rights, but there could be some pro-competitive benefits.

I think that sort of thing you need to look more closely at. I could give many more examples, because the world is a complicated world. Does that help? I can give another couple if you want.

THE PRESIDENT: You are saying, if I have understood you correctly, that the inference still applies, but this is where the rebuttal could be engaged because you would look at that element and look at the potential competitive benefit that comes from it and how would you balance it against the inference?

PROFESSOR SHAPIRO: So this is where I think we get to the boundary of what I have to do as an economist and what you have to do as judges.

When I am asked to look at cases, it is always: what are the economic effects as best you can judge them? So let us be clear that my example with the paediatrician, you, the generics, have agreed to cease your efforts to independently produce the drug, and you would have sold to all, all of the doctors. You would have been competing with me for the whole market.

So there is a restriction here that is of concern. I guess -- so I come at this from -- as I said earlier, there is such a strong incentive for both parties to restrict competition because that keeps the profits high that I think that is something any competition authority, you know, should be very cognisant of, and I would hope you would be, not to presume to tell you what to do.

But on the other hand, I would want to be open to possible efficiencies. So I guess what I am saying here is because of the inherently dangerous nature of these agreements, I would still apply some presumption. But I would be open, maybe very open in that example, to the parties coming in and saying, look, here are all the efficiencies associated with the generic distributing to paediatricians. There is going to be a significant increase in output that will come about and that, of course, is pro-competitive.

If they could make that case, then they might rebut the presumption, or from my point of view show that the effects of this agreement, in comparison with ongoing litigation, would be favourable to consumers overall.

THE PRESIDENT: Where I struggle is you can show the effect of the agreement because that is it, the extra distribution to paediatricians, greater penetration of the drug, as compared to ongoing litigation where you do not know what the result of that would be, you have just got the possibility.

PROFESSOR SHAPIRO: Right.

THE PRESIDENT: So you are balancing the certainty against a possibility.

How do you do that when you want to ask the question, as you say -- you ask as an economist, saying: well, is it overall harmful to competition or beneficial?

PROFESSOR SHAPIRO: So I am not going to pretend this is an easy thing or I have a formula, really. Cases are different. But here is the elements. I would say, look, you have agreed as a generic not to distribute to the rest -- all other types of doctors, say, the rest of the market. So we could see, if you had won and the patent was invalid, there would be very substantial consumer benefits throughout the market or loss of my profits. So we can get a sense of the magnitude of the lost competition, but of course that is only going to be if you win.

That is the big unknown that is going to be here, that probability. There is no getting round that. But you could -- suppose we said, well, I could distribute to paediatricians almost as well as you, you are a little better at it, so the competitive benefits would be existent but minor for paediatricians and the harm in the rest of the market is quite substantial, then we would have to think that if this was even a moderate possibility that the patent would be invalid, or not infringed, then this deal is going to be bad for consumers overall.

I am happy to concede the point that you cannot do that without starting to look to some degree at the patent strength. It is hard to see how you do it otherwise. I do not think this is needed in the current case, but in the conceptual world we are talking about, and I think all of my counterparts over here are emphasising that at various points you need to look at patent strength to do some balancing, that is true in some other cases. I do not think it is true here, but in the example you are asking me about, it becomes hard to avoid, and then the question, I think, becomes: whose burden is it to handle that problem?

THE PRESIDENT: Yes.

MR. MALEK: Can you just explain briefly why you do not have to do it here?

THE PRESIDENT: I think perhaps before we do that, can we get the response of the others on that point before we move on to here, because we might have to leave here until Thursday.

We have moved then for the case where the agreement involves complete exclusion of the generic until patent expiry, to a case where there is some value transfer which brings some competitive benefit. The example we had was the marketing allowance for paediatricians to penetrate the paediatric market more effectively and how the inference might apply and what you would need to look at. You heard Professor Shapiro's view and I would be interested in your reactions to that.

Start with Dr. Stillman and we will work along.

DR. STILLMAN: I think Professor Shapiro has teed it up nicely, that I think when we get into this situation where the settlement has an agreement that has potentially some beneficial effects, in this case on pharmacies and on wholesalers, where we try to do the full analysis, we are going to be led into some question of counterfactuals which will then take us into some discussion of patent strength, except unless one is able to establish, as I think Professor Shapiro feels very strongly is the case, that these supply agreements really had de minimis impact on pharmacists and wholesalers.

THE PRESIDENT: I think you are basically saying if de minimis impact, then you do not need to look at these other factors and patent strengths. But if it is more than de minimis, then it is like the paediatrician example, you have to start looking --

DR. STILLMAN: Yes, and I am always wanting to say focusing on a world where we are concerned about the pharmacists and the wholesalers in this particular market and under the broader issues I mentioned.

THE PRESIDENT: We will take that observation in all your comments, you do not have to repeat it.

DR. STILLMAN: Thank you very much.

THE PRESIDENT: Yes, Dr. Jenkins.

DR. JENKINS: I think as I understand the hypothetical we are in now, we are saying there are some positive, or there is the potential for positive competitive effects in this agreement. But we also observe a payment and we are asking about what can we infer from that.

I think we all agree that you need to investigate that competitive benefit, and for me that almost is enough to then conclude that for that type of agreement, you cannot infer from its face that there is an anti-competitive effect because what we are saying is you cannot just look at the value transfer and some restriction and say, oh yeah, we are done. You have to look into, in detail, what are the benefits from the positive aspects that come from this agreement.

So then we think, okay, let us think about our two counterfactuals, and this is where the other aspects of the critique that I have brought in come into play, because Professor Shapiro's inference says, well, almost regardless of what those competitive benefits are, my inference tells you if you took away the value transfer they would get an even better outcome for consumers, and that would be great. I say if there is information asymmetry, their outcome may not be possible.

So not only do you need to know about the competitive benefits, but you need to know whether or not there is information asymmetry to know whether those alternative settlements are available, and you need to investigate those alternative settlements to know whether they are available.

If you conclude that there is information asymmetry, which means that the parties will not agree absent a value transfer, so that means the delivery of these competitive benefits that we have investigated at the first stage are only deliverable for some value transfer because you need that payment to get those achieved, then if we take the value transfer away, we are into the continued litigation, or ongoing litigation counterfactual, and for that to judge it, as you said Mr. President, you need to know something about patent strength. You have to have some judgment on that question.

If you are still concerned about the value transfer in that point about how we come to achieve the actual underlying settlement, that is where risk aversion will also be relevant, because in addition to finding asymmetric information that shows you need the value transfer, in the presence of risk aversion the brand may be willing to pay more than you might think just from a straight toss of the coin in this situation, because of their risk aversion and their concerns about what it might do to their business.

So all of those aspects then are relevant and must be investigated in order to draw a conclusion from such an agreement.

THE PRESIDENT: That is why you say no inference can be rebutted, it is just an open question, investigate what might be anti-competitive, but that will be dependent upon investigating the factors. But you do not start with an inference.

DR. JENKINS: That is right, you cannot start with an inference, you need to investigate the effects and I am not precluding that there are may be many agreements that fall foul of that effects analysis.

THE PRESIDENT: Dr. Majumdar.

DR. MAJUMDAR: Thank you, sir. I thought that was a helpful example from Professor Shapiro to explain his thoughts. If I understand correctly, he says there is a value transfer; there are competitive benefits from the agreement in question. As a result of that, if I understood correctly, he says one has to think about the patent strength, the size of the patent strength and what gains would arise if the entrant got into the market.

Now, all of those things make sense to me weighing up looking at the size of the competitive benefits and weighing up the patent strength and size of the gains if the entrant gets in.

However, that seems to me going well beyond making an inference and actually doing some quite serious analysis.

MR. GLYNN: You can do quite a serious analysis starting with the view that there is something that looks pretty potentially suspicious here and we better -- that perhaps goes to whether or not you would look for the burden of proof and so on, but if you have a rebuttable presumption for very plausible reasons, as Dr. Shapiro was explaining, and then you have a large value transfer, in a way, the argument has to come back to justify that rather than starting with a completely open mind. I think that is what he said.

DR. MAJUMDAR: If I may comment on that. I would not go so far as to say there is a rebuttable presumption in that case. I think one, first of all, has to look at the size of the competitive benefits. So simply the existence of a value transfer does not lead me to think one should presume there is likely to be a harmful effect where we see competitive benefits. By implication it means we should look to see if there are competitive benefits.

THE PRESIDENT: Professor Shapiro, perhaps you would like to respond.

PROFESSOR SHAPIRO: Thank you. I think we have made some helpful progress, perhaps hopefully you will see it that way here.

Two comments from what I have heard from the other experts. First, I just want to emphasise the chain of logic that led us into having to talk about patent strength was only if we were needing to look at the counterfactual that was ongoing litigation.

The more straightforward counterfactual is an agreement without the value transfer. I understand Dr. Jenkins is saying maybe they could not reach an agreement without the value transfer. My view is that that would be something that would -- I would look to the parties to explain or to look at evidence that that was the case.

In your example, Mr. President, where the patent holder had an 80% chance, if they were very confident, they would not be willing to pay much to bridge the gap, they would say: we are confident, let us go to court. I think it requires some evidence before you are going to conclude that the value transfer was necessary to the settlement. So that point.

If you can go with the alternative settlement arrangement, you do not need to then delve into the whole issues of patent strength, you avoid that. So it is only in the one branch we have to worry about.

The second thing was, when we have been talking this whole time about significant pro-competitive effects of their agreement, the competition is "enabled" is the word that I have been using, and that has been the predicate of this conversation, that something of itself -- what sort of evidence, what sort of examples would qualify? I would normally be looking

for something that, in the way we normally do in the anti-trust, look for something that is going to increase output in the market or perhaps allow a lower cost producer to come in. Those are what are called normal, legitimate, pro-competitive benefits. So I would be looking for those markers before I would even need to head down in this direction. In other words, to conclude that the agreement enables significant competition, I would be looking for evidence that it is leading to significant increases in output or reductions in cost that would not otherwise be possible.

THE PRESIDENT: Yes, I think that is very helpful and I think on Thursday we can, on that basis, move on to the question of whether the agreements here, because of the supply agreement that authorise supply, do involve any meaningful pro-competitive benefit or are of minimal benefit such that the inference, if it applies, remains and clearly you disagree about that. I think that is what we logically will move on to on Thursday.

I think for all of us up here that has been extremely helpful and we shall now adjourn until Thursday morning.

I was about to say that no counsel has had a chance to ask any questions on the conceptual element. If you want to do that, you can do that first thing on Thursday morning. It is clearly important that we move on now to the next part, which may prove the critical part for deciding this case, and we really wanted just to understand the basis of the differing views and exactly how close they were and the exact points of division, which we found this very helpful. So I am not encouraging you to ask questions on that. We certainly will allow you to ask questions on the actual interpretation of the effect of the supply agreements when applied to the conceptual framework.

We will resume at 10.30 am on Thursday. I need to remind you all that, while those who are visiting from abroad, I hope you have an enjoyable time in London, but you must not, please, discuss the case with anyone in the case teams or indeed your own organisations, if you have come from firms that have been supporting you. So you are away from the case for a day.

Adjourned until 10.30 am on Thursday. Thank you.