mechanism and therefore should be banned.

The conclusion of the case, it was more likely than not that the payment system required a form of balancing payment, interchange, but that the participants in such an arrangement could not do so without setting the interchange with reference to cost.

So every time you wanted to revisit on a periodical basis the interchange in the market to ensure it was correct, there would be a requirement to undertake a cost study.

So from Edgar Dunn's perspective that is where our methodology originated from. We looked at if there is an imbalance in the card payment system, it must because there is probably something on the issuing side that is of value to the acquiring side. We tried to quantify those; we came up with the methodology we currently apply.

Whenever this methodology was applied in the given market we believe, and we strongly advised our clients, that it would be wise to apply this periodically to update the numbers to ensure you were in line with the market. Because there would be things that are changed, such as interest rates in the market, so the cost of funds, the bad debt, the fraud, these things need to be updated periodically to ensure you are in line with what

happens.

Q. The last point you just made, which seems to be a very valid point, why is it that the last Edgar Dunn cost study is 2008? Why hasn't there been an update?

A. That was because of the European Commission case and the OFT at that stage basically stating that they did not believe the application of the methodology was correct anymore, and therefore MasterCard deemed that it would be -- there was no value in undertaking a cost study that would be rejected immediately.

Q. And that's the reason you didn't do a further one?

A. Yes.

Q. But had they not intervened, you would have advised your clients strongly to update the cost studies?

A. Yes. That would have been very nice for us as well.

Q. If I was doing a calculation for an interchange fee today, I would not be relying on this cost study because, as you say, interest rates change and all that sort of stuff?

A. I would agree.

Q. In fact, it would be rather foolish to calculate an interchange fee based on this cost study?

A. Yes, I think it is outdated.

Q. Yes, thank you.

So let's go to this cost study, and what I want to

do, and again I don't think there's anything in issue here really, it is going through the process, and it is to assist the Tribunal as to the costs that you have taken into account.

If we could go to page 2499. This is at internal page 2, 2499:

"MasterCard commissioned a study to review the relevant cost structures ...(Reading to the words)... interchange costs. The primary objective of this study is to gather sufficient data to be able to calculate statistically representative interchange costs for domestic pay later transaction in the UK market."

So that is basically the background and purpose of the study, to calculate a statistically representative interchange cost?

A. Yes.

Q. Then if we go over the page, we see -- again, we will come onto this in a bit more detail later on because you deal with it -- the study was conducted according to MasterCard's global methodology:

"The methodology measures the cost associated with key activities undertaken by credit and charge card issuers that relate to providing a payment guarantee to the merchants and funding and completing the transaction. The costs measured are associated

with ..."

Then these are our famous friends:

"Losses resulting from fraud and credit risk; non-reimbursed funding costs; operating costs incurred for risk management and transaction completion."

Those are the ones we see time and time again, for example, in the Commission's 2007 decision.

A. Yes, correct.

Q. If one then goes over the page, I think this is 2502. Can I call it internal page 4?

MR HOSKINS: 2501.

MR BREALEY: It is 2501. Okay. So this is the sample size. So this is the representative sample.

If I can just go to the first two paragraphs and then the last paragraph:

"So the overall objective of the sample selection was to achieve a representative sample of issuers across which to measure the interchange costs. As with every sampling exercise, this involves a trade-off between the additional cost of collecting information from a larger sample and the improvement in accuracy of the results that could be obtained from an increasing sample size."

Then:

"Given the cost of collecting relevant information from issuers was unrelated to the size of the

...(Reading to the words)... was focused on the largest issues in order to limit the overall number of participants, while ensuring that the sample included a significant proportion of the transactional volume in the market."
So there you are concentrating on the largest issues and transactional volume, correct?
A. As part of the selection for the study, yes.
Q. Then you go on, I will just ask you about this:
"In other regulatory environments, MasterCard has aimed to measure a majority of transactions in the market to provide a statistically valid sample. For example, MasterCard Europe has agreed with the European Commission that a representative sample for undertaking a cost study in a given market would be achieved if the participating banks would account for at least 70% of the transaction volume in the market. Edgar Dunn & Company has applied the same rationale for the selection of participants in the UK market."
Could you just assist. What was this agreement with the Commission that a statistically representative sample would comprise MasterCard participating banks that accounted for at least 70% of the transaction volume? Where did that agreement come from?
A. That goes back many years ago. That was when we

started, I think it was the 2004 cost study, cross-border cost study, and the Commission, as I understand it, was in discussions with both the major schemes, Visa and MasterCard, about how they collected their data, what the sample sizes were and whether it was representative or not.
They put two requirements in place. One was a minimum sample size that would cover a certain percentage of the market. And the second was that the study process should be audited and that they should be supplied with an audit report on it to ensure that the application of the methodology and the process indeed came back with fair and reasonable results.
We did not change any of our process in applying and complying with this, and in our case Deloittes audited the cross-border studies. And when you see the reports linked to the 2005 and the 2008 studies, what we did was we actually were commissioned by MasterCard to do cross-border studies and for a select number of markets to do a domestic study at the same time.
To do a domestic study at the same time we had a much more specific domestic information data collection set that enabled us to calculate at a more detailed level what happened in the specific domestic market.

So in reference to this, the 70% was a minimum requirement. We have tried always where we could to go higher than that --
Q. Pausing there. 70% was sufficient for a robust study?
A. Well, for the purposes of the Commission. But you should compare that to markets such as -- I will take a small market, Norway. Norway is predominantly small independent savings banks, and you have 400 savings banks for a country of 5.5 million people. It is clearly totally impossible to undertake a cost study of 400 savings banks.
What we would do was to segment in strategies the size of the banks and then pick over -- I believe we had four segments, and we picked representative sample banks in each and then pro rata'd their cost structure to represent over 70% of the market.
Q. Just pausing there. You look at table 1. There is seven is there? There is seven. They are the issuing banks. I mean, they seem quite large to me. Clearly in the UK, even at that time, you had other banks. You had, from memory, Clydesdale Bank, the Co-operative Bank, Coutts, Yorkshire, the building societies, Bradford & Bingely, Alliance & Leicester, we can go on.
Why pick those big seven and exclude the smaller ones?

A. We are seeking representative samples of transactional activity. That's what the Commission asked us to do and that's how we chose the sample.
So as you can see, this was over 90% of all the domestic transactions in the UK. That would be, in all instances I have come across, deemed to be a very representative sample.
Q. So picking the largest you thought was a representative sample?
A. Yes.
Q. If you go to page 7, as with many studies you have to check the quality of the data. So as I understand it, you are telling the reader, me and the Tribunal and the others -- and this is, for example, the last line on page 7 -- that you draw on your extensive experience in payment service and utilised statistical methods basically to validate the quality of the data.
Can you assist the Tribunal how you go about ensuring that the quality of the data is achieved?
A. Yes.
Q. But why is that? Is that because of some sort of self selection bias? The issuers here know the reason that they are giving the data, I guess. They know that it is going to go and form the basis of an interchange fee?
A. You could argue that. In our case I think it is just as

much if we are going to put our name on a study you want to make sure that that data is correct. We are not just going to accept what people tell us.
Q. Right.
A. So we have several levels of analysis to undertake. The first is that we ensure that the data sources they use for costs are linked to their internal cost mechanisms. So they are cost centre reports; the P&L basically for the organisation. And we know where the data came from.
The second is we then ask for a whole range of activity numbers around that. So we might ask for, or we would ask for the number of applications received, the number of those that have been approved, the number of cards issued in a given year of which how many were new cards, how many were replacement cards, in terms just they expired and renewed, and how many were ad hoc renewals.
And by looking at what we call performance statistics around the bank, we would be able to see outliers.
So if we saw a bank, for example, that had very low customer recruitment cost, we would be looking for a reason for that. And we would be trying to understand whether it was operational, whether it was they ran some kind of very successful recruitment programme that could

explain that low cost there, and if they did that that was all right.
Q. So you are looking for outliers, are you?
A. We are looking for outliers as well as understanding the organisational structure of them. You know, how big is the department they're running and how many applications are they running through it. Do they outsource, and if they're outsourcing does that look as if it's expected to be in that cost range for that volume of business that they are outsourcing.
Q. I see. Even after that, drawing on your expertise, as I understand it you get the cost study audited by, or you did, by Ernst & Young; is that right?
A. As I said, this was the EC Commission that requested that the study should be audited. It was a complete independent process.
I think Deloittes -- no, it was Ernst & Young, you are absolutely right. Ernst & Young told us -- we informed them: here is the study, here is the scope of it. They then told us what they wanted to do in terms to audit the study. So they looked at our questionnaires, the models we built, they participated in member banks, they looked at the audit trail documentation we had built so that if we had a question on some cost we could go back and say you reported this,

that and the other, can you just check these areas because there seems to be something that looks odd, either too low, too high, whatever it might be.
They then looked at our -- in detail we submitted the cost model to them and they had some Excel auditors actually run through it in detail to make sure there weren't any wrong links or anything that was going on.
So it was a very hands-on detailed audit process developed for the benefit of the Commission. We never saw the report. It was submitted to MasterCard and I believe then submitted to the Commission together with our study.
Q. I see, thank you.
Now, I would like to go to the categories of cost, which is clearly important in this case. And I just need to ask a few questions on these types of cost. I would like to go to -- first of all, if we just --
Taking it in stages, 2506, which is internal page 9. And I'm actually going to go to page 12 ultimately, but we will get the feel of what's going on at internal page 9, 2506.
From the total costs collected, the costs were allocated into cost component categories associated with providing issuing services.
Then you have table 2 where we have our famous

friends, the credit write-offs, collection department, fraud losses, fraud investigation department, funding costs, processing costs. We are going to come onto those in more detail in a moment.
Then over the page, again we see table 3:
"These cost components ..."
Again, the famous friends:
"Actual credit write-offs, collection department, fraud losses, fraud investigation, funding costs."
Then:
"Transaction costs", number 6, is split into 12 subcategories. Yes?
A. Yes.
Q. I know it is a long time ago --
A. No, no.
Q. You are probably well aware of it. Then over the page to internal page 10, 2508 --
MR JUSTICE BARLING: Page 11, actually.
MR BREALEY: Is it? I will blame Mr Spitz. It is internal page 10. No, 11, sorry.
The internal paragraph:
"The cost analyses with the model are conducted on a purely historic basis with no forward-looking element applied."
What does that actually mean, "no forward-looking

element applied"?
A. Because the question has been asked before. What if you expect in the next two years we are going to see a downward trend in funding costs, for example? Why wouldn't you build that in?
Q. Yes.
A. The reason that we have always preferred to take purely historical data is in the hypothetical case that you predicted wrongly, that a development might happen on interest rates or bad debt or something, let's assume that we predicted too low an interest rate and it was in fact higher, what do you then do the next time period you are doing a cost study? Do you ignore that? Do you try to recover the under recovery? You end up potentially in a purposing effect, and therefore we just went on purely historical data. And as long as it is updated in a reasonable time period, that's probably the best you can do.
Q. Thank you.
So then we go to internal page 12, which is a table. What I would also like you to do, please, we are going to have a look at that table, but also could you go to bundle D2.1, tab 3, page 550 and 551.
If we put that to one side, but I will be coming to that in a moment. Just so you know, all these figures

are agreed. It is essentially, just to let you know, CEG is Sainsbury's expert in this case. It is table 8.1 and 8.2 we will be looking at, but the figures come from -- we see the source, table 8.1, Dr Niels' first expert report.
A. Yes.
Q. You've probably met Dr Niels. He is the expert for MasterCard.
Table 5.1. Essentially if you go to table 5.1 and 5.2, all that CEG is doing is replicating Dr Niels' figures. But these figures, you will see, are very similar, if not identical to the figures in this 2008 cost study report.
Now, we have, just to be careful, table 8.1, MasterCard would prefer to keep confidential. So that is the reason they are in blue. But the figures in table 8.2 are not confidential because essentially they are aggregated, yes?
A. Yes. They look similar.
Q. I want to go through the categories of cost, and going back to your report, so the 2007, what we need to do is keep a finger in internal page 12 and internal page 16. Internal page 16 --
MR JUSTICE BARLING: Sorry, Mr Brealey, just for my note, did you say that these were the same as the ones in

tables 2 and 3, or in the summary table, or -- probably both, I suppose -- in the EDC report?
MR BREALEY: Yes. So the figures -- I'm going to get the numbers right --
MR JUSTICE BARLING: The figures in 8.1 and 8.2.
MR BREALEY: Yes, we are going to go through that in a moment.
The figures in the table on page 12 we shall see will reflect the figures in table 8.1.
MR JUSTICE BARLING: Right, thank you.
MR BREALEY: These are confidential so I won't read them out, but if you compare 8.1, credit write-offs, and we are looking at 2008 not 2005, so if you have a finger under credit write-offs, the percentages is almost -- it is rounded up. Collections department again is the same figure. So we are looking at the 2008 study, total fraud costs.
In table 8.1 that figure is the combination of the total fraud costs and the fraud investigation department. So that is why it is -- then, you get the total direct risk control, and then you have the funding.
So if you look at table 8.1, the funding costs for 2008, the figure is almost identical, except that (iii) has gone right at the end because you have rounded down.

Then the processing costs, if you go all the way down, so you have got those -- I think those ten subcategories. You end up with a figure in table 8.1 which is equivalent to that subtotal processing.
How it goes is this table 5.1 of Dr Niels' and table 8.1 of Mr von Hinten-Reed's. But the figures are the same. That's the kind of ... (Pause)
I think you can put D2.1 away now if you want to.
It is important to know the relevance of this to the experts. So, again, these figures are in blue: We have actual credit write-offs and we get a definition of that on internal page 16. So actual credit write-off, net of recoveries.
So this says:
"The cost category relates to actual net credit write-offs of balances on accounts considered to be uncollectable during the year. The average cost of actual credit write-offs is ..."
Then we blue that out.
Can you explain in a little bit more detail what "actual credit write-offs" mean to the Tribunal?
A. When a customer initially goes bad, as it is termed in the industry, you have a front end collection process, which is typically people up to two to three cycles bad, up to 90 days. You try to work them in a polite manner

and try to just convince them to make payments in accordance with the agreement. That's called front office.

Then you have the back office collection team who are typically people three cycles over get transferred to, and that is when you start doing actual collection cases. And they are regulations enforced in the UK as to how long you can have an account sitting in the back office collection process before writing it off if you don't make any progress on collecting on it.

So you can have a voluntary repayment agreement with the customer, in which case it doesn't get written off; it is actually a worked account. But if it is one where you have made no progress, you will have to, after a certain time period, write it off and it goes into the P&L as an written off account. You do not have to stop working. You can have an unexpected recovery, which is why we net those off from the actual bad debt that's been collected.

Now, the UK is one of the more developed markets. There are certain, for example, Eastern European markets, there's no guidelines as to when do you have to write an account off. And therefore, these figures can be quite difficult to determine. The UK is very clear.

Q. Let's be clear on that, then. If I kind of buy, I don't

know, a mobile phone for £100 on a credit card, and I don't pay it off at the beginning, so I start paying interest, and let's assume I pay £10 interest, but then I default. Do you write off the £100, or the £90?

A. From memory, I -- this is a long time since I have looked at it so I will stand corrected if I'm wrong on this. But from memory, I do not believe you are allowed to record interest payments as bad debt.

Up to the point where the account went into -- I'm trying to recall it. I think up to the time when the account goes into collections, the interest can accrue to the account. Once it is in collections, you can no longer have interest charged or written off to it.

But I will stand corrected on that. I really cannot recall off the top of my head what the rules are in the UK. I could find out if that helps.

Q. You may have to assist MasterCard on that at some point, but you can't remember whether --

A. The data we collected was in compliance with the UK regulations as to what could be written off or not written off in your accounts. These are the audited accounts by the participants in the studies.

MR JUSTICE BARLING: Just remind me, these regulations, are they accounting or banking regulations or just consumer credit --

A. I think they are consumer credit regulations. They are part of the credit licence regulations and banking regulations, I believe.

MR JUSTICE BARLING: Maybe take a break in the next five or 10 minutes, whenever it is convenient, just so the transcript writers can have a rest. It is up to you when.

MR BREALEY: Yes. If I have got, say, 10 minutes --

MR JUSTICE BARLING: Sure.

MR BREALEY: Then I can finish. Not finish, but finish Mr Sidenius 1 and then I have got to go on to Mr Sidenius 2.

MR JUSTICE BARLING: Right. That's probably a natural --

MR BREALEY: A natural break and I will try and hurry this up a bit.

MR JUSTICE BARLING: Don't feel you have to.

MR BREALEY: That is the actual credit write-offs.

If we go back to internal page 12, page 5081. So we have done actual write-offs. Now we have collections department. That's the next one on the list. Again, if we go back to internal page 16. I'm going to flip to and fro in these pages.

The collections:

"Collections relate to the cost of monitoring and managing the collection of outstanding and past due card

receivables [ie debts] ...(Reading to the words)... telephone calls to cardholders whose payments are past due, the amortisation of equipment and systems used solely by the department, or the relevant portion of shared equipment and other related costs. The cost category does not, however, include head office and other corporate level costs allocated to the collections department."

Is there anything you can add to that to assist the Tribunal as to what is meant by collections, or do you think that is a fair summary?

A. I think it is a fair summary. It is basically once an account goes into default, then -- and that delinquency -- I should probably use as a term rather than default. Once it becomes delinquent, so payments have ceased to happen on the account, then you start working it. You send either reminders, nowadays emails, telephone people, not at 6 o'clock because that has been banned now, but you try to contact them politely to make them make a payment. And as I said, if it then continues, there's no progression in getting any payments on the account then it goes to back office and then you start initiating legal proceedings.

Q. So that is the collections department. Then can we just park total fraud costs and fraud investigation

department and go to the funding cost, which is on internal page 2, (ii). The funding costs. Yes?
That is defined on internal page 16.
Again, funding costs:
"These are non-reimbursed funding costs represented by interest expenses the issuer incurs to fund the cardholder receivables from the time of posting to cardholder account or cleared funds settlement with the acquirer, if this is earlier, until payment is received from the cardholder or interest begins to accrue if the cardholder revolves the account ...(Reading to the words)... sixty days."
Is there anything you can add to that definition as to what funding costs would amount to?
A. They are -- there are -- those balances that do not generate any interest income for the issuer. So a revolving account generally. If you post a new transaction to the account that revolves from day one, it accrues interest. So the costs of that are not covered, the revolving outstandings are not included in this amount either. And the rule of thumb if you go around Europe is that, sort of two-thirds, 60%, 70%, 80%, 75% are revolving balances, and the remainders, so the minority of outstanding balances, are not incurring any interest income for the issuer and would be the free

funding period costs that we measure here. And they support approximately two-thirds, 60%, two-thirds of accounts.
MR JUSTICE BARLING: Sorry, I'm not quite sure -- does all that mean that the funding cost here is the free --
A. Purely the free period, that only some of the customers benefit from. But the vast majority of customers.
MR JUSTICE BARLING: Yes.
A. So as I said, about --
MR JUSTICE BARLING: Sorry, why do only some benefit?
A. Because those that are paying interest will be charged interest from day one on transactions as well.
MR JUSTICE BARLING: I see. If you have been revolving, you have got a revolved debt on your card, you don't get the 28-day, or whatever it is, free period?
A. No.
MR JUSTICE BARLING: I follow. Only those who are --
A. Full payers.
MR JUSTICE BARLING: Who pay off get that free period.
A. That is correct.
MR JUSTICE BARLING: I see. I hadn't appreciated that.
MR BREALEY: Is it not the case that two-thirds of credit card users are revolvers?
A. No. Balances, yes. Only about one-third of account holders revolve. Probably in the UK 35% to 40%, I would

say, revolve, but as a rule of thumb going around the world. And if I do a portfolio evaluation and I look at the convenience users, as we call them, I expect them to be about two-thirds of the accounts and I start asking questions if they are not. And for outstanding balances if I see much less than two-thirds revolving, then there's something to question on the valuation of that portfolio as well.
MR BREALEY: I think I'm just about to go on to the second witness statement, so maybe that is a --
MR JUSTICE BARLING: We will take a short break now.
MR BREALEY: Thank you.
A. Thank you.
MR JUSTICE BARLING: Thank you very much.
Mr Sidenius, have a wander round by all means, but don't talk to anyone.
(3.08 pm)
(A short break)
(3.20 pm)
MR BREALEY: Mr Sidenius, I'm moving slightly out of my depth here because we are going into economics, but can we just again -- my Lord, you may have been handed that. I'm going to take the witness through this document.
MR JUSTICE BARLING: Right. Thank you.
MR BREALEY: It puts as best we can what Mr Sidenius says in

his second statement.
MR JUSTICE BARLING: Right.
MR BREALEY: Just to kind of flag where we are going to put that pie chart in context, have you still got your first statement open?
A. I do, yes.
Q. At paragraph 5 onwards for a few paragraphs, you refer to the cost study methodologies. You refer to, for example, paragraph 6, that you have used two main methods for assessing interchange costs associated with payment cards. The proxy method, we could say, is the issuer's cost methodology?
A. Yes. That's your terminology.
Q. And the Baxter methodology you say is based on a -- proxy, whereas the Baxter-style methodology is now used to measure debit cards and the Baxter methodology involves the measurement of the end-to-end costs involved in a payment card transaction.
So it is looking at end-to-end costs, issuers and acquirers. And you say that you have applied the proxy method, ie the issuer's cost, to credit cards. Can you say correct or not, because a nod --
A. Sorry, a nod doesn't work. Correct.
Q. But then you flagged in paragraph 10 of your statement that you have:

"... applied our proxy method in payment card cost studies for many years. However, during the course of the OFT investigation into MasterCard's pay later interchange fees in the UK, we did carry out a mini and maxi Baxter-style analysis of credit card costs.

"The end result," you say, "was close to the existing UK domestic pay later fees in place."

So that was paragraph 10.

Just before we go on and flesh some of that out, you are aware, of course, that the OFT and the European Commission have not found favour with the Baxter methodology? There is quite some considerable debate in both?
A. The way that we use the Baxter methodology, in our view, and I am aware that they have preferred to use the merchant indifference test finally, but they have been using different methodologies. They used what we call the proxy methodology, the issuer as a reference, as you have also referred to before in the Visa ruling.
Q. The Visa exemption decision?
A. The Visa exemption, sorry. We felt, if anything, that was a form of endorsement of the analysis we had done. The Baxter analysis they perhaps don't agree in the same way.
Q. Yes. So we have paragraph 10, and then, as it may have

been explained to you, we were talking about interest and the European Commission in its decision and the General Court saying that you had to take interest into account when you are looking at proxy or the issuer cost methodology. So you are aware of that issue, yes?
A. That wasn't the driving cause for the analysis we did here.
Q. No?
A. The question we were trying to answer was the proxy methodology, as we referred to it, which was developed, as I said, as an outcome of the NaBANCO case where we had to have a cost base reference for making decisions on interchange. And as I said, we looked at what would be fair and reasonable to say is of benefit to the acquirer that they can provide to the merchant that indicates why they are willing to pay this amount that's needed in a four-party system.

But the question that came was: well, how do you know that that is reasonable relative to the economic theory? And the economic theory, having been written up by William Baxter, who actually was with the Department of Justice during the original NaBANCO case, and so he took five years to write up his economic theory --
Q. He must be a very disappointed man, yes.
A. Possibly. But when we then looked at what could we

benchmark the proxy methodology against, we decided that, well, if we were to apply the Baxter methodology, which is to say let's measure the end-to-end cost, let's try and get a measure of demand, and by using revealed willingness to pay, which is the pricing that exists in the market, we cannot prove, and we never intended to prove, and we also -- I had several discussions with economists -- it is near on impossible to prove optimal output. But we could certainly prove for this point in the demand curve whether the distribution of costs reflected what the proxy methodology came up with, and that's what we intended to do.
Q. Okay. Well, let's just then go to your second statement, which is at tab 8. We will need to go also to -- that E bundle can go away. I think they have been put in E3.13, which is the annexes to your second statement. E3.13. As I understand it, it is tab 261. So the recent documents are more or less at the back. We can go and have a look at a few -- so it is E3.13, tab 261, which is your mini Baxter, as I understand it.
A. Yes.
Q. We are going to have the pie chart in front of us. If I just explain, if I'm looking at the pie chart, if I just explain what this is trying to do. So as I understand it, Mr Sidenius, your second statement came

about because of a question by Mr Justice Barling which related to interest payments. Are you aware? Was that explained to you?
A. Yes, it was explained that a question on that had arisen and had we ever done any work that looked at the revenue side.
Q. Correct. If you look at the footnote of the first page of this, this is the passage that we have seen a few times in these proceedings now from the General Court.

So I'm looking at the pie chart thing, where the court says:

"As the Commission has pointed out, in essence it is sufficient to note that it is based [that is the second assumption] on a partial presentation of the issuing and acquiring business taking into account only the costs borne by the issuing bank and omitting the revenues for other economic advantages they obtained from their card issuing business, notwithstanding the latter's importance."

One way of looking at this -- and we would say that's clearly what the Commission had in mind because it rejected the Baxter analysis of willingness to pay -- is that, and you will see this from the front page, you have got to take the issuer's revenues into account by netting off. Do you understand what I'm talking about

there?
A. Mmm.
Q. Again, Sarah Love is responsible for these pie charts, not me. But the reference to pie comes from Professor Beath, which is where we got the idea from.
PROFESSOR JOHN BEATH: Statistically they are called pie charts.
MR BREALEY: So the issuer's costs pie. So these are the costs that we have been talking about: funding costs, the fraud costs, collections department, processing. So that is the pie of the issuer's costs.
Then we have the issuer's revenues pie, and so you have net interest, income, about three-quarters, interchange. This comes from a MasterCard slide; we have given the source there. Yes? Again, certainly as far as the MasterCard slide is concerned, we haven't challenged it.
Would you accept that if you were to take the whole of the interest that is paid to banks, which is in the region of about £8 billion, that is another slide that you have seen there, 8 billion -- would you say that they would exceed the issuer's costs of providing the credit?
A. Providing the credit?
Q. Look at the issuer's pie there. And then you compare

that to the interest payments and other economic advantages. I would suggest to you it is plain as a pikestaff that the revenue that the banks receive in interest payments and other card fees far exceeds the costs that they incur, funding costs, processing costs fraud costs.
A. The costs -- the revenues would exceed the costs, I would agree with that. Whether they do it to the extent that they generate a required return is a totally different question, and whether you would be in the business or not.
The second point I think I would add there, because I'm guessing where this is going is that that revenue, the interest revenue derived from the lending comes from the minority of the cardholders, and if we are talking about whether that should be offset against transactional activity, then we are cross-subsidising one set of customers from another, I'm not sure that's a fair interpretation either.
Q. Right. You mentioned the two-thirds point. I would like you to keep your finger, or if you have a pencil or something, or a pen -- I don't want to abandon that tab.
A. Yes.
Q. If you go to tab 249, you have mentioned this one-third a few times now, and it is at page 5315. Do you see on

the left-hand side there is a figure? As I understand it, Mr Sidenius -- don't read it out because, as I understand it, MasterCard regards it as confidential.
Do you see that you could be wrong on that one-third figure?
A. I would think that whoever provided this slide has got his title wrong.
Q. Right.
A. I absolutely would reflect it for balances, not for consumers, cardholders.
Q. So, whatever --
A. If it said two-thirds of all credit card balances are revolving, I would agree.
MR JUSTICE BARLING: So you are distinguishing balances from consumers, from customers?
A. Yes, from users of transactional services.
MR BREALEY: Now, as I understand it, when we go to your second witness statement -- so if we can flip forward, back to tab 262.
A. Yes.
MR BREALEY: The exercise that you have done in this --
MR JUSTICE BARLING: Sorry, while you are looking for the place there, I just want to be absolutely sure what you are saying, all users of transactional services. How do you distinguish those again from credit card customers?

A. I was looking at the slide as I was closing it. I noticed that they had interest bearing, pay down customers and then they had pure revolvers. If they had done that analysis over a full year, it is not impossible that that chart could be correct. So I grant you that.
At any given time, when you ask who are paying interest on the accounts, what the interest bearing accounts are, month by month, which is what we do in our analysis, it is roughly one-third, maybe 40% of accounts that incur interest every month. The rest of them -- and people transit into that proportion and out of it again, but typically about 60% will not be paying interest.
MR JUSTICE BARLING: In any given month?
A. In any given month. Then, because people who are revolving are using up part of their available spend limit, they tend to transact less. So you will find the people who pay in full are higher transactors; they use the transactional services on the account more than the people who are paying interest. Which is why I was saying that if you then start saying that the interest bearing balances should pay for the transactional services you are effectively forcing a subset of the customers to cross-subsidise the transactional activity

of the others.
You may take the view that that's an inherent product feature. You may also perhaps argue that if you had a lend business that transferred the loan balance into a separate account apart from the transactional account, you would have pure transactional cost to support in the other business. You, of course, have less collection cost and less bad debt, but that would be equivalent to a charge card, which you see in a number of European markets.
MR JUSTICE BARLING: Thank you.
MR BREALEY: So if we can go back to -- did I say 262? 261, which is your --
A. Yes.
Q. Which is not the draft one. This is the mini one.
These were prepared -- these are quite old -- in 2002. These were prepared for the OFT proceedings, as I understand it?
A. That was correct. The mini Baxter -- we had a timeline to submit the data and that's why we undertook the mini Baxter, because we could complete that in time by having a small sample on the issuing side. And post the submission, we prepared the maxi Baxter which had a bigger issuer sample, more representative, and submitted that to MEPUK. And as I understand, they

submitted it then to the OFT for information afterwards. And I do believe the OFT refer to it.
Q. They actually refer to you as well --
A. I was there, I know.
Q. I don't need to go to it, but it is E1, tab 3A, page 250A.003 for the Tribunal's note, footnote 745. You seem to have answered a question or given evidence. I might come back to that a bit later on.
But before we get to what you have done, the point of the first page of this pie chart is to show how it may be understood about taking into account revenues and netting it off.
Now, when we get to what you have done in your mini Baxter, you have not netted it off?
A. No.
Q. And the reason that we have done these -- you might have to help the Tribunal. I will do the best I can.
The steps that you have done in order to achieve an interchange fee, I will kick off and then you tell me if I get it wrong. What we have done, taking your witness statement and then the Baxter report, there seems to be five steps, so bear with me and if we get it wrong then please tell me.
The first step -- and this is at internal page 11 of this report, 5561. So if you go into your report, so

ultimately you are coming up with an interchange fee which you say is broadly similar to the proxy method. It is essentially what is happening here, correct?
A. Yes.
Q. So the first step is that you have got to create the pie, but here you don't just create the issuer's cost pie, you have an issuer's and acquirer's cost pie. And one sees on page 5561, internal page 11, the ingredient, if I can put it that way, of the issuer's part, which is far more than the three types of, or the costs --
A. Yes.
Q. Then we also add into the mix -- this is page internal page 12, 5562 -- acquirer's cost. This is going into the pie, and one of the acquirer's costs you will see there is the merchant service charge, which is the interchange fee.
A. No. That's not an acquirer cost.
Q. Sorry. I beg your pardon. The merchant service. We come onto the interchange fee. You are absolutely right, in the revenues part.
So the issuer's and acquirer's cost pie, we have the acquirer's cost on page 12; is that right?
A. Yes.
Q. The merchant recruitment, authorisation processing, merchant servicing. So that is how we get the pie.

Then, I was jumping ahead of myself, we have the issuer's and acquirer's revenue pie.
A. Correct.
Q. We get that from page 15. So the issuing costs, that is the first bullet point, is the card fees, interest revenues, late fees, over limit fees, other revenues, correct?
A. That is correct.
Q. And then the third bullet, that's where we get the merchant service charge, the interchange fee. So the interchange fee goes into the revenues pie?
A. Correct.
Q. As you are aware, that's one of the things that the OFT objected to, yes?
A. Yes.
Q. So the interchange fee goes into the acquirer's pie, and that's why that 28% is quite large. But we then go on to the third stage, we have to slice the cost pie in the revenues ratio. And pausing there, we don't actually know, do we, what the size of the revenue pie is. So although we have --
A. No, there was very good reasons for that. That it was felt that it would be anti-competitive to reveal detailed revenue information. Especially the acquiring market was quite -- what do you call it --

Q. Sensitive?
A. No, consolidated. Quite --
Q. Aggregated?
A. Well, no, there were about three players who had a very significant market size, and if they backed their own revenues out of the analysis then we would be signalling basically. So that is why we just purely put the splits down.
Q. You would appreciate for someone who is trying to replicate it, whereas the cost pie we can see the pence, we don't actually know what the actual size of the revenue pie is. We get your percentages, but we don't actually know what the ingredients are.
A. I regret to say that was on legal advice.
Q. Right. But you are where you are?
A. Yes.
Q. But it is very difficult to replicate, you would agree with that.
Then the third stage is slice the cost pie into the revenue ratios. This is at page 14, as I understand it.
So at the bottom, you say:
"Given that both issuing and acquiring are highly competitive, the proportion of revenues contributed by cardholders and merchants has been assumed to be a good estimate of the relative margin of willingness to pay."

This is a buzzword that comes in. You are trying to work out what is the relevant marginal willingness to pay, correct?
"For both approaches the marginal willingness to pay was determined by the average issuing and acquiring revenues, excluding interchange revenues and costs of issuing and acquiring respectively."
So that is the third stage: slice the cost pie in the revenues ratio, correct?
A. That is correct.
Q. You say, and we set out what you have said underneath the first point which is:
"The proportion of revenues contributed by cardholders and merchants has been assumed to be a good estimate of the relative marginal willingness to pay."
Essentially you are taking the percentages and what you are saying is that's a proxy for the willingness to pay?
A. Yes, or the demand.
Q. Demand, yes. I don't know whether this is confidential now, but you end up with a certain pence.
A. Yes.
Q. Then the fourth step is to subtract the acquirer's costs --
MR JUSTICE BARLING: Sorry, can you just tell me where that

something pence is again that you were referring to just then?
MR BREALEY: Yes. If you take our pie chart first --
MR JUSTICE BARLING: Am I looking at the pie chart or the Baxter analysis?
MR BREALEY: If I take my Lord to the pie chart first. So 3 "Acquirer share to pay". So the percentage times --
MR JUSTICE BARLING: I was following the Baxter analysis, sorry, rather than your handout.
MR BREALEY: I see. So in the Baxter analysis if you look at page 16, after "determining the optimal multilateral interchange fee", we see "full service approach", the MIF equals --
MR JUSTICE BARLING: That.
MR BREALEY: -- the pence. Now, that pence, just so that you -- if you go back to page 12.
MR JUSTICE BARLING: Yes.
MR BREALEY: Where it says "total payment system costs".
MR JUSTICE BARLING: Yes.
MR BREALEY: Is 2 ...
MR JUSTICE BARLING: Yes, I see it. That is the same as MIF there?
MR BREALEY: Yes. Then you have your percentage. Then you are going to minus the costs -- so you are now going to take away the total acquiring cost at page 12 again.

MR JUSTICE BARLING: I get it now. Now that I realise you were actually looking, when questioning Mr Sidenius, at the handout rather than the -- that's fine.
MR BREALEY: So the step forward, subtract the acquirer's costs. And then at 5, divide by the average transaction size. Then you get the MIF at the end.
MR JUSTICE BARLING: Yes.
MR SMITH: Mr Brealey, when one is talking about cost of funds, that is the cost to the bank of advancing all of the credit to the cardholder market?
MR BREALEY: I think that is correct.
A. That is correct.
MR BREALEY: It is a much bigger cost pie. Yes.
MR SMITH: So we see that it is on the second page, issues cost funds -- I don't know if I should say it -- but the figure is there in dark blue on the first issuer's and acquirer's cost pie. But it is not present on the one on the first page, the issuer's cost pie, where the only funding costs are the costs of the credit-free period. Would that be right?
MR BREALEY: So Mr Sidenius, maybe you could help.
A. The first pie, although it references different materials, that's taken from the previous proxy methodology. This is only the free period funding that's included in that number.

MR SMITH: So under the label "Funding costs".
A. Yes.
MR JUSTICE BARLING: That's only the free period?
A. Under pie 1, that is correct. And on page 3 the funding cost includes extended and free period.
MR JUSTICE BARLING: On pie 3.
A. On pie 3, yes. Actually, pie 1, the second one --
MR SMITH: Yes, on page 2. We need to number our pies, I think.
MR JUSTICE BARLING: So pie 3 includes the total cost of credit; is that right?
A. Yes, outstanding balances.
MR SMITH: As you say, it is a much higher figure. That's what I was expecting.
MR BREALEY: Are you happy, my Lord?
MR JUSTICE BARLING: Sorry, just remind me, Mr Sidenius, in pie 3, the acquirer's share of that total cost that you see in percentage terms, what does that --
A. It represents -- and this is -- it is an interpretation of Baxter's theory where he says you take the marginal cost on both sides and add them up on the marginal transaction. Then you look at the marginal demand and you can get the split of who should carry how much of the cost to socially optimise the output.
And apologies, I'm not an economist, so please

correct me if I get it slightly wrong. So what we did was we are not working on marginal costs, but we work on aggregate cost in the market. We are looking at the whole issuing side and the whole acquiring side, and then we look at the revenue split as a proxy for the demand knowing that we are not proving optimal output because that is virtually impossible. I think most economists that I have discussed it with have said that is an incredibly hard burden to try and prove.
But we are using the revealed willingness to pay as a point on the demand curve, that says accepting this is a point on the demand curve, we end up with this type of split. And what we have come out with is, you know what, it is not a million miles from what we have with our proxy methodology. So insofar as you accept that the market is competitive and has worked til now, it seems to be reasonable what we have done. And that was the objective for doing the study.
So we are not trying to be socially optimal, we're not trying -- we are just trying to see does the proxy methodology actually replicate if you try to do a Baxter methodology on it. Regardless of whether the OFT accepts the Baxter methodology or not, that's what we set out to do.
MR BREALEY: So you didn't set out with this methodology to

measure a link between a MIF and any efficiency gains?
A. No, we couldn't do that. As I said, you cannot measure just easily what the optimal output would be. Socially optimal.
Q. So it wasn't an article 101(3) analysis?
A. I don't believe so. I'm not sure what article 101(3) is specifically. So ... I believe it is about --
Q. It is about efficiencies and benefiting --
A. Yes.
MR BREALEY: I have got no further questions. Thank you very much, Mr Sidenius.

Questions by THE TRIBUNAL

MR JUSTICE BARLING: Just one question.
MR SMITH: Sorry, Mr Sidenius, just looking at the figures on pages 11 and 12, where do they come from?
A. We designed an end-to-end activity base costing methodology which followed a life cycle approach to managing the relationship on both the issuing and acquiring side.
So if we went through the issuing side, it would be the first step is account recruitment, so it would include any marketing, specific marketing to get accounts, you score the accounts, you decide whether you want to offer the client a card, if you do so you create their account on the master record.

The second stage is issue a card to them. Then there is an authorisation process because hopefully they start using it. Then you have clearing and settlement, which comes -- the transaction comes in and out, also called interchange in many areas. So that is a bit confusing. Then you have cardholder billing. Then after that, cardholder service, because the bills result in people calling the cardholder centres.
After that we have collections, payments that come in. Then we have collections after that; that's for those who don't use the payments function. Then we have fraud, also referred to as those customers we never knew we had. Then finally, we have the overhead function of the business. So that is the whole activity where people are engaged in the function.
And then you have indirect costs. They are only indirect insofar as there is no activity that drives them, but you have to have them to run the business. So they are funding costs, write-offs, scheme membership, and stuff like that.
So we use this activity-based method to go out and collect costs from the participants in the study, again using the same data quality measures. We went back to the P&L, we used their activity-based costing models to refer to allocations of cost. Then we built our quality

control models that looked at performance ratios and stuff like that.
MR SMITH: Taking cost of funds, that would then be derived from the accounting documents of the sample you were looking at?
A. Absolutely.
MR JUSTICE BARLING: Mr Sidenius, going back to when we were looking at the 2008, I think it was, report that you prepared for MasterCard or for the Commission, or both, you said that it was necessary to do fairly regular updates of costing of that sort because they did fluctuate over time.
Are you able to sort of give us an indication -- you may not be able to -- of where you would expect to see, which particular heads of costs you would see most likely to reflect some changes and others that would be less likely to?
A. In the proxy methodology depending on the economic cycle we would see cost of funds vary quite considerably, and we can all remember the horrible times in the early 90s when they were very, very high going down to exceptionally low levels now, but also bad debt which doesn't necessarily have to follow the cost of funds. It could be like now, very cost of funds but we had some very high bad debts recently.

We would see those change over time. Many of the others, fraud varies because the fraudsters change their methods all the time, so sometimes they go up. Then you have a counter measure, they go down again. So they cycle a bit. And then the processing charges generally, we would see efficiencies of scale come in and also process efficiency come in to see them lower.
The two others, the cost of funds and the bad debt, would change quite considerably. We have throughout the time of us doing studies, the measured proxy methodology results vary from the upper range, which is the number that we had looked at here, to ranges that have been at about 50% or 45% of that previously.
MR JUSTICE BARLING: Over what sort of period.
A. That would be back in the sort of early mid-1990s, I would guess, that we were looking at that before we had the first real --
MR JUSTICE BARLING: But they would increase by 50% over what period?
A. This was over, like, eight years, nine years they went up that much. But that was, as you could see, bad debt, for example, that was kicking in very severely here. And also the methodology, and I think there is some relevance in the observation that we measure what we recommended was a cap. Based on our proxy methodology,

you should not surpass this cost on average of your transactions.
But it was not what went into the market necessarily, and insofar as it didn't go into the market, it is, if anything, an indication that there are competitive pressures from one or other side of the payment activity who are managing to keep it below a measured cost level.
But that is if you accept the proxy methodology, and I accept that there are some regulators that wouldn't. And I also accept that OFT didn't accept our Baxter methodology of proving there was a social optimal outcome of what we did. But as I said, that wasn't what we were trying to prove.
MR JUSTICE BARLING: Thank you very much.
PROFESSOR JOHN BEATH: I don't have any questions.

Re-examination by MR HOSKINS

MR HOSKINS: I would like to take you back to the first part of your evidence, and you talked about how different size banks could have different levels of costs, and you gave Norway as an example with that.
A. Yes.
Q. If it is possible to generalise, are costs for small banks generally higher or lower than for large banks?
A. Generally they are higher. They are less sufficient.

MR HOSKINS: No further questions.
MR JUSTICE BARLING: Thank you very much, Mr Sidenius.
A. Thank you.

(The witness withdrew)

MR JUSTICE BARLING: There we are. Is that it for now?
MR BREALEY: Yes.
MR JUSTICE BARLING: Where shall we put the helpful pie charts? We haven't got a sort of addendum bundle, have we?
MR HOSKINS: You can put it behind his second witness statement.
MR JUSTICE BARLING: Okay, we will do that, behind tab 8.
MR HOSKINS: Just to confirm, we are not going to see you for a while.
MR JUSTICE BARLING: Yes, just remind me. We are not seeing you tomorrow, and then we are not seeing you until --
MR HOSKINS: It is 2 pm Thursday next week.
MR JUSTICE BARLING: It is rather a long time, isn't it?
MR HOSKINS: I presume it's Mr von Hinten-Reed who's giving evidence first, but that can be confirmed.
MR BREALEY: I can confirm that he is.
MR JUSTICE BARLING: So we will resume again next Thursday at 2 o'clock.
MR BREALEY: Yes.
MR JUSTICE BARLING: And with Mr von Hinten-Reed. And

I suppose I will ask you just for the sake of anyone in court who is thinking of coming, we are presumably likely to spend at least some of the time -- but I don't know whether we are in camera, are we, or --
MR HOSKINS: I haven't looked at my notes to see how many blue bits are in it because I did my notes and then someone put blue bits on it. I haven't focused on it, I apologise. I'm not able to say a week in advance.
MR JUSTICE BARLING: What is your feeling in terms of how much if any --
MR HOSKINS: Let me speak to Mr Leith because he's looked at how much confidentiality there is in the questions.
MR COOK: While Mr Hoskins is doing that, in relation to Mr Reynolds, who deals with interest points and consequently considers a lot of Sainsbury's data, as matters presently stand, that is, unfortunately, all going to be in camera.
Having read again through his witness statements, or his expert reports, this morning, I have very strong concerns about the way in which Sainsbury's has chosen to say that very large sections of this are confidential. For example, sections with kinds of economic theories on this, which have been blocked out as confidential.
It doesn't seem to me that those are ones that are

legitimately confidential, and I was going to engage with the other side after this to try to see if those could be narrowed down. I understand if there are particular numbers, that those are ones that should be kept confidential, and if it is only individual numbers, as we have been doing today, it should be possible for me to cross-examine without needing to say: that says 98, because we don't need to be asking questions about the specific numbers.
At the moment, almost the entirety of the report is yellowed out, but as far as I can see --
MR JUSTICE BARLING: I think it would be helpful if you could have that debate. We expect, roughly speaking, without committing you, Mr von Hinten-Reed to be in the witness box from and until when, roughly?
MR HOSKINS: It is probably going to be some time on Monday morning, I guess.
MR JUSTICE BARLING: So all --
MR HOSKINS: Monday lunchtime.
MR JUSTICE BARLING: Thursday afternoon, Friday, and we will finish likely some time Monday?
MR HOSKINS: Yes, I think so.
MR JUSTICE BARLING: Then it will be Mr Saunders, will it?
MR HOSKINS: Mr Reynolds.
MR JUSTICE BARLING: I'm so sorry. Mr Reynolds. So

Mr Reynolds is quite likely to be in the witness box on Monday at some point and to continue into Tuesday, do you think?
MR COOK: It is entirely a question of when Mr Hoskins finishes with Mr von Hinten-Reed.
MR HOSKINS: Having discussed it, we're sort of two, two and a half days for both of them.
MR JUSTICE BARLING: I hope that gives people some idea anyway. There may well be some of both those witnesses that will be heard in camera, but not by all means all.
MR HOSKINS: Correct.
MR JUSTICE BARLING: Right. See you whenever it is.
(4.07 pm)
(The court adjourned until 2.00 pm on Thursday, 18th February 2016)

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