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IN THE COMPETITION
APPEAL TRIBUNAL

Case No: 1403/7/7/21

Salisbury Square House
8 Salisbury Square
London EC4Y 8AP

Monday 3rd February 2025

Before:
Ben Tidswell
Dr William
Bishop
Tim Frazer

(Sitting as a Tribunal in England and Wales)

BETWEEN:

Dr. Rachael Kent

Class Representative

v

Apple Inc. and Apple Distribution International Ltd

Defendants

A P P E A R A N C E S

Mark Hoskins KC, Tim Ward KC, Michael Armitage, Matthew Kennedy, Antonia Fitzpatrick,
(Instructed by Hausfeld & Co. LLP) On behalf of Dr. Rachael Kent

Marie Demetriou KC, Brian Kennelly KC, Daniel Piccinin KC, Hugo Leith, Hollie Higgins
(Instructed by Gibson, Dunn & Crutcher UK LLP) On behalf of Apple Inc. and Apple
Distribution International Ltd

Monday, 3 February 2025

(10.30 am)

(Proceedings delayed)

(10.40 am)

Housekeeping

THE CHAIRMAN: Good morning, everybody. Just before we start with our expert bench on the front row, I think there was some correspondence on Friday night, and I assume that the offer of sitting all week this week and of course next week is accepted. That I think was on terms that we will try as far as possible to sit usual sitting hours, and that of course requires you to shape your cross-examinations accordingly.

Is that the plan?

MR HOSKINS: That is the plan. I have spoken with Ms Demetriou and we are happy with that. So we will be sitting on the Thursday, Friday morning, and we would be doing normal hours. Is that fair?

MS DEMETRIOU: Yes, that is fair, save that can we see how we are getting on on Friday, and if it makes just more sense for the witnesses to carry on and sit a normal day on Friday, that may -- that may be more sensible. But can we just see where we are with the experts, whether we break early on Friday, as Mr Hoskins suggests, or whether we sit the whole day.

1 Either way, I am not trying to get more time than
2 the time that is allotted, but it just may make some
3 sense to keep that flexible.

4 THE CHAIRMAN: Yes, of course. I think we will see how --
5 absolutely see how we go, and I assume that -- I mean,
6 generally speaking ... where are we? So we would be in
7 the middle of your expert, Mr Hoskins, on Friday, would
8 we not, is that right? Yes.

9 MR HOSKINS: That is right. I think the intent, from the
10 conversation I had with Ms Demetriou, is if they are
11 going well and they think they can finish on that day
12 then they will finish on that day. But the agreement is
13 four days, four days. I think it makes sense for us to
14 have a half day off at some stage in this time period,
15 I think we will probably all need that.

16 THE CHAIRMAN: That might happen reasonably naturally with
17 the break between the two parties, might it not?

18 MR HOSKINS: Indeed. But we are talking and we are playing
19 nicely with each other, so I think it will work.

20 THE CHAIRMAN: Good, thank you very much.

21 Anything else by way of housekeeping? No. Good, we
22 will get on with the hot tub then.

23 Could we please swear the experts.

24 MR DEREK HOLT (affirmed)

25

1 DR HAL SINGER (affirmed)

2 PROFESSOR LORIN HITT (affirmed)

3 PROFESSOR ANDREW SWEETING (affirmed)

4 THE CHAIRMAN: Thank you very much. Really as much for my
5 benefit as anybody's, would you mind just identifying
6 yourself. I know Mr Holt at this end. I assume that is
7 Dr Singer, is that right?

8 DR SINGER: Yes.

9 THE CHAIRMAN: Then?

10 PROFESSOR HITT: Professor Hitt.

11 THE CHAIRMAN: Yes, and Professor Sweeting? Good.

12 Thank you very much.

13 Just two preliminary observations really for those
14 behind you rather than you. Nothing of course --
15 I probably do not need to say this but I will say it
16 anyway -- nothing that we say in our questioning should
17 be given as an indication of any sort as to our thinking
18 about the issues in the case at this stage.

19 Also, just in terms of the way we will proceed,
20 I think we will invite all of you to contribute to every
21 question asked, but if you have not addressed the
22 subject matter in your report, then it is obviously
23 a matter for you as to whether you feel you can provide
24 a substantive answer. But rather than get into the
25 tangle of who whose subject is which item, we will just,

1 I think, go along the line in the order that Dr Bishop
2 selects and ask you all if you have anything to say on
3 the subject as we go.

4 So with that, I will hand over to Dr Bishop who is
5 going to run the hot tub.

6 Questions by THE TRIBUNAL

7 DR BISHOP: Thank you. The purpose of this proceeding is
8 for the panel to get the benefit of your views about
9 various questions. It is not our intention to try to
10 comprehensively cover all the evidence that you have
11 given; indeed, each one of you will be subject to
12 cross-examination by the people behind you in the coming
13 days. So if we have left something out, it is not -- it
14 is not something that worries us, it will come up in due
15 course. That said, we may have and certainly will have
16 a few questions about precise points as we go along.

17 Now, we gave you the five broad themes that we want
18 to cover over the next -- today and tomorrow morning.
19 The first one is the topics of market definition and
20 dominance. We drew your attention to the evidence of
21 the Competition and Markets Authority, it is called the
22 CMA skeleton, but in fact it is a little white paper
23 they have given us on the question of market definition.

24 I am not going to read through the entire thing,
25 I assume you will have read it. In that document --

1 I will just note one or two points. In that document,
2 the CMA sets out the standard -- what it regards as the
3 standard analysis involving -- of how you go about
4 market definition in antitrust cases. As all of you
5 probably will know, the history of this goes back about
6 40 years or more to the first guidelines issued by the
7 United States Department of Justice for Mergers, then
8 later the joint agency guidelines of both the Department
9 of Justice and the Federal Trade Commission. In the
10 meantime, this was adopted by the European Commission in
11 its market definition notices and various other
12 documents by competition authorities around the world.

13 The question of how it applies in the particular
14 case of course is what the CMA is concerned with here.
15 It lays emphasis on where you start, they call that the
16 focal product, and then goes through the procedures of
17 what the hypothetical monopoly test is like.

18 So my real question to you, and there are other
19 things later, but let us start with that. I want to ask
20 whether you agree with the CMA's procedure as set out in
21 this so-called skeleton argument. I suppose I will
22 begin with on the Class Representative's side for this
23 question, Mr Holt, and Dr Singer.

24 MR HOLT: Sure, thank you, Dr Bishop. So I think, just to
25 be clear, the issue of market definition is one of the

1 subjects that falls outside the specific scope of my
2 expert reports, at least in the post certification
3 phase. So just to be aware of that.

4 Having said that, I have seen the CMA's submission,
5 because it was circulated some time -- I think it was
6 last week, and so I do have a few brief observations on
7 that. In my view, what the CMA has said is an entirely
8 orthodox and common framework for the issue of exploring
9 how to deal with market definition in a competition
10 matter which can apply equally in a context of
11 a foreclosure type case or an excessive pricing matter.

12 In particular, I think the elements that you have
13 alluded to already, such as the focal point, is an
14 essential aspect of that, because what that means is
15 that it is really important to ensure that the
16 conditions of competition which are being described, and
17 which is essentially the purpose of the market
18 definition exercise, are linked to the issues at stake
19 in the proceedings.

20 So in my view, the focal point does need to have
21 some tie or needs to be linked to the nature of the
22 allegations concerned. So for that reason, I agree with
23 the CMA in that regard in that it is plausible to
24 identify potentially different markets in different
25 contexts.

1 I think the other issue -- sorry, just to be clear,
2 are you asking for the experts' views specifically on
3 the focal point and not some of the other issues?

4 DR BISHOP: No, I meant on the focal point and the
5 hypothetical monopoly and indeed on the conclusion.

6 MR HOLT: So I agree with the focal point analysis.

7 DR BISHOP: By all means if you wish you can hand over to
8 Dr Singer. I leave that to the two of you.

9 MR HOLT: I understand. I wanted to understand what the
10 scope of the question was.

11 So briefly, I agree with the other aspects as well,
12 including the importance of the adoption of the
13 Hypothetical Monopolist Test, and that whilst not always
14 empirically able to be adopted, a SSNIP, or a small but
15 significant non-transitory increase in price, approach
16 is the orthodox principle to adopt.

17 I guess my main view on that is that it really
18 emphasises the need to focus on economic
19 substitutability, not the mere existence of alternatives
20 which could potentially be alternatives but which may
21 not be sufficiently close substitutes to constrain
22 the pricing ability of the hypothetical monopolist.

23 So I will hand over at that point.

24 THE CHAIRMAN: Dr Singer, do you want to add anything?

25 DR SINGER: Yes.

1 THE CHAIRMAN: You might disagree with it.

2 DR SINGER: No, not here at least. I agree wholeheartedly
3 with their approach and conclusions. The most important
4 part is this notion of the focal point and bringing the
5 challenged conduct into consideration when defining the
6 relevant markets.

7 So there are different aspects, and I do not want to
8 talk about them all at once, but let us just focus on
9 the payment restrictions which, to an economist, is a
10 tie. So we think, what is the purported tying market?
11 It is going to be access to our distribution platform.
12 What Apple is basically telling developers is that you
13 will not get access to the platform unless and until you
14 agree to make us your sole provider of the In-App
15 Support Services -- of the In-App Support Services at
16 the low, low commission of 30%. That is the tie.

17 So we want to ask ourselves, could these two markets
18 that form the crux of the challenged conduct and the
19 crux of the tie, can they constitute relevant antitrust
20 products? The way that we get at that is exactly as the
21 CMA says: could a hypothetical monopolist exercise
22 market power by controlling just those products?

23 I think the answer to that question is an obvious yes,
24 and we will get into that.

25 I do think also that the HMT is essential. It is

1 missing in Professor Hitt's analysis, I cannot find it
2 anywhere. I think that as a result he defies a core
3 aspect of what it means to define relevant markets, and
4 that is it begins with the smallest set of products,
5 such that a hypothetical monopolist can exercise power.
6 It is the smallest set, right?

7 So we want to know, if a hypothetical monopolist
8 were to control the distribution platform, the only way
9 to get access to iOS or iPhone customers, and also
10 control the payment system and the in-app support, would
11 that be sufficient to exercise power?

12 So I perform an HMT, and the way I perform it is
13 I ask the question: beginning from the competitive
14 level, which we do not get to observe unfortunately,
15 could a hypothetical monopolist raise the price by
16 a small amount who only controlled these two services,
17 these two services as defined through the focal point,
18 and do so profitably?

19 So I looked at comparables for the primary market --
20 I am going to use the words primary market and the
21 secondary market, just to kind of keep things -- in the
22 primary, which is the App Distribution Market on iOS,
23 I look at what the comparables were for PC games.
24 I think PC games is a wonderful environment to exploit
25 for us, because it is very similar products but it is

1 not monopolised, and we have this wonderful episode
2 where Steam was at 30% and got invaded by Epic and faces
3 competition from Microsoft and as a result was forced to
4 drop its commission rate down.

5 So I like to use that as the counterfactual, that is
6 the benchmark, the 12 to 15% that has been charged in
7 a competitive environment.

8 Then ask yourself, if a hypothetical monopolist who
9 controlled Apple's portfolio were to raise its price by
10 5% of starting from, say, 12 or 15% for these services,
11 could they do so profitably? The answer to that
12 question, we already know the answer, it is they of
13 course do, they charge 30%, so they have done so
14 profitably.

15 But set that aside, let us talk about where would
16 a developer go, right, if he were facing say a 12 or 15%
17 commission to get access to this wonderfully rich
18 customer base of iPhone and iPad users, where would you
19 go in response to a small increase of, say, over 12% tax
20 to get access to these customers? The answer is you
21 would go nowhere. No one would leave.

22 If you have already built up an app and you are
23 selling, or you have the potential to sell successfully,
24 into this wonderfully rich subscriber base and user
25 base, and the tax would go up from, say, 12 to 15%, you

1 do not leave, you do not go anywhere.

2 So I submit to you, respectfully, that the
3 elasticity of demand that Apple is facing with respect
4 to the developers is close to zero. No defection.
5 No one in their right mind would leave in response to
6 that small of a price increase from, say, 12 to 15%.

7 I will wrap up here.

8 MR FRAZER: You said nobody would leave, but would it be the
9 case that people would not come? In other words, in the
10 face of an increase in commission, they would decide not
11 to come on to the Apple platform?

12 DR SINGER: I think it is safe to conclude, sir, that it
13 would not affect their entry decision either. A move
14 from 12 to 15 would not deter anyone. Look at how Apple
15 was able to build up this vast network of developers at
16 30%, right? That tells you that no one would be sitting
17 on the sidelines at 12.

18 You want to be able to access these customers.
19 These customers are special customers, right, because
20 they have low sensitivities to price, they have high
21 propensity to spend, and stepping out at 12 in response
22 to a 2% price increase just would not make any economic
23 sense.

24 But if I could just flip over to the consumer side
25 as well, and I will wrap this up quickly, I promise,

1 I also submit there is no sensitivity on the consumer
2 side to a hypothetical increase in the Commission.

3 The consumer cannot understand -- we are fighting
4 about how commission maps into prices, right? A bunch
5 of PhD economists cannot even come to an agreement on
6 how that works. Consumers are completely oblivious to
7 how that mapping works. You could not expect them to
8 understand the mapping of commissions, which they cannot
9 even observe, into prices.

10 So the notion that consumers are going to defect and
11 go from, say, an iPhone to a Samsung phone in response
12 to a SSNIP, a small increase in the Commission from,
13 say, 12 to 15%, is also impossible.

14 Now, even if you saw prices -- Professor Hitt
15 disagrees with me here, he thinks it does not matter if
16 they understand it, and this is the debate, I do think
17 it matters. Because if you see your prices going up and
18 you think it is the developer raising his price, you do
19 not blame Apple for that. You do not punish Apple by
20 switching over to a Samsung if you see the developer's
21 prices going up. You would only ever be inclined to
22 punish Apple if you thought it was Apple that was
23 causing the prices to go up.

24 So I respectfully disagree on this point. I do not
25 think you could expect any consumer defection, right,

1 from an iPhone to a Samsung, in response to a small
2 increase in the price of the Commission. That is the
3 only price that Apple is charging here. There is no
4 price on the consumer side. So I think I have hit the
5 focal point, the methodology, the HMT and I also agree
6 with their conclusions. Thanks.

7 DR BISHOP: Thank you very much.

8 Now, I switch to the Apple side of the argument.
9 This is primarily developed by Professor Hitt. Do you
10 want to start? Feel free to do it the other way if you
11 wish.

12 PROFESSOR HITT: I think I can go first and then
13 Professor Sweeting can fill in, and we will probably
14 have some further discussion down the line in any event.

15 So good morning. In terms of the direct question,
16 which is the question of the CMA report and associated
17 letter in this case, I think I agree with Mr Holt
18 largely on the points of it is a conventional framing of
19 the market definition question and the question of
20 dominance. The idea that substitution is very, very
21 important and should be considered as part of any
22 evaluation of where market boundaries are. The idea
23 that a Hypothetical Monopolist Test can be informative
24 if it can be properly executed in the setting, I think
25 is right. I think the idea of thinking about what the

1 alternatives are, especially in a two sided market for
2 both consumers and developers in this case, as the
3 participants of the two sided market, I think is
4 a reasonable framework.

5 There is a number of other things that I also agree
6 with along the way. For example, they have done
7 a number of studies along the way, and in particular
8 some of the surveys they have done I think are
9 informative about the degree to which consumers are able
10 to substitute cross-channels, and critical issues, for
11 example, such as switching between platforms, that
12 I think is -- that can inform a market definition
13 exercise.

14 So I think the framework, I am largely in agreement
15 with the framework.

16 Many of the aspects of implementation
17 I fundamentally disagree with, and I think the greatest
18 point of departure is simply in thinking about what the
19 relevant products are. In this case, I view the
20 relevant product as the production of app transactions,
21 whatever the process and services, the outcome of the
22 process in which buyers and sellers, in this case
23 developers and consumers, are matched together to
24 perform a transaction for iOS Apps both in terms of
25 initial downloads, free transactions as well as in the

1 in-app purchases as well.

2 So I think the focus on that is important because
3 many of the arguments that you will see both in the
4 various CMA's documents use -- rely almost exclusively
5 on the concept that you have to download an iOS App on
6 iOS, and that is a fact. Indeed, you do need to get the
7 original app on iOS, because you have to go through App
8 Review, and there are a number of processes and so
9 forth, so it has to be downloaded on iOS initially.

10 However, from the perspective of transactions, those
11 transactions of where developers are attempting to
12 monetise their apps can occur in many, many different
13 places. For example, simply on an iOS platform
14 developers can monetise through paid downloads in in-app
15 purchases, and that is most of what we have been
16 discussing here because those are the transactions that
17 are actually monetised.

18 However, even within the iOS platform consumers and
19 developers can also transact through web apps and web
20 browsers and many developers provide that facility as
21 well. Developers can also monetise their apps in other
22 ways in which they do not pay Apple any commissions.
23 They can transact outside the App Store for content
24 consumed in the app, they can engage in in-app
25 advertising, they can engage in many other forms of

1 monetisation for generating revenue from their apps.

2 This is important from a market definition
3 standpoint, because if you simply take it from the
4 perspective that where the app is downloaded is the end
5 of the story, you avoid -- you do not even get into the
6 discussion of all the other channels which developers
7 have to substitute among different channels which they
8 control and many of which do not incur any kind of
9 commission.

10 So that is one significant point of departure.

11 I disagree that it is a tie. I believe that is
12 Professor Sweeting's area so I will defer to him on that
13 point.

14 But I will also note, however, that these two
15 products -- products are not tied when they are
16 integrated. The App Store provides an integrated system
17 for consumers and developers to come together and
18 perform these transactions. They do so as part of
19 initial downloads, they do so as part of in-app
20 purchases, and that this is part of an overall
21 integrated system, it is not simply that they are paying
22 for apps, they are providing a payment service. They
23 are providing the same kind of services in the download
24 transaction as they are in the in-app purchase
25 transaction, including App Review, the ability to manage

1 subscriptions, all of the other services that are part
2 of the App Store.

3 So these are actually simply an integrated part of
4 the overall delivery system that forms the App Store
5 which is one of the ways in which Apple creates value
6 for consumers.

7 I just want -- since we got into a couple of topics
8 that Dr Singer brought up, I agree that I have not done
9 the classic SSNIP test style HMT. I disagree that
10 Dr Singer has done a useful HMT in this case. What
11 Dr Singer has done is he has claimed to have identified
12 a potentially competitive price, which he relies on PC
13 app stores as that price, and then simply observes that
14 because the price we observe today is above that number
15 it therefore would pass a SSNIP test.

16 That, first of all, is not the classic HMT, where
17 you can construct a world in which you have
18 a competitive outcome, and then you modify the
19 circumstances and then see whether or not there are
20 sufficient degrees of substitution. That style of HMT
21 is very difficult to do on a two sided market. It
22 requires knowledge of things like how much people
23 substitute across size and platform, what the effect
24 would be on entry on the various sides of the platform.
25 That information is simply not available.

1 So my reason for not doing the classic SSNIP test is
2 simply that the necessary information is not available
3 here.

4 Dr Singer's SSNIP test is merely an observation that
5 Apple has prices that are higher than the lowest that
6 have ever been observed in this market throughout its
7 entire history. If you take a look at the comparison he
8 is relying on, it is the PC platform, Microsoft and Epic
9 Games, he is claiming those are the competitive prices,
10 and because the 30% is greater than those prices he
11 concludes that they could have raised their price.

12 I do not believe those are competitive prices. Epic
13 is a special case. It loses money. It cross-subsidises
14 its own first party games which allows them to charge
15 essentially anything and still operate reasonably. Also
16 that price did not exist until December 2018, well into
17 the period.

18 The Microsoft price, which Dr Singer refers to,
19 I think Mr Holt does as well, did not exist really
20 until 2021, and the Microsoft store is probably not
21 effectively competitive with other alternatives such as
22 Steam.

23 Also note that the prices -- if you are using Steam
24 as a counterfactual for this, Steam did indeed introduce
25 a new pricing scheme where they lowered their prices

1 very slightly for the very largest developers. It is
2 nowhere -- you know, outside the realm. Again, I do not
3 believe some of these figures are in this case, so
4 I cannot say the exact numbers, but the amount of
5 the price decrease was relatively modest regardless, and
6 nobody has established a causal link between the change
7 in Steam's pricing from roughly 30% to a tiered pricing
8 where they offered 20, 25 and 30, depending on how large
9 you were.

10 So I do not consider those to be competitive prices.
11 If you look at the vast majority of all prices, most
12 platforms charge that same 30% headline rate and that is
13 likely the competitive price in this market.

14 A couple of minor things that Dr Singer brought up
15 as well. He refers to incidence here, and I know we are
16 going to get into this later, and we have a very limited
17 amount, but I just note that consumers do not switch
18 platforms to punish developers or service providers.
19 They look at the prices that they face and decide
20 whether or not this is a good deal for them. How those
21 prices arise are not of interest to them.

22 I will note that Apple has consistently lowered
23 the prices it has been charging while developers have
24 been consistently increasing the prices they have been
25 charging over time. I view that as evidence that

1 consumers are looking at the options and saying, yes,
2 this is good value and I am willing to spend more money
3 and transact to a greater extent on the iOS platform,
4 indicative of value. Again, Apple's prices have been
5 going down, and consumers are continuing to transact
6 more and more, so I think that is the relevant fact
7 there. But we will get into incidence later. I think
8 the incidence rate, in terms of any kind of Apple
9 commission change, is actually zero, and we have
10 empirical evidence on that, but I do not want to get
11 into that in any great detail here.

12 Then finally, the last bit. So it is my contention
13 that developers have the ability and consumers have the
14 ability to substitute across many different ways of
15 performing transactions, and that is the discipline that
16 constrains Apple's pricing and why I believe 30% is
17 a competitive price, because they are constrained by the
18 ability of consumers and developers to transact
19 elsewhere for the things which actually incur
20 commissions and it is that constraint that matters, and
21 that constraint matters, I believe it is in the market.
22 Dr Singer disagrees. Even if it is not in the market,
23 it still constrains the behaviour there.

24 One of the things I strongly disagree with Dr Singer
25 on is the appropriate counterfactual there, and we are

1 going to go back again to the idea that Apple is the
2 only place where you can download apps. In Dr Singer's
3 world, he claims that no developer would delist from the
4 App Store upon a change in circumstances. I actually
5 agree with him on that point. But that is not the
6 relevant margin on which the competition occurs. What
7 will occur is a developer may choose to continue to
8 offer their apps on the App Store yet not monetise
9 through any channel which Apple pays commission. If
10 they do not feel the Commission is a good value for the
11 services they are getting, they can continue to offer
12 their apps through the App Store, the apps can be
13 download by consumers and they can monetise in other
14 ways, and services such as Netflix and Spotify have done
15 exactly that, it is well within the scope of what can
16 happen.

17 Many developers choose monetisation schemes which do
18 not incur any Apple commissions. In fact, the various
19 statistics, I am not sure which ones of these are
20 available generally, but I believe the global figure is
21 available that nearly a trillion dollars, at least 800
22 billion pounds of commerce, goes through the App Store
23 in one way or another, of which only a very small
24 fraction of it is subject in any way to any sort of
25 commission. Most of the commerce that is generated is

1 either through the activities of people who are engaged
2 in free apps or selling other things. So, again,
3 developers do have the ability to go outside.

4 So it is not a question of delisting from the
5 App Store, it is simply choosing not to participate in
6 transactions -- if the developer feels their price is
7 too high, they do not have to participate in
8 transactions for which Apple incurs commissions.

9 I think I addressed most of the other things. Happy
10 to discuss this further, but let me pass it over to --

11 DR BISHOP: Thank you very much.

12 THE CHAIRMAN: Can I just ask you a question,
13 Professor Hitt. Just picking up this point about
14 transaction, I just want to understand a little bit
15 better. I think there is a distinction between you and
16 Dr Singer, I am not sure how much it matters, so that is
17 really what I am trying to get at. I think you talk
18 about app transactions, Dr Singer talks about the
19 connection of supporting services that facilitate iOS
20 App transactions.

21 But I think also you were talking about matchmaking
22 on the two sided platform, and I wonder whether I am
23 right in thinking that you accept that that is the
24 primary service that has been provided on the platform
25 or not. I just want to be clear about what your

1 position on that is.

2 PROFESSOR HITT: Sir, so quickly to reference the initial
3 part of your statement, in terms of the practicalities
4 of market definition and the dispute we are having,
5 I actually do not think that definition matters very
6 much. I am considering the transactions, the output.
7 Dr Singer is considering the services that form the
8 transaction which is kind of an input. You can define
9 a product either way by the things they contribute to
10 making it happen or the event that it actually does
11 happen.

12 From the perspective of our market definition
13 disputes and other things, I do not think that
14 critically matters. The reason I prefer my definition
15 is because it very much highlights the transaction level
16 substitution, the ability to transact outside the
17 App Store, which I think is the important margin of
18 substitution, which is why I focus on that.

19 So that is -- so I think that is a correct
20 encapsulation of our disagreement, but as a material
21 matter I do not think it matters in terms of where we
22 go, except to the extent that I think it is important to
23 think about transactions because of the substitutability
24 condition.

25 Regarding the services, let me just address the last

1 one and I will pass it back to Dr Singer. The
2 services -- matchmaking is a component of what they do,
3 as well as all the other services necessary to
4 consummate the transaction. You can think of in two
5 sided markets there are many, many different kinds of
6 services you perform. For example, you validate the
7 characteristics of the participants on both sides. You
8 ensure transactions actually occur. You help match
9 buyers and sellers. All of these services I think are
10 part of the platform.

11 Matchmaking is certainly an important one, but it is
12 only one of the many services that is being provided to
13 enable both sides to come together and feel like they
14 can transact. So I think that is one, but it is one of
15 many.

16 MR FRAZER: Just before you do pass back, I just want to
17 make sure I am not misunderstanding. You were talking
18 about the availability of other platforms which
19 constrain Apple that must be regarded as the possibility
20 for substituting them for monetisation. You also said
21 you did not think that distribution and app payment
22 services were separate products but they were part of an
23 integrated whole, and I am just trying to work my way
24 between those two propositions to see if there is some
25 sort of conflict there.

1 PROFESSOR HITT: I think you have correctly characterised
2 I think exactly our dispute. So the two disputes really
3 are, one -- well, I think the main part of the dispute
4 is that I view the initial download transaction and the
5 in-app purchase are part of the same set of services, it
6 is part of the same market. So I do not think there is
7 a conflict there in the sense that developers can --
8 again, the initial download can be free and then
9 developers can transact in any number of ways on other
10 platforms. I think that is true. They also can engage
11 in various business models where they do not pay any
12 Apple commissions, so that would be a substitute for
13 both the initial download transaction and these other
14 services, so I think that is one of the distinctions.
15 The other, I think, subtle distinction sitting in
16 here, maybe not so subtle, is this idea that the
17 services provided in that in-app purchase transaction
18 market, as Dr Singer has defined it, are not distinct
19 from the market services provided from the platform
20 generally. They continue to, for example, screen the
21 developers. Enable the transaction. Perform the
22 payment processing, which is one small part of it.
23 Enable subscription management. Provide security
24 services. All of those kinds of services in that
25 secondary -- that are in Dr Singer's in-app purchasing

1 market are also provided in the primary market. So that
2 is one of the reasons I believe it is an integrated
3 platform; together, it provides the same kind of
4 services. That is another reason why I do not believe
5 that is distinct.

6 Yes, however, there are platforms out there that can
7 provide the ability to transact outside. Apple still
8 continues to provide many of their services regardless,
9 they just do not charge commissions for those services
10 when it is done outside.

11 DR BISHOP: I was going to go to Professor Sweeting and give
12 him a chance first; on the other hand, Professor Hitt
13 did refer to some of what you said. I am going to give
14 Professor Sweeting the option: do you want to start
15 yourself now, or do you want to cede the floor to
16 Dr Singer for a few minutes to reply?

17 PROFESSOR SWEETING: Sir, I have not been asked to opine on
18 market definition, so I am just going to make some quick
19 comments, and then I am happy for Dr Singer and
20 Professor Hitt to talk some more. Because I am not
21 asked to opine, my comments are going to be at quite
22 a general kind of principle level based on my
23 experience, thinking about two sided markets in kind of
24 other contexts.

25 The first one, I think I would agree with the other

1 experts that at a high level, the comments that the CMA
2 makes are kind of standard and are fairly
3 noncontroversial. But obviously in any kind of setting,
4 the key thing is how do you apply those principles?

5 So I guess there were kind of three things that kind
6 of strike me, kind of commenting on this debate.

7 The first one, I just think it is an economist
8 always needs to keep in mind what really kind of the
9 market realities are. So the way I would think about it
10 would be what do developers, who are at least some of
11 the customers here, at least on one side of the market,
12 what do they really want? Right, they want to reach
13 a great audience, they want tools and technologies that
14 help them create kind of compelling content that
15 consumers are going to want to interact with, and then
16 they want various ways to kind of transact with
17 consumers and to monetise what they do.

18 So paid downloads is one of that, in-app
19 transactions is one of that. There can be other methods
20 which the other experts can speak to. But something
21 that comes out of that is the way they are looking at
22 it, they want this whole set of things and they want
23 different ways to monetise.

24 Those different ways of monetisation, at least as
25 I understand it, lots of developers use different

1 combinations of them, and those things look they are
2 pretty close substitutes, and I think when we come to
3 some of the other matters that I will be speaking to
4 I think that is good to kind of bear in mind.

5 So the second point would be I think it is useful
6 throughout this kind of analysis, you know, market
7 definition does not exist in a vacuum, you are going to
8 apply it to look at particular allegations, you are
9 going to apply it to think about the counterfactual. It
10 is just important to kind of bring an element of
11 consistency of that.

12 So if the role focus of, say, the counterfactual
13 analysis is going to be paid, you know, paid download
14 transaction and then in-app purchase transaction, you
15 want to be thinking, kind of coming back, okay, if that
16 is the real thing, these things are going to be close
17 substitutes. When you are doing the counterfactual you
18 are going you want to recognise there is going to be
19 kind of interrelated pricing decisions for kind of
20 levying commissions on those different things.

21 But that then also flows through to when you think
22 about the allegation. So, for example, for tying,
23 economists understand that tying is pervasive. The only
24 time tying really is anti-competitive is when a dominant
25 firm is using it to leverage market power from one

1 market to another market.

2 So if you really have -- if you are really thinking
3 in terms of these things which seem like close
4 substitutes, they should be in the same market, and the
5 tying claim, just thinking about the functionality, does
6 not really seem to make sense as a kind of allegation.

7 So I understand there was some discussion of Steam.
8 Obviously I have thought about Steam partly in the
9 context of the counterfactual, so obviously I am happy
10 to talk about that in a different context later on. But
11 with that, I am happy to turn it back.

12 DR BISHOP: Thank you, thank you very much.

13 As is characteristic of these things, our plan for
14 how to approach all these questions is melting before
15 our eyes. Tying and separate demand and so on were to
16 be theme 4, but they have already formed an important
17 part of what we are doing in this session.

18 I think it is appropriate now to hand over to the
19 other side to see what they have to say about what they
20 have heard.

21 DR SINGER: If it is okay, I would like to quickly respond
22 to some of the things Professor Hitt said.

23 He says that the word "transactions" does not create
24 any friction between us, and I respectfully disagree.

25 I think the word "transaction" is a bad word, I think it

1 engenders confusion. The problem is that there are
2 two -- I do not even want to use the word in the
3 sentence -- I am going to say economic activities that
4 are occurring in parallel, and it is very important to
5 keep them separate because only one of them is involved
6 in our relevant market.

7 So an 18-year old wants to buy a sword inside of
8 a game, and the 18-year old is the buyer and the
9 developer is the seller for the sword for that economic
10 activity. There is this parallel economic activity
11 which is occurring which is that to consummate the
12 transaction, the developer has to turn around and get
13 In-App Support Services, including payment processing
14 services, to consummate, and it is only in that economic
15 activity that we are interested in.

16 So I worry about the word "transaction", because it
17 allows Apple, and we will see in other arguments that
18 are coming down the road, to invoke certain things and
19 services which are being provided in this parallel
20 economic activity. The sale of the sword, where the
21 buyer is the 18-year old and the seller is the
22 developer, right, is not the relevant market that at
23 least I am interested in, and I think that you should be
24 interested as well.

25 I want to point out -- just very quickly on the

1 Steam front, Professor Hitt seems to be pushing back on
2 the notion that Steam dropped its price in response to
3 the invasion. I will note that he does grant the 20%
4 cut, but in the record in Epic v Apple there is a 10.7%
5 commission rate which the court found in that case.
6 I cannot see how they got to that, but they have
7 credited that analysis that came to the 10.7, and the
8 10.7 would be a lot closer to the 12, the 15%, that its
9 two main rivals are offering.

10 Let me say something about separate products really
11 quickly. This is important, obviously, because for the
12 tying claim we have to have separate products. I just
13 want to submit a few of what I think are the most potent
14 and powerful explanations for why these are separate
15 products.

16 The first is, as you put it earlier, matchmaking.
17 Matchmaking is key. Matchmaking is what Apple is
18 offering in the primary market for the app distribution.
19 It is bringing together a buyer and a seller, a user and
20 a developer, and they pair off, and they pair off
21 afterwards and make wonderful music together five years
22 in the future, ten years in the future. But after that
23 fact, there is no matchmaking activity any long taking
24 place in the In-App Support Services which are
25 supporting these payments for the swords and the skins

1 and anything else you want to buy.

2 So matchmaking is gone in the aftermarket, and
3 I think that creates an important distinction as to why
4 these are two different economic activities.

5 The second difference I want to highlight is the
6 temporal difference. These are happening at different
7 points in time. You download the game or download the
8 app, and then four years later, five years later you are
9 buying a skin or a sword, these are happening at
10 different points in time, and so that creates another
11 key fundamental significant difference in my mind.

12 The last thing is the activities are happening in
13 different places. In the primary market the
14 transaction, I used that word; the economic activity is
15 occurring inside of the app. In contrast, in the
16 aftermarket, the activity is occurring -- let me start
17 over. I got that wrong.

18 In the primary market, the economic activity is
19 occurring in the App Store, I apologise, in the
20 App Store. In contrast, in the aftermarket, the In-App
21 Support Services are occurring within the app. So now
22 we have a third dimension of difference that I think
23 creates a distinction.

24 Finally, this is a technical one, but Apple tells us
25 that even though they are both using a common engine,

1 this ASPS, there is actually a different technology,
2 there is an IAP, there is a bridge back to the commerce
3 engine that is used for In-App Support Services that is
4 not implicated in the primary market.

5 So I have just given you four reasons for why
6 I think we have a good basis for believing these are, in
7 fact, distinct and separate activities.

8 The last thing I promise that I want to point to
9 quickly here is this notion that you can monetise in
10 other ways besides in-app transactions. Of course
11 I agree with that, there are other ways to monetise.
12 You could also just hold your breath; you do not have to
13 monetise, so you could just give it away, everything
14 could be free.

15 But the fact that you can monetise in other ways and
16 the fact that we see some apps engaging in advertisement
17 does not constitute proof of economic substitution.
18 I submit to you that Professor Hitt, and it is not just
19 here but you will see it in many of these debates that
20 we have, sees two things happening and claims, aha,
21 there is economic substitution. But to get to economic
22 substitution, we need evidence that a developer actually
23 substituted in response to an increase or at least
24 a change in the relative price. He cannot point to any
25 episodes that serve as a precursor or pre-date these

1 movements.

2 So I would submit there are a lot of stories you
3 could tell as to why developers are increasingly using
4 advertising as a way to monetise, but does that
5 constitute proof that these are economic substitutes,
6 and so close in fact that a hypothetical monopolist
7 would also need to control advertising in order to
8 exercise power? I would submit to you the answer is no,
9 we do not need to do that.

10 I think they are going to advertising because they
11 have been targeting the same group of payors for years,
12 namely the users, and after a while you want to continue
13 to grow your revenue base, so why not turn around and
14 start in addition to, as a complementary channel, start
15 selling to advertisers. It is a new payor, it allows
16 them to grow their revenues.

17 But the fact that we see two economic activities
18 occurring, the fact that we see a user with both
19 a Playstation and an iPhone, does not mean they are
20 economic substitutes. We cannot fall into that trap.

21 I think those are the only things that I want to
22 raise in response.

23 DR BISHOP: Okay, thank you.

24 Professor Hitt.

25 PROFESSOR HITT: Two or three, maybe not quick. If you want

1 to move on, that is fine, but I want to address a couple
2 of things Dr Singer said.

3 DR BISHOP: No, go ahead.

4 PROFESSOR HITT: Okay, I do not want to ...

5 DR BISHOP: The purpose of this session is to hear what you
6 people have to say. Not too long, but ...

7 PROFESSOR HITT: Thank you. I will try to be efficient with
8 your time.

9 Let me knock off the easy ones and we will talk
10 about the hard ones. So Dr Singer cites to a 10.7%
11 Steam counterfactual that does indeed appear in the
12 decision in Epic v Apple which I was involved in.
13 I will point out that that cannot be correct. I will
14 not say specifically what the number is, because
15 I understand that that is not in evidence here and it is
16 protected. What I will note, though, is that number is
17 outside of Epic's -- sorry, of Steam's commission rates
18 schedule. It is not possible, under the Commission rate
19 schedule that they adopted, which has a lowest rate of
20 20%, for the counterfactual rate to be 10%. It is just
21 simply not possible. It is not correct. It is
22 a miss -- I do not know -- it is an error in some
23 respects. I cannot say exactly what the error is but
24 that cannot be true.

25 So I do not believe that is a relevant comparison.

1 The relevant comparison is Steam's schedule, which is
2 20, 25, 30. Again, what the actual number is I believe
3 is not in evidence, but it has to be somewhere in that
4 range.

5 That would be equivalent to Apple rates that are, on
6 average, somewhere in that region as well, which you can
7 compute from data available in this case.

8 So more specific, the question of substitution. So
9 I agree by itself to see true economic substitution one
10 sees a change in circumstance. We most of the time do
11 not see a change in circumstance but sometimes we do.

12 So I will note first of all that there is a large
13 collection of evidence that suggests that developers
14 have the ability to move consumers across channels if
15 they chose to do so. Developers multi-home. They are
16 on multiple platforms. Almost every major developer is
17 on multiple platforms. Consumers have multiple devices
18 upon which they can perform these transactions.

19 Transactions can be performed on many things. So this
20 would fall under the category, I agree, of Dr Singer,
21 they could do it, do we know that they actually do it?

22 The answer to that question is there is a limited
23 amount of evidence where we are actually able to observe
24 consumers moving across transactions. One of those is
25 provided by the Epic example, where you see that when

1 consumers were unable to perform transactions in
2 Fortnite because of -- you are probably familiar with
3 this story but Epic decided to engage in a practice that
4 violated the App Store rules and was removed from the
5 App Store and that was the subject of the Epic v Apple
6 trial and the fallout of that.

7 One of the things you are able to do as a result of
8 that is to observe what consumers did after Fortnite was
9 removed from the App Store and what you find is in
10 a relatively short or longer window somewhere between
11 40% and a third of all their transactions moved and this
12 was a causal econometric analysis, somewhere between 30
13 and 40% of their transactions moved to another channel
14 that would have been performed on iOS. That is detailed
15 in one of my reports. I do a detailed econometric
16 analysis of that.

17 That is a situation where circumstances have changed
18 and consumers shifted their transactions from iOS to
19 other platforms. There is more detail than that, but
20 that I think is direct evidence of substitution.

21 Another bit of direct evidence of substitution, both
22 Netflix and Spotify no longer monetise through the
23 App Store. When Netflix decided no longer to allow
24 transactions in the App Store they were still able to
25 allow their app to be downloaded. Consumers could still

1 use Netflix on iOS, they just were not paying Apple any
2 commissions along the way.

3 Dr Singer and I have gone back and forth about
4 whether there is or is not any change. Even setting
5 that aside, there is not a large change, even accepting
6 Dr Singer's results. I think there is no change, but
7 even accepting Dr Singer's results, there is not
8 a substantial change in the number of consumers using
9 Netflix on iOS afterwards, which indicates they were
10 able to move consumers over.

11 Other direct evidence of substitution: throughout
12 time, when IAP was originally introduced, most apps that
13 were paid were paid by initial download fees. That
14 rapidly went to zero when IAP appeared and developers
15 shifted over, and there is an academic study that shows
16 that developers have swapped between these two things.
17 There is another study which shows the rate at which
18 certain game developers were more likely to swap from
19 paid downloads to in-app purchases over time, and so
20 there is additional evidence there.

21 So I think there is evidence that consumers not only
22 can move between these channels but they actually
23 actively do.

24 Then the last thing, the last item on this issue
25 about what segments the market. Apple views their

1 App Store as an integrated system that facilitates both
2 the initial download and in-app purchases. They perform
3 many of the same services for both initial downloads and
4 in-app purchases, including things like App Review.
5 They provide payment services for both of these things.
6 They provide other things like parental controls, family
7 sharing. Many of the services that are performed for
8 the initial download are performed similarly for the
9 in-app purchase.

10 So I think the types of services, that is one reason
11 why these are integrated. The second is developers do
12 not walk into a primary market where they download an
13 app and then say, well, maybe I will buy some
14 aftermarket services afterwards.

15 When they are coming in to monetise their app
16 initially, they understand, and in fact it is in the
17 various App Store -- in the agreements that they sign
18 when they participate in the App Store, they are aware
19 that there is this option to engage in in-app purchases
20 and many developers have built their businesses around
21 this. Most apps today are free either without any
22 in-app purchase, which would mean advertising-supported,
23 or free with in-app purchase. The developers are
24 looking at this simultaneously as a decision. It is not
25 a separate decision where they buy some services here

1 and they buy some services in the aftermarket.

2 If you take a look at games, it would be a very
3 unusual looking aftermarket where literally almost all
4 of the transactions that occur are actually occurring in
5 the aftermarket itself, as Dr Singer has indicated.
6 Almost all of monetisation in game apps today currently
7 occurs through in-app purchase.

8 So this is a very unusual aftermarket where you have
9 all the transactions being performed in the aftermarket
10 and the initial download is essentially free.

11 Those are some of the reasons why we believe it is
12 both an integrated system, developers are
13 forward-looking and know they are going to use these
14 services, and Apple provides many of the same services
15 in Dr Singer's download market as well as in his in-app
16 purchase market.

17 I will stop there. I will pass it over.

18 DR BISHOP: Okay. Thank you all for your observations.

19 They obviously spilled over into other things, other
20 than market definition, and not inappropriately.

21 We included one item under theme 1 which was -- it
22 does not occur in your joint statements, either
23 agreement or disagreement, which we called industry
24 timeline. I will refer to paragraph 4(e). But what we
25 had in mind there was we wanted to stand back a little

1 bit, and we wanted you to stand back a little bit, from
2 specific controversies here to look at some of the
3 context in which this whole controversy occurs. I think
4 it is probably reasonable to say that if Apple were
5 a struggling company, barely profitable, nobody would be
6 undertaking a big action to try to force them to lower
7 commission on games and other apps. That may or may not
8 be what the structure of the law is, but I think as
9 a practical reality that is the case.

10 We are dealing here with an industry which did not
11 exist 18 years ago, and it is one of the most amazing
12 business stories, perhaps the most amazing business
13 story, of the first quarter of the 21st Century. It did
14 not exist, and today 3 billion people around the world
15 have these devices and pay substantial amounts for them
16 and use them extensively. These things have transformed
17 modern life.

18 Apple started it, it was the first company for more
19 than a year, and other companies scrambled and caught
20 up. They supply cheaper devices, but Apple seems to be
21 the premium product. That is the general background of
22 the industry.

23 Apple is not being accused of single-firm dominance
24 of devices for the very good reason that its market
25 share is somewhere in the 30s, something like that,

1 percent. It is actually the Android companies which
2 have more than half the market.

3 So a few questions about the dominance that we are
4 concerned with here, its dominance of access. Dr Singer
5 used the word "access" many times, and in some sense we
6 are dealing with an access, are we not, here?

7 Regardless whether it is tying or not, it is access.

8 When did Apple become dominant in access? Was it
9 dominant on day one? What is our notion of access in
10 this context? Is there any connection here to the
11 question of value created? Value is part of what we
12 mean by reward for innovation. Is it reasonable to say
13 that Apple is, and indeed the other companies, Apple is
14 a multi-product company? One of its products is the
15 device, another product is services for games and other
16 apps that can be used on that device.

17 Are we saying that this multi-product company
18 cannot -- it certainly is a fairly profitable company.
19 Some of the figures are confidential but there are some
20 things in the public domain. Apple's -- it is in the
21 public domain that Apple's sales are approaching
22 400 billion, that its profitability is about a quarter
23 of that, something like that. These are enormous
24 figures, gargantuan figures.

25 The effect of this case, if the case were to -- if

1 we were to decide the case in favour of the Class
2 Representative's point of view, would be to say you,
3 Apple, are a multi-product firm. You are not allowed,
4 however, to earn any contribution to what you created on
5 the app side, or at least only a minimal contribution.
6 There, you will be limited to your cost of capital,
7 return equal to your cost of capital. No control on the
8 device side, so it would still be very profitable, but
9 no contribution on the app side.

10 Is that a reasonable thing to say? More
11 specifically, what I want from you, what we want from
12 you, is your views as economists on the complex of
13 things involved. New industry, unquestionably
14 innovative firm, enormously successful product,
15 multi-product firm with several different revenue
16 streams. The effect of this action would be to control
17 one of those revenue streams in the future and indeed to
18 award damages for the recent past, leaving it, however,
19 to earn lots from devices in the other revenue streams
20 it has.

21 You are economists. You study new markets, entry,
22 rewards for innovation. What is it that gets people to
23 enter markets and how long should a modern society allow
24 huge profits to go on? Is there a point at which --
25 does economics tell us anything about when

1 institutions -- whether the law or legislature should
2 intervene to say, hey, you have had enough, it is now
3 time to treat you the way we treat telecoms and other
4 industries which are in some sense regulated for public
5 benefit.

6 So that is a question for all of you. Shall we
7 start now or ...

8 THE CHAIRMAN: Why do we not come back. So we will take
9 a ten-minute break and come back at 10 to on that clock.

10 Thank you.

11 (11.41 am)

12 (A short break)

13 (11.51 am)

14 THE CHAIRMAN: Just before we start again, could I ask you
15 all just to keep an eye on your pace of delivery. It is
16 quite hard work, particularly for the transcript writer,
17 if you get a little too excited and speak too fast. If
18 you would not mind just keeping an eye on that,
19 thank you.

20 DR BISHOP: Right, yes. I asked you to think about some of
21 the background and a number of the background matters in
22 this case, some of which are not strictly part of the
23 law but to effect the question of how the law should be
24 applied by people generally and by this Tribunal in
25 particular.

1 Shall we start with the other side first this time;
2 Professor Sweeting, perhaps?

3 PROFESSOR SWEETING: Sure. So once again there were
4 obviously some questions about dominance which were kind
5 of in your framing, Dr Bishop. That is not a question
6 I have been asked to opine on, so I am just going to
7 kind of say that my understanding obviously of the case
8 itself is that the Class Representative has identified
9 these distribution requirements and these payment
10 requirements which are viewed or are alleged to be
11 a restriction on competition, and obviously the question
12 to my mind is if those are -- if those were to be
13 eliminated what would be -- would this create -- what
14 would be the competitive effects of eliminating those
15 restrictions and what might be kind of the harms of
16 doing so?

17 Obviously, there is this bigger picture question
18 about should, as a matter of public policy, there be
19 some regulation of highly successful businesses to try
20 and create kind of the theoretically optimal outcome,
21 even though that may be different from what competition
22 would produce. But I regard that, you know, if public
23 policy wants to go down that route, that is one option
24 for public policy, but I do not see that necessarily as
25 being the question before us.

1 DR BISHOP: Maybe someone from the other side.

2 MR HOLT: Sure. I am happy to pick up. Obviously that was
3 quite an interesting question which raised a number of
4 points, some of which touch on I think some of the other
5 themes, including I think profitability and market
6 value, so I will try and sort of pick up some of that.

7 So I think one issue which comes to mind in your
8 description is that Apple clearly is a multi-product
9 firm and it has been very successful over, now, several
10 decades, and its sales and profitability figures in the
11 public domain I think demonstrate that it has been very
12 successful. There is no doubt about that.

13 I think the question though here is, and assuming,
14 which I think is a reasonable assumption, and, as I have
15 mentioned, taken it as an instruction, that it is
16 reasonable to identify the iOS App distribution and
17 in-app aftermarkets as relevant economic markets where
18 competition could occur, then what is the implication,
19 depending on whether you are looking at the foreclosure
20 part of the case or the excessive and unfair pricing
21 part of the case, what is the impact of Apple's conduct
22 in those markets?

23 I think therefore the focus of the enquiry needs to
24 be on those, while of course reasonably taking into
25 account any interaction with the ecosystem, as might be

1 relevant, depending on the question you are asking.

2 You mentioned dominance and that it is not claimed
3 that Apple is dominant, and you mentioned the 30%.

4 I think that is correct, that is not something that is
5 being alleged. Again, the dominance issue is not within
6 my scope, similarly to Professor Sweeting. But I would
7 note that to the extent that switching of devices, there
8 is evidence on that, it might be relevant to the
9 thinking around how you approach the question of the
10 position of Apple in the purported relevant markets,
11 ie does that switching cause sufficient constraints in
12 those markets? So again, that is not something that can
13 be looked at on the evidence.

14 There was some discussion of profitability, and
15 I think actually there, there are some statements which
16 I think are worth having a discussion around. So not
17 what are the levels of profitability, which I think in
18 the public domain are quite clear, but the implication
19 of any potential Competition Act intervention on the
20 relevant markets and what the consequence of that would
21 be. I think it is worth distinguishing between the
22 situation as was described, which is that Apple would no
23 longer have the right to, in a sense, earn any
24 contribution from one part of its monetisation of the
25 ecosystem, namely the services or the App Store, beyond

1 the WACC, and that is simply not the counterfactual or
2 the proposal, I think, that the Class Representative and
3 certainly that my analysis is indicating.

4 So if you look at the way I have addressed it for
5 the excessive pricing case, yes, I think profitability
6 is an important piece of the evidence to look at,
7 particularly in respect of the first limb, and I think
8 to my mind it is very clear that in the relevant markets
9 the amount of profitability is extremely high, and that
10 is based on the analysis that Mr Dudney has put forward
11 and I think was the subject of last week's discussion.

12 Now, that is not to say that if there was a case for
13 intervention, Apple would no longer have the ability to
14 earn contributions beyond the WACC. Indeed, the outcome
15 of the analysis that I have carried out, which takes
16 into account the second limb, the fairness question, and
17 identifies a counterfactual commission rate, my best
18 estimate being 15% within the 10 to 20 range, it is
19 interesting to look at, well, what would the implication
20 of that be for Apple's ability to monetise the
21 App Store?

22 The results again are set out in Mr Dudney's
23 reports, I think it is table 4 of his supplemental
24 report. If you look at the operating margins and the
25 operating profits that Apple would earn in the

1 counterfactual --

2 THE CHAIRMAN: Mr Holt, I am sorry to interrupt you, I just
3 wanted to make sure we are not going to get into
4 confidential numbers.

5 MR HOLT: Oh, I see.

6 THE CHAIRMAN: I am sure you have that in mind, and I am
7 afraid I do not know what is and is not confidential at
8 that level, so maybe it is just better to keep away from
9 actual numbers.

10 MR HOLT: Thank you for that reminder, sir. I will avoid
11 referring to specific numbers.

12 The numbers in any event are in that table. I think
13 it is probably not being too specific to say that the
14 contribution, and indeed above the WACC contribution,
15 would be several billion dollars per year over the
16 relevant period.

17 What does that tell you in terms of an implication?
18 It seems to me that that means that far from saying that
19 Apple would be constrained from having contribution from
20 developers due to any intervention, that it would
21 continue to achieve extremely large and ongoing
22 contributions from developers. Of course, that is not
23 taking in to account -- that is looking at the impact of
24 a change in commission rate. But of course developers
25 make contributions in other ways as well. They make

1 the -- they have the \$99 annual fee, which might sound
2 like a nominal amount in one sense, but given that there
3 are many millions of developers, that is obviously
4 a very substantial contribution to the ecosystem itself.

5 Then perhaps even more importantly in terms of how
6 Apple has described their early decision to make third
7 party access in terms of developers devising apps to
8 distribute to the user base, well, of course, the reason
9 for that is that that makes the devices more attractive.
10 So it is the provision of additional apps, and of course
11 they need some APIs and so on in order to produce those
12 apps, but that creates additional attractiveness in
13 terms of sales of devices, and as the CMA has noted, but
14 in a sense it is sort of obvious from the public domain
15 figures that Dr Bishop already quoted, the devices
16 business is extremely profitable as well. So there is
17 a wide range of contributions that would be made even in
18 the case of an intervention on Competition Act grounds.

19 So I think the other point I wanted to briefly touch
20 on is the question of access. So the way I have
21 approached this is, again, on the basis that there is
22 a relevant downstream market, or the markets that have
23 been purported for iOS App distribution, then what is
24 driving Apple's ability to set a high commission rate in
25 that? It is essentially that it is the gateway to that

1 user base so it is able to adopt a monopoly toll. In
2 the actual world, that monopoly toll has been extracted
3 through a particular structure being a commission,
4 which, on my analysis, is excessive, and I am aware of
5 course that the defendants' experts consider that not to
6 be the case, but it is really that access to the iOS
7 user base, which is the basis of which Apple is able to
8 extract these very large monopoly rents.

9 DR BISHOP: Can I just ask one small question there before
10 I ask Dr Singer to make some observations.

11 Monopoly. You have characterised 30% as monopoly,
12 and of course that is an essential part of the case or
13 at least too high a rate. Do you attribute no
14 significance to the fact that that was the rate on day
15 one when the App Store was brand new and the iPhone was
16 only a few months old or even a year old?

17 MR HOLT: Yes, so I have engaged on that point. It clearly
18 was the basis on which -- the original rate that was
19 levied. The evidence suggests that the basis was not
20 a detailed and rigorous analysis of what the competitive
21 levels were, what the developer benefits were, so
22 I would not put a lot of weight on whether that is
23 relevant in the relevant period, obviously many years
24 later and over a long period of time, as to the not
25 unfair rate at that point in time.

1 I think it is just -- it is a starting point. You
2 can raise a question as to whether it was already
3 excessive at that point. That is certainly not the
4 evidence that I have been asked to look at in terms of
5 the relevant period. But even if it was not, that does
6 not mean that that necessarily suggests it was not
7 excessive in the relevant period, because of course
8 a huge amount of developments have happened in the
9 market, the scope for entry would have been potentially
10 very great, and the market would have been attractive to
11 enter.

12 DR BISHOP: Okay, thank you.

13 Dr Singer.

14 DR SINGER: I am going to weigh in on this issue of
15 dominance when the App Store was launched in 2008.
16 I will note that the App Store was launched a full year
17 after the iPhone had been on the market and Apple was
18 the first to market with the smartphone, so I would
19 submit that Apple -- and the last point that is all
20 related is that the App Store itself, even though I am
21 calling it the primary market here, is itself an
22 aftermarket to the device, right?

23 So for all these reasons, I think it is indisputable
24 that Apple had power from day one in this aftermarket,
25 namely the App Store. It is the only way you could

1 access iPhone customers. The fact that they waited
2 a year allowed Apple to build up a base of customers in
3 that interim and that made them attractive to developers
4 and then the indirect network effects started piling on.

5 So I think for that reason it is fair to assess that
6 they had, certainly in the aftermarkets, what we are
7 calling here the App Store and in-app services, they had
8 dominance from day one. The CMA said that if a firm has
9 50% shares for several years it is safe to infer
10 dominance, and here we had Apple having 100% of these
11 aftermarkets for decades, so I think that easily passes
12 their test.

13 Let me address this question. Mr Holt did it, but I
14 think it is very important. I think you said is it fair
15 if they have no contribution from the aftermarket? Just
16 to be absolutely clear, in my scenarios, where I am
17 modeling through the Rochet and Tirole for the two sided
18 primary market and Landes and Posner for the
19 aftermarket, I never take Apple's share down to zero of
20 course, I think I am looking at shares in the range of
21 40 to 60, and Professor Sweeting says it could not fall
22 below 50%. So we have some agreement there as to where
23 we go. This is important. Even at 50% in this
24 aftermarket, Apple is going to have a sizeable amount of
25 power and Apple is going to enjoy significant economic

1 contributions for the investments they made.

2 So I blanch at the notion of no contribution.
3 Maybe that is in the limit. But I cannot -- even my
4 models do not contemplate Apple's power entirely being
5 eviscerated, right? They are going to have a foothold,
6 and the reason why they would continue to have
7 a foothold is brand loyalty. There are certain
8 developers who are going to want to stick with Apple
9 through this openness. They just feel their customers
10 are going to feel most comfortable if it is Apple doing
11 the back end commerce of the transactions.

12 So I just want to take on that issue of no
13 contribution. I think they are going to get plenty of
14 contribution.

15 The last question that you raised is -- oh, on the
16 30%, I mean this is quibbling, but I have seen higher,
17 and I wonder if on a revenue-weighted basis Apple might
18 have more. But of course Apple was the first to get to
19 the smartphone market, so I think we can hopefully agree
20 that in those initial years before the Android systems
21 came on and attacked Apple, Apple was enjoying a certain
22 amount of power that they might have lost at the margin
23 to the Android competition. I think Android came after
24 Apple.

25 On this question about intervention, no one is

1 begrudging a monopoly, right. We can have monopolies,
2 we can enjoy the fruits of a monopoly. The
3 intervention, as I understand it, is the exploitation or
4 the abuse of the monopoly, and here it is leveraging
5 that power, starting from the device market, going into
6 the App Store, and then leveraging it down to in-app
7 transactions at 30% commission. That is the abuse. So
8 that is, I think, the basis for the intervention, is
9 why, five years into a relationship between a developer
10 and a user, Apple is still taxing the value that is
11 being created by the developer at 30%, and could it do
12 that if not for the tie in?

13 DR BISHOP: Professor Hitt, you have not commented on ...

14 PROFESSOR HITT: I will do it in reverse order. I will
15 address some of the comments made by Dr Singer and
16 Mr Holt, and then I will round back around to your
17 original query.

18 So in terms of -- a couple of things about
19 Dr Singer's claim. So one of the -- first of all,
20 regarding the ongoing fee. Apple continues to offer
21 services to developers over time. When the app is
22 initially created, they evaluate. When the app is
23 updated, they evaluate. They continue to promote the
24 iOS platform, they continue to engage in all sorts of
25 activities which make this a desirable place to

1 transact, and when developers use certain forms of
2 monetisation, they capture a portion of that back in
3 return for all the services that they are providing.

4 To some extent, it does not matter whether it is
5 today or down the road, they have provided a variety of
6 services and they have charged for a limited number of
7 them, and when they choose to -- when developers choose
8 to use those services, that is when they incur
9 commissions, and they do not necessarily have to use the
10 services, they can do other things.

11 We did not get into this I think in market
12 definition, but Dr Singer quotes this 100% market share.
13 I think that goes back to this, which is the same
14 I think misconception that also appears in the CMA, is
15 the idea that because you have to download an app from
16 iOS, and that if you do engage in IAP you have to do it
17 within the iOS system, that they immediately have 100%
18 market share.

19 One of our disputes is as to whether or not these
20 are two separate markets. Another of our disputes is
21 whether or not there is one huge transaction market for
22 all apps, or there are individual transaction markets
23 that have individual competitive constraints that are
24 important for competitive analysis.

25 In my report I have analysed -- defined two

1 particular markets, one for games and one for video
2 streaming apps, and if you treat those as relevant
3 antitrust markets, which I believe is reasonable because
4 they have different constraints, you get market shares
5 which are significantly less than 1%. I think there is
6 no conception of games in the UK which would get you
7 above, say, 25 to 30%, and in video streaming it is sub
8 10%. So when you actually think about the market with
9 appropriate market boundaries you do not get the same
10 kind of immediate 100% story.

11 Mr Holt made a couple of references. I will come
12 back to the profitability point a bit later. But he did
13 bring up the idea of switching devices and whether that
14 is a competitive constraint. I believe the ability to
15 switch devices is a strong competitive constraint.
16 Apple continues to innovate, as does Samsung, as does
17 HTC, as does every competitor in this market, because
18 they recognise that this is a repeat purchase product.
19 After a couple of years you get a new smartphone.
20 Everybody is up for grabs.

21 It turns out empirically that about 90%, and we can
22 quibble with the exact numbers, about 90% of consumers,
23 when faced with that decision from either platform make
24 the same platform choice. That is reflective of
25 competition because -- and one of the reasons why

1 consumers might make that same choice is they are very
2 satisfied with the platform which they are on. So the
3 absence of -- so with rates of something like 10%
4 switching platforms, it still reflects competition in
5 the sense that maintaining that level of satisfaction
6 both from the Android side and from the Apple side and
7 from all the other smartphone device manufacturers is an
8 important part of that competition, and what we are
9 observing is the outcome of that competition, of people
10 choosing the same device because they like the device
11 they have.

12 I would also like to situate some of those switching
13 numbers compared to other kinds of markets. That is
14 something that I worked on specifically for this case in
15 the UK. What you find is there are many kinds of
16 services where you see switching rates of the order of
17 15%, utilities, telco plans, other kinds of things like
18 that. So it is not as if this is an unusually low rate
19 of switching, and, indeed, the threat that consumers
20 will move to another platform is especially salient in
21 a platform environment where, when you lose a consumer,
22 not only do you lose the consumer but you lose many
23 other things.

24 So I think the device level competition and the
25 potential for switching creates a strong competitive

1 constraint that limits the behaviour of the platform
2 across the platform.

3 Now, getting back to your original question. So
4 I agree it is absolutely a multi-product firm but it is
5 also a platform, and that has some special
6 considerations. So the structure that Apple has adopted
7 is they provide many services in many dimensions and
8 they charge for a relatively limited number of them.
9 They charge the developer programme fee, which I would
10 disagree with Mr Holt on, which could be viewed as
11 a profit centre. I believe there was some testimony
12 earlier either from Mr Federighi or Mr Schiller simply
13 saying that does not even cover the cost of the
14 programme. If you anchor that against I am going to say
15 my own experience, I pay more for a programme editor in
16 a year than that whole programme that provides all of
17 Apple's suite of testing tools, development tools, all
18 those other things.

19 So that is not -- I think -- my experience is
20 consistent with the earlier testimony that that is not
21 a sort of revenue source. That is offsetting some of
22 the expenses of the programme.

23 They charge for a relatively small number of things.
24 They charge for initial downloads that are paid, they
25 charge for the device obviously, and they charge for

1 in-app purchases consummated on the device. They could
2 charge for many other things, that is always an option,
3 but they have chosen to configure their structure the
4 way they have. That is typical of platforms. Often
5 platforms have (inaudible), some things are free, and,
6 you know, this is based on the decision that it
7 maximises value for the platform by having this
8 configuration.

9 One of the challenges, however, is when you go in
10 and say, okay, I am going to look at the pieces of the
11 platform that are actually priced, it becomes very
12 difficult to make these kinds of standalone comparisons,
13 because, indeed, the services that are provided for the
14 App Store include things like Apple's tools and
15 technologies that are used to create apps that
16 developers rely on to create apps. It turns out they do
17 not charge for them if you do not transact in certain
18 specific ways, but they have chosen that configuration
19 and you would expect them to be able to in some ways
20 monetise that. Similarly, they do not charge for free
21 downloads and enable large numbers of firms to offer
22 free apps of all sorts of types without any charge at
23 all.

24 So one of the challenges of working in a platform
25 environment and evaluating prices, for example, is that

1 this is the way they have chosen to configure their
2 monetisation scheme there, but those services -- it is
3 a compensation for a wide variety of services that could
4 have been priced that they chose not to.

5 With respect to this discussion about 30% as
6 a monopoly price, I will turn to -- so I do not believe
7 it is a monopoly price at the beginning. If you look at
8 the history, and again this was one of the questions
9 I understand you were all interested in, at the
10 beginning Apple was an entrant. They were an entrant in
11 app stores and they were an entrant in smartphones.
12 There were incumbents. There were things like
13 BlackBerry in existence and hand-helds. So Apple was
14 constrained in part by the ability to generate consumer
15 demand for this new technology and they were also
16 constrained by the ability to create consumer demand for
17 apps which at the time was actually quite challenging.

18 One of the issues at the early -- in the early
19 smartphone industry is to find a killer app, things that
20 would make consumers adopt these high powered devices
21 and use high amounts of network bandwidth, and Apple was
22 one of the ones that brought a solution in the form of
23 apps. So they were trying to -- they were building the
24 market at this time. It would be unusual to consider
25 a company who is a new entrant to be dominant. They

1 were differentiated, they were competing for customers,
2 but it would be hard to say they were dominant.

3 I would also note there is testimony in this case
4 about where that commission originally came from.
5 Mr Schiller I believe was pretty clear that what they
6 did when they were setting that 30% commission is they
7 looked at other competing services, one was Steam, which
8 was at 30%, and one was Handspring, I believe -- no,
9 Handango, which Mr Schiller said was at 30%. They also
10 considered the fact that the alternative distribution
11 channels would have been retail distribution for
12 software and the types of implied commissions you get
13 when you distribute, say, through a computer store,
14 which was the prior mechanism of distribution, you would
15 be losing 50 to 70% between the retail -- between the
16 additional costs of doing so as well as the retail
17 mark-ups.

18 So it was in some sense comparable to other stores
19 at the time and a pretty good deal relative to retail,
20 so I think that is not consistent with the idea of
21 exercising dominance at an early stage, even if they
22 could given they were an entrant.

23 Finally on the issue of profitability, and I agree
24 Apple is a highly profitable company. I think the --
25 one of the things I would like to highlight, however, is

1 those comparisons of profitability for the purposes of
2 excess pricing I do not think are all that helpful here,
3 and I think they are not helpful for a couple of
4 reasons. I know there is a very extensive discussion
5 about the allocation of costs and things and the
6 difficulties of properly allocating costs. I will leave
7 that to the accountants. That is the accounting world,
8 I will let them handle that one. But I do agree that
9 when you have a platform where you generate value in
10 many ways and charge for some of them, it becomes very
11 difficult to decide where costs have actually been
12 incurred and I agree with some of the discussion along
13 that line.

14 The second thing is Apple has a tremendous amount of
15 intangible assets, and I think Mr -- I reviewed both
16 Mr Dudney and Mr Barnes's testimony, and one thing that
17 stood out to me was, in Mr Barnes's testimony, the
18 discussion he had about the sort of how large the
19 intangibles may be given Apple's market cap, and that
20 makes those kind of calculations like WACC very
21 difficult to do. One of my areas of research is in
22 intangible assets and one of the things you persistently
23 find is that in technology-enabled industries
24 intangibles can be very large. They are observably
25 large in Apple, and depending on how you account for

1 those you can reach very different conclusions about
2 how -- whether or not there is excess profitability.
3 But it is undeniable that Apple has created a lot of
4 value and they have captured a lot of the value as part
5 of that, which is sort of the normal operation of
6 a competitive industry.

7 Then finally the last comment is, again referring to
8 the 30% platform charges I alluded to before, Apple
9 provides many services and charges for some of those.
10 For this, they have charged a 30% fee. If you take
11 a look at the 30% fee they charge in the App Store and
12 you compare it, for example, to Mr Holt or Dr Singer's
13 comparators, you are comparing it against things like
14 the Epic Games store, where you have Microsoft platform,
15 which I noted earlier. They did not do this until
16 roughly -- this was not even a different price until
17 2018. Up until that point, the prevailing price was
18 historically about 30% for almost every platform.

19 Now, if you look at the differences between the
20 stores, however. I will note that Epic Games store does
21 not provide tools and technologies for the production of
22 apps and it does not provide the same kind of services
23 that Apple provides.

24 Similarly, the Microsoft store is not considered
25 a particularly high quality platform, at least in their

1 PC games store. Their Xbox store is excellent and they
2 charge a 30% fee there. But they do not charge -- you
3 cannot consider the PC stores were either providing the
4 same comparable services or it was of comparable
5 quality.

6 So one of my disagreements with my friends over here
7 is that that 30% fails to -- even if you looked at the
8 30% compared to 10 or 12, that is not the right
9 comparison because, one, it does not conclude the same
10 sets of services, then, second, it does not account for
11 differences in quality. Remember, when you are making
12 comparisons in prices, prices need to be compared on a
13 quality-adjusted basis and they have not done so, and it
14 is undeniable that the App Store is a facility of very
15 high quality, and simply association of the Apple brand
16 itself may generate value for consumers as they
17 (inaudible).

18 I will stop talking here. I am happy to allow you
19 to have any other final questions.

20 DR BISHOP: Mr Holt, do you have any responses?

21 MR HOLT: Yes, I do have a few responses, if I can go in,
22 and I do not know if Dr Singer has some as well.

23 Let me pick up on the point about intangible -- and
24 I am aware that some of these debates may be the subject
25 of more detailed discussion later, so I will just sort

1 of try and respond briefly now on the anticipation that
2 we might come back to them.

3 I do not think it is right to say that looking at
4 the profitability of the App Store is not helpful. It
5 is a business unit, it is the focal point of these
6 proceedings, and I think the evidence has shown that
7 there are reasonable ways of thinking about the
8 profitability of business units, including in the
9 application of this case, and the results of applying
10 those methodologies, incidentally, are not sensitive to
11 alternative reasonable approaches, but I am sure we will
12 get on to that in greater detail at some point.

13 There is a related point about one of the reasons
14 why it is difficult to look at profitability being the
15 intangible assets. I think there are two sort of
16 aspects to that. One, how should, in a competition
17 case, one investigate that issue, and particularly how
18 should one apply that in the context of the first limb
19 analysis in an allegation concerning excessive pricing.

20 I think it is very clear that you have to look at
21 the price by reference to the actual costs or the
22 profitability by reference to the actual costs. That is
23 informative as to whether the business unit or product
24 in question is highly profitable or not. Of course if
25 there are legitimate further issues of distinctive value

1 then those very well need to be taken into account in
2 the second limb.

3 I think -- again, there is a reference to Apple
4 having high intangible value. The case is not about
5 Apple's high intangible value, the case is about the
6 App Store, and even if Apple is perceived as a high
7 quality producer of devices, that does not necessarily
8 say that it is high quality in regard to the App Store
9 and, indeed, given that there was no scope for any
10 competition in the App Store or in the distribution of
11 apps on iOS, I think actually there would have been
12 perhaps more innovation in a counterfactual where that
13 type of competition had taken place.

14 Again, on intangibles, I think it is interesting to
15 note how the CMA engaged on that issue. It for many
16 years had guidelines as to how to deal with the question
17 of intangibles. It has got several criteria that it
18 applies in regard to the treatment of intangibles
19 relating to whether costs are business as usual or
20 creating new assets and things of that nature. It has
21 looked at this in the context of Apple and found that
22 there was not a sufficient case to identify adjustments
23 to the capital base it had investigated when it was
24 looking at the mobile ecosystem study, and in spite of
25 that, and I thought it was useful to understand the

1 consequences even if you were to treat Apple's R&D as
2 satisfying the criteria, when even the CMA said they did
3 not necessarily meet those criteria, it had very little
4 impact on the profitability analysis.

5 Finally, it is worth noting that these issues have
6 been raised over a long period of time. The question
7 about the gap between a market capitalisation and an
8 alternative perspective on returns on capital employed
9 versus the WACC was raised, for example, in the early
10 2000s banking inquiry where the very same argument was
11 made by banks.

12 I think it is interesting to see what the
13 Competition Commission said in response to that.
14 Firstly, it highlighted the critical circularity whereby
15 if you are looking at a product which potentially is not
16 subject to contestability and is potentially setting
17 high prices, then of course the market capitalisation
18 will simply capitalise the future cash flows associated
19 with that. So that is not an easily resolved
20 circularity problem.

21 There is also the attribution as to the market
22 capitalisation of Apple, which is -- I think it was
23 2.7 trillion when Dr Barnes was doing his report,
24 I think it is now up to about 3.3, but how much of that
25 is relevant for the context of these proceedings. Of

1 course there is a huge range of other activities Apple
2 is doing. How much of that is down to its potential
3 role in AI, and so on. I think these are just not
4 really relevant and answerable questions for the
5 purposes of doing an excessive pricing context. So that
6 is what I wanted to say.

7 DR BISHOP: Dr Singer.

8 DR SINGER: I just wanted to respond to a few things. He
9 said a lot of things and I do not have time to respond
10 to all of them. He is kind of monopolising the
11 platform.

12 Let me just respond to two points. On the
13 transaction point, he said that word again, and it is
14 a bad word, and the reason why it is bad is he then gets
15 confused and goes into the video games market, and
16 I think he has got the videos and the gaming market.

17 The reason why that is happening is because he is
18 conflating those two parallel economic activities. We
19 do not want to get caught up in what actual content is
20 flowing over, right.

21 As the CMA noted, Apple's services are the same for
22 all of these developers. It is distribution in the
23 primary market and it is In-App Support Services in the
24 secondary market. They do not vary up what they are
25 offering based on genre. So it is a mistake to go off

1 into the video and into the games things because what he
2 is doing is conflating the two activities that are
3 happening in parallel.

4 But of course it takes it him to a place with lower
5 market share. He does not like the 100% market share
6 I understand because it is pretty hard. Once you have
7 100% it is hard to argue against dominance.

8 The second point I want to respond to was about
9 where the price comes from. I have been doing this for
10 a long time, the antitrust cases for over 20 years.
11 I used to have hair and I used to have silky skin and
12 I have never been asked the question before, I never saw
13 it until this case: where does the price come from? Is
14 that some kind of defence against a restraint or an
15 abuse of dominance?

16 I have been asked, does the restraint, can the
17 restraint be justified on an efficiency grounds? I have
18 never been asked, what is the point, where does
19 the price come from? As an economist I want to tell you
20 the answer. The price comes from whatever the market
21 will bear, whatever you can get away with. That is
22 where the price comes from. So when Apple chose 30 that
23 is what they thought they could get away with. If they
24 thought they could get away with more than 30 they would
25 have done more than 30. That was the profit maximising

1 price.

2 Where do our bill rates come from and what are they
3 compensating? Are they compensating our egos? Who
4 cares about that. This is what the market will bear.

5 So I just -- I think it is a mistake and a danger to
6 go off on this tangent. It is like a rabbit hole. What
7 is the rate compensating them for? I think the only
8 relevant question, at least that I have been asked in 20
9 plus years of doing this, is what would the rate be?
10 What would the price be in the absence of the restraint?
11 That is the enquiry. To me that is where what we are
12 trying to figure out here.

13 DR BISHOP: Thank you.

14 MR FRAZER: Thank you.

15 I just want to bring this down to something more
16 prosaic and that is in relation to the impact of
17 competition in the device market or in the device
18 segment or device activity.

19 One of the things I have been looking at is the
20 CMA's report into mobile ecosystems which is not
21 evidence in this case but it is clearly very interesting
22 and relevant. One of the things they said in there was
23 that the threat of device owners switching between
24 iPhone and Android ecosystems did not place
25 a significant constraint either on Apple or on Google.

1 I think the background to that is they also found that
2 in choosing between devices the range of apps was not
3 a significant feature which was considered by users
4 compared to things like battery life and camera features
5 etc, and also the size and the complexity of the
6 deferred cost of apps meant it was very difficult to
7 calculate or at least users were myopic in relation to
8 it.

9 Professor Hitt has mentioned device competition
10 quite a lot in his last answer and I wanted just to make
11 sure that we could have an opportunity to look at that
12 and see whether there was agreement or disagreement with
13 the CMA and why we might come to different conclusions
14 in relation to that.

15 After that I want to ask you something else but let
16 us stick with that. I honestly do not mind.

17 Professor Hitt you have had a good go at devices.

18 Perhaps we could come to this side first.

19 MR HOLT: Yes, sure and as my previous sort of caveats
20 indicate, my focus was not on market definition and
21 dominance, but I have reviewed the mobile app ecosystem
22 study previously so I do have some views on at least
23 some of the principles as opposed to the specific
24 evidence as to how much switching is actually happening
25 and so on which Professor Hitt has raised.

1 So just a few points of principle that I think are
2 relevant in this context. The point of principle
3 I think is that again we are not interested in the
4 question about: is Apple dominant in the devices market
5 per se; we are interested in the different question
6 which is: for the candidate market of iOS distribution
7 and the aftermarkets does device switching constitute
8 a sufficient basis on which to say that actually Apple
9 would not have an ability to exercise market power to
10 a sufficient degree in order to raise prices above
11 a competitive level?

12 Now, so I think that is the right question. That is
13 the question that the CMA was very explicitly trying to
14 understand because its focus was not on device
15 competition as such but rather on the implications of it
16 for essentially the aftermarkets in the overall
17 ecosystem.

18 Now, some of the factors that I think the Tribunal
19 might wish to sort of consider in that regard are those
20 in fact, sir, that you already highlighted. They
21 include the nature of switching costs, the degree of
22 switching, the factors that consumers may take into
23 account which of course may be in part direct financial
24 ones but may also be factors relating to -- the concern
25 of going off platform in terms of what impact that might

1 have for their historic purchases or their historic
2 relationships and use of various tools that they might
3 engage with with people that they are communicating
4 with, whether it be on iMessage or any other range of
5 things, Facetime and so on.

6 So these are the sorts of things that can
7 constitute, in a sense, non-price switching costs that
8 could be a relevant factor that constrains Apple in
9 relation to the Commission.

10 Then I think the last point I would make is that
11 there is a consideration as to how much -- how do
12 consumers think about this, and obviously the price of
13 the device is sort of an up-front cost of whatever it
14 might be, between £700 and £1,200 or whatever it might
15 be. That is obviously a large up-front cost. It can
16 obviously be sort of scaled out over time as a per month
17 approach in a bundled contract with a mobile network
18 services provider, but it is still a significant amount
19 per month.

20 In contrast, the implication of a supra-competitive
21 change in the Commission rate from whatever the starting
22 base is, and obviously there is a lot of debate about
23 what that should be, but a competitive or
24 supra-competitive rate above that would not necessarily
25 amount to a significant financial motivation for

1 a customer to switch to the alternative device given all
2 of these switching costs and the up-front costs of
3 buying the phone. Albeit I get that if you are coming
4 up to a renewal point then some of those considerations
5 might be a little different.

6 DR SINGER: Can I address the switching? I will be quick.

7 So the data that we have seen, including from
8 Professor Hitt, shows it is fairly small, I think in the
9 order of about 5% a year of iPhone users going over to
10 Android. But remember that is for any reason. What we
11 are interested in is price induced switching like do we
12 have any evidence that a consumer would switch over to
13 an Android phone to help defeat an increase in Apple's
14 commission on developers? No evidence of that.

15 MR FRAZER: Or a decrease in quality.

16 DR SINGER: Or a decrease in quality. I do not think we
17 have any evidence of that either. I certainly do not
18 think the quality of the Apple system has declined.

19 Let me make the next point. What matters of course
20 is the price induced switching to make it an economic
21 substitute and we see none of that in the record. I do
22 want to talk about stickiness -- and I agree with the
23 CMA, if I heard your quote right, my memory is that it
24 is not -- whatever competition is going on in these four
25 markets for the devices does not engender any

1 competition in the aftermarkets, that both Apple and
2 Android based and Google are able to exercise power in
3 the aftermarkets despite whatever competition is
4 occurring in the primary markets. That is for several
5 reasons including stickiness. I just want to kind of
6 tick through my favourite stickiness factors.

7 One of course is the expense of the phone. So if
8 you are expecting someone to defect and to go to the
9 other side in response to a commission increase they
10 have to buy a new phone. That itself creates
11 stickiness.

12 The time value of learning the system. I am old and
13 now I am set in my ways there is a word processor I like
14 to use, Excel spreadsheet. I do not want to learn how
15 to do the Android phone. I just cannot. Okay. So time
16 value of money.

17 The lost apps. We have an executive and other
18 things that have been purchased on the phone. We have
19 an executive from Apple, I do not remember the exact
20 quote and I think he was talking about iTunes and movies
21 in particular, but he said something to the effect that
22 it would be crazy, it would be crazy because you would
23 lose all of these things that you had purchased.

24 Another thing I want to talk about is coordination.
25 When I move it is not just me. I would have to get

1 everyone in my family to move over there with me. Apple
2 has done things including messaging that you are
3 probably aware that for at least high resolution
4 messaging there is some difficulties going from an
5 iPhone to a Samsung phone, and you lose some
6 peripherals. Apple has made -- they are building a moat
7 to kind of keep you in their ecosystem wisely. They
8 put -- the Apple Watch is you are going to strand
9 investments in peripherals that only work with the Apple
10 ecosystem.

11 So I think for all of those reasons we get a certain
12 amount of stickiness and that probably explains why we
13 see such low switching rates. But whatever the rates
14 there are my contention is it cannot discipline Apple or
15 Google's power in the aftermarket. I will leave it at
16 that.

17 MR FRAZER: Professor Sweeting you are kind at the
18 peripheral, do you want to ...

19 PROFESSOR SWEETING: So I will just make -- obviously partly
20 when I talk about the objective justification side of
21 the ledger, I do talk a little bit about the fact there
22 is evidence in Apple's customer surveys including from
23 the UK that security and privacy, so two of the quality
24 features that you alluded to are very important, amongst
25 the most important things that attract iOS device

1 purchases to Apple products and that there is actually,
2 if you look at, for example, some of the Android
3 manufacturer purchases it is much less important to
4 them. So I think we do need to keep in mind that the
5 distribution requirements and the payment requirements
6 do play some role in ensuring the quality of the
7 products and potentially leading to a high satisfaction
8 for iOS device users.

9 Then actually also in that context there was some
10 discussion earlier about the fact that 30% had been from
11 the beginning of the App Store. I would also point out
12 in that context that the distribution requirements were
13 kind of in place from the beginning and then once in-app
14 purchasing was available, so were also the payment
15 requirements.

16 I do just think it is interesting to think about at
17 that time Apple's incentives were being very much to try
18 and grow the platform kind of very quickly and this
19 looks quite different, so you may know kind of Carl
20 Shapiro who is a well-known US antitrust economist. He
21 sometimes talks about platforms adopting these kind of
22 open and then closed policies where you grow the
23 platform and then kind of exploit. These requirements
24 are in place from the start and in fact if you think --
25 to my mind Apple has done things over time such as the

1 reader rule and the multi-platform rule that are kind of
2 opening up kind of alternative ways for monetization.

3 So it does not like look like they are acting in these
4 incentives to grow and then exploit. It really does not
5 look like that to me.

6 MR FRAZER: Thank you. Professor, do you want to come back
7 on any of that?

8 PROFESSOR HITT: Sure, just a couple of points. Again,
9 I will work in reverse.

10 So Dr Singer quotes 5% switching. I think that
11 there is a variety of numbers in there between -- and
12 the number I would say is in the order of between 5 and
13 15% which, as I noted in my earlier comments, is in line
14 with many other kinds of services that have those
15 switching rates, so I will just flag this one.

16 I think the most interesting and important thing we
17 have not discussed in terms of the switching rates is
18 that it is not the switching of everyone. It is the
19 switching of the marginal consumer that critically
20 matters here. In particular, so we are talking about
21 device prices. I do not expect large numbers of
22 consumers to move from one platform to another.
23 However, there are device consumers who do spend
24 a tremendous amount on apps. I will give you a couple
25 of examples.

1 There is a 0.3 of the customer base who in any given
2 year who will spend more than the value of the device.
3 These customers are likely to be very incentivised to
4 know what the deal is in terms of IAP and prices and
5 those kinds of things, and the movement of those
6 customers, they represent about 20% of the revenue for
7 the App Store.

8 Another relevant statistic, about 5% of customers
9 generate about 50% of all revenue; again, on the
10 App Store. The switching of the limited number of those
11 consumers could have a significant effect on revenue.
12 So it does not have to be everybody who switches. It is
13 switching on the margin.

14 It is important for two reasons. One is it does not
15 take many and two, these consumers have a lot of
16 incentive to understand what they are buying not only in
17 the device itself but also in terms of IAP. You can
18 think about who these people are. They are people who
19 buy a lot of IAP and games so they are people who play
20 gambling apps for instance where you can spend
21 a tremendous amount in that kind of world.

22 Then, just as a final comment, a number of the
23 switching items that, for example, switching costs that
24 Dr Singer and Mr Holt flagged are not necessarily
25 I think material switching costs. You have to buy

1 a phone eventually. That is the switching event. That
2 kind of takes the full value of the device off the
3 table.

4 Many of these switching things -- for example, the
5 idea that people have multiple Apple devices and that
6 they like doing it altogether is just part of the
7 platform value itself. It is part of the value that
8 Apple brings. For example, some people choose to
9 participate in the Apple ecosystems because they value
10 these other things. That is a pro consumer. That is of
11 benefit to consumers. I think that is one reason why
12 you see stickiness. It is not because it is an
13 anti-competitive effect. It is because consumers like
14 the Apple ecosystem. Consumers also happen to like the
15 Android ecosystem and that is a good thing and that can
16 explain a lot of the numbers we see in terms of device
17 switching. I will stop there, thank you.

18 MR FRAZER: Thank you. There is one other thing I would
19 like to just pick up on, it is slightly off topic but
20 I think everybody mentioned in the previous round which
21 is the Commission. The Commission started off at 30%
22 and has since reduced, at least in relation to some
23 services, some contexts. Should we view that as
24 a constraint on Apple in these potential markets as we
25 define them or is that not related to competition in

1 those markets? Whoever wishes to start.

2 MR HOLT: Okay, I am happy to sort of get the ball rolling
3 on that one. Another important and fascinating topic in
4 this case I think.

5 So the way I have addressed this, and I think there
6 has been some discussion amongst, in particular
7 Professor Hitt and myself, on the implication of the
8 timeframe and profile of the Commission rate over time.
9 So it started at 30 and then at different points in time
10 some limited exceptions were applied, the small business
11 programme, the reader rule, although that itself was not
12 a reduction in the Commission rate but it changed some
13 of the terms and conditions for certain types of apps,
14 subscriptions for renewals and so on. So there are
15 clearly a number of cases where the Commission rate has
16 been changed and then there are a number of questions
17 which arise from that.

18 What is the interpretation of that? I think my
19 overall sense, and then I will just address a couple
20 more specific points, my overall point is that while
21 I would agree that reductions in prices over time could
22 be consistent with a workably effective or workably
23 competitive market, you do need to ensure you are
24 comparing that against the right benchmark and the right
25 counterfactual. So merely because there is a downward

1 direction in the average effective commission rate is
2 clearly not sufficient to suggest that the Commission
3 which emerges from that is not excessive or unfair
4 because it is a benchmark free assessment or at least
5 the benchmark is only how high it was before without
6 taking into account developments over time, the nature
7 of the market, what workable competition would have
8 likely led to in terms of entry and price competition
9 and so on.

10 So if the benchmark properly construed would suggest
11 levels materially below the effective average that you
12 have seen, then the fact that it has gone down is simply
13 saying it is somewhat less excessive, somewhat less
14 unfair than it would otherwise be.

15 The second part of this debate that I think is
16 interesting is what is to be gleaned from the fact that
17 Apple has made some quite targeted changes to specific
18 types of commission rates. Now, I actually use that as
19 part of my wider base for thinking about what would be
20 the not excessive and not unfair commission range. So
21 let us just take the small business programme as one
22 example.

23 Now, that is not clearly a case which would be my
24 ideal comparator scenario which is a case where there
25 would be within market rivalry ie within iOS App

1 distribution or in-app payment aftermarkets whereby
2 Apple is having to compete against a direct rival in
3 order to keep the custom of developers from moving their
4 listing or steering their listing away. That is not
5 happening.

6 But it is at least a case where there is a somewhat
7 better sort of bargaining position in terms of the
8 position of some of the developers in terms of what
9 choices they have available to them by contrast to the
10 wider base of developers.

11 What I mean by that is obviously if you are a small
12 developer essentially the opportunity cost of delisting
13 or not doing the investment in the first place and
14 trying to bring an app to the iOS platform is relatively
15 modest. There is still significant risks, there is
16 significant fixed costs they would have to incur in
17 order to devise the app and those are all factors that
18 would be taken into account no doubt by a small business
19 developer.

20 So the extent that there is some realistic scenario
21 where these developers might say, look, I am just not
22 going to be profitable I am just not going to do it,
23 then that changes their bargaining position with respect
24 to the viable commission rate and that is an analogy to
25 a situation that I am looking at which is in a workably

1 competitive market with real rivalry and choice
2 available to the developers what would be the impact.

3 Again it is not the same type of competitive
4 constraint but it is at least evidence of a constraint
5 and that has led to a 15% which is consistent with my
6 broader evidence.

7 MR FRAZER: Thank you.

8 DR SINGER: If it is okay, let me take it on.

9 The answer to your question, no, we should not
10 consider these slight reductions in the weighted average
11 commission rate to be indicative of competitive
12 constraints. I have broken it down by segment including
13 the in-app segment. Remember the discounts only apply
14 to the small developers, under a million pounds in
15 annual sales, and I have calculated over the study
16 period, the damages period about 2% of the transactions
17 were eligible for -- these in-app transactions were
18 eligible for the 15% commission.

19 MR FRAZER: Under the small business scheme or under all of
20 the schemes?

21 DR SINGER: Sorry?

22 MR FRAZER: Just the small business exception or all the
23 exceptions?

24 DR SINGER: No, just the small business. This is the
25 in-app. I will talk about the subscription ones in

1 a second. But for in-app transactions the percentage of
2 the transactions that were eligible that took advantage
3 of the discount were in the order of about 2% over the
4 damages period. So when you look at the weighted
5 average reduction in the Commission rate for in-app
6 transactions you barely get any movement.

7 So I do not want to overstate. I think it is
8 a danger to overstate the reduction. Yes, they dropped
9 it to 15 but the circumstances under which it applies
10 affects such a small amount of commerce that the
11 weighted average commission has barely moved.

12 Now, I do not think it is reflective of competition.
13 They could have done this for many reasons. They could
14 have done it to a response to regulatory pressures or
15 they could have done it in response to litigation
16 pressures. We know that Apple is being pursued in the
17 United States by Epic, by Class consumers.

18 I think, as Mr Holt said, the correct counterfactual
19 is not to look at the direction and say oh it went from
20 30 to weighted average, I do not know what it is, 28,
21 and therefore competition has broken loose. I think the
22 relevant counterfactual is: what would the Commission
23 have been in the absence of the restraints?

24 Professor Hitt makes a similar mistake when he
25 highlights the output, the growth in output, the number

1 of transactions over time. He cites that as evidence
2 that supposedly contradicts anti-competitive effects.
3 Of course that is the same mistake, right. We can have
4 output growing even under a monopolised platform. The
5 relevant question is: at what rate would the output have
6 grown at a lower commission structure? Presumably it
7 would have grown even faster.

8 So I just want to caution that we do not want to
9 make too much, as economists, of directional changes.
10 What matters, as Mr Holt says, is the counterfactual and
11 how did history unfold relative to the counterfactual.

12 MR FRAZER: Thank you, that is helpful. Professor Hitt,
13 I am sure you have a different view.

14 PROFESSOR HITT: So with respect to the Commission rate
15 I think Mr Holt is exactly right, you want to look at
16 the competitive benchmarks in which you can see very
17 clearly -- there is a big chart in my report -- is that
18 up until about December 2018 there was nobody charging
19 systematically below 30% headline rate and so that was
20 the competitive rate up to that point.

21 When these various subscription programmes were
22 introduced, for example, the auto renewing subscription
23 programme and the video partner programme, those were
24 close to or comparable to what other platforms were
25 charging. So if you want to take a look at benchmarks

1 up and through 2018 pretty much Apple was on par,
2 slightly ahead in the reductions with respect to those
3 commission rates.

4 In terms of the benchmarks that they are using to
5 anchor it on, 10 to 12%. The only other one that would
6 be included there would be Microsoft which again on
7 a quality adjusted basis probably is a number
8 significantly higher than that. I do not know exactly
9 what it is. But it is certainly not comparable or
10 viewed as comparable in quality to many of the other app
11 stores that have charged 30%.

12 So if you look at the actual prices being charged
13 Apple is not unusual in that respect. The only two they
14 are able to point to is Epic and Microsoft. So from
15 a benchmarking standpoint, I think you get a pretty good
16 indication that Apple has been charging effectively
17 competitive rates largely throughout this period.

18 So I agree, I think Dr Singer's small business
19 programme figures I think are in the right ballpark.
20 Just to put a little context on that. SPB probably
21 affects something of the order of a few percentage. It
22 affects a very large number of developers but the total
23 commerce that goes through there, so a large number of
24 developers get access to these lower programme rates.
25 Again, they are small. Maybe they will grow up to be

1 bigger, but that is a small amount.

2 These other programs are not necessarily small.
3 Video streaming for instance is in the order of a few %
4 as well. Auto-renewing subscriptions represent
5 a significant volume of commerce for the App Store and
6 do qualify for a 15% rate in the renewal period after
7 the first year which is comparable to what other
8 platforms have been charging for these kind of things
9 and that does represent a significant volume of
10 commerce. I think I have a calculation that
11 collectively these three programs cover probably in the
12 order of -- a little bit less than 40% of all commerce
13 is covered by one of these programs I studied between
14 SBP, auto renewing subscription, video partner programme
15 and news partner programme, of which the largest is ARS.
16 So I think that is most of what I have to say.

17 MR FRAZER: Thank you.

18 PROFESSOR SWEETING: I have not been asked directly to give
19 an opinion on some of these questions. I would just say
20 for me as an economist I would understand Apple's
21 choices of commissions and how they have changed over
22 time to be a reflection of Apple's understanding of its
23 changing environment. Competition will be part of that
24 but also they see developers trying to do different
25 kinds of things and they are kind of responding to that

1 to kind of maximise the value of the platform.

2 MR FRAZER: Thank you. Thank you, Dr Bishop.

3 MR HOLT: Is it helpful to make a brief response to a couple
4 of the additional points or not helpful.

5 MR FRAZER: It is always helpful if it is brief.

6 DR SINGER: I have a brief one too.

7 MR HOLT: Let me be brief. The video streaming is I think
8 is another example which is an analogy to what might
9 happen in more competitive environment in the sense that
10 Apple had something to gain from people signing up to
11 that because it would join them into the Apple TV plus
12 offering. So a bit like the small business programme,
13 where there are certain cases where developer choices
14 were more analogous to what might happen in a workably
15 competitive environment, then it is interesting to see
16 that 15% is what arises.

17 DR SINGER: A very quick one. I am confused about this
18 thing that we should not look at these examples of the
19 breakout of competition for PC games because it occurred
20 in 2018. I honestly do not understand why we would not
21 want to look at that example. Is 2018, too recent, too
22 late? I cannot figure this out. It was seven years ago
23 so I just feel like that is a credible one in saying it
24 happened in 2018 and therefore we can ignore it. I do
25 not get the economic logic there. It is not just Epic

1 and Microsoft. It is Steam as well.

2 We are offering up Paddle as the comparable in the
3 aftermarket. I do not know when Paddle's number came
4 out but if it came out after 2018 I hope we do not lose
5 it on the grounds that it is too fresh. I just do not
6 understand that logic.

7 PROFESSOR HITT: I will be very brief. I promise. Okay.

8 Now, so let me be specific about the relevance of
9 that is we have benchmarks of what the prices have been
10 charged over time. Again, I note that nothing
11 fundamentally changed in the PC market in terms of the
12 competitive environment and upon Epic's entry they did
13 offer a lower price but that is the first time you
14 started seeing lower prices. So at least up to that
15 point there is no debate this is a competitive price.

16 Then afterwards some platforms have adopted but most
17 have not which is a strong indication that they had
18 a competitive price prior. So I think it is informative
19 in the sense if we are looking at benchmarks Apple
20 typically charges about the same rates as other
21 platforms have charged.

22 MR FRAZER: I have noted your facial expression. I think
23 that will come up in cross-examination.

24 DR BISHOP: We are, I think, more or less finished with
25 market definition and dominance.

1 Now, the next theme mentioned was economic value.

2 We have already considered quite a lot of that. Perhaps
3 we could just take the one that is closest to --

4 THE CHAIRMAN: I think we should take a break. I think what
5 we will do is we will take a short adjournment and we
6 will start on theme 2 at 2 o'clock.

7 I am sure you know that there is a rule that you are
8 not to discuss your evidence with anybody else. It is
9 obviously particularly important while you are in the
10 hot tub so if you could avoid any conversation with
11 anybody that would be helpful other than of course the
12 functional ones about sandwiches and things, and we will
13 resume again at 2 pm. Thank you.

14 (12.56 pm)

15 (Luncheon Adjournment)

16 (2.00 pm)

17 DR BISHOP: Now, we are going to move to economic value. As
18 I said, we already discussed that to some degree. Can
19 I ask both sides, and beginning with this side of the
20 room: in the assessment of whether Apple's prices are
21 excessive or unfair, should we take into account the
22 economic value that the App Store and the ecosystem
23 provide to both developers and to users, as to whether
24 you agree that it should, or disagree and say no, it
25 should not.

1 Professor Sweeting perhaps?

2 PROFESSOR SWEETING: Thank you, sir. So I have not been
3 asked to directly opine on the excessive or unfair kind
4 of pricing question, but I will say a couple of things
5 that are kind of relevant to it, because it is also
6 relevant for how we think about what will happen kind of
7 in the counterfactuals.

8 So as far as I see kind of all the evidence and also
9 kind of the expert reports in this case, it seems to be
10 common ground that Apple's proprietary technology, tools
11 and services, kind of beyond things that directly create
12 value specifically for some kind of distribution or
13 in-app purchase transaction, do create a lot of value
14 for developers and potentially also are kind of
15 enhancing the value of the content to users.

16 These tools do not just kind of play a role when the
17 developer is kind of designing and programming the app;
18 the way I would see it is that they would actually feed
19 into some of the value that is being generated by the
20 specific transaction that may happen, for example, for
21 in-app purchase.

22 So if a consumer buys kind of an enhanced set of
23 brakes in a racing game, all of the kind of
24 interactivity, the fact when you press the screen harder
25 you may brake harder and all those kind of things that

1 come from the technology, are making kind of that kind
2 of transaction kind of more valuable for the consumer
3 and more value for the developer.

4 I would understand kind of the current commissions
5 that Apple charges on relevant purchases to be part of
6 its monetisation of all of the value that is being
7 created for developers in all the different ways through
8 the technology and services and so on, and if we were
9 thinking about the counterfactual, some of the things
10 that have been suggested about how Apple may ensure the
11 security and performance of apps distributed through
12 other platforms, they would be additional services that
13 would be provided which would make sense to think that
14 Apple would monetise.

15 So I will let other people who have studied the
16 excessive pricing question to speak to kind of numbers,
17 because that is not my role, but I do see lots of things
18 they are doing creating value on both sides of the
19 market and that does play into the monetisation.

20 PROFESSOR HITT: So I think I agree with the framing of
21 Professor Sweeting, so I will say, yes, I agree with the
22 general point that the iOS platform has created a
23 tremendous amount of value and that the services that
24 are being provided in the App Store through IAP or
25 through paid downloads or other services they provide

1 are -- both reflect, reflect some of this value, and
2 that the pricing in there is intended to be in part
3 capturing proportionate value.

4 I will note that by both direct and indirect
5 measures the amount of value being generated by the
6 App Store has gone up dramatically. Developers are
7 increasing the volume of transactions at higher prices.
8 Developer revenue over the relevant period has gone up
9 something like 20% per year compound.

10 So developers are getting more value and consumers
11 are getting more value because they have been paying
12 the prices that developers have had, noting that Apple's
13 portion of that has actually been going down at the
14 time.

15 I think one thing I would add to the general idea
16 here is that this value -- I consider the value to be an
17 important part of why Apple is able to benefit -- why
18 the world has benefited from the iOS ecosystem and that
19 Apple has been able to earn the revenue it has from the
20 App Store.

21 When it comes to looking at counterfactuals, I think
22 it is particularly important to think about this value
23 in the sense that when you are doing a comparison, for
24 example, of the 30% commission to something else, you
25 need to think about both the quality adjusted price,

1 what is it that you are getting relative to some of
2 these alternatives, and to the extent those alternatives
3 do not either provide the same services, or they do not
4 do so at the same level of value that would be
5 considered by consumers, that becomes an important
6 consideration when you try to make these sort of
7 absolute comparisons.

8 So just simply stating, I think a lot of value has
9 been created which in part reflects why the high
10 profitability exists here. But when you are doing
11 comparisons, especially doing it on a quality adjusted
12 and service adjusted basis, recognising that Apple
13 embeds in its prices many things that it could
14 independently charge for, I think it is useful for
15 making those kinds of comparisons.

16 MR HOLT: Yes, thank you. I do not actually think that the
17 proposition as put, that economic value should be taken
18 into account in the assessment of whether a price is
19 excessive or unfair, is contentious. Professor Hitt and
20 Professor Sweeting have just agreed with it, and I agree
21 with it, and, indeed, I have set out my understanding of
22 the framework with which to apply evidence to the
23 question of excessive and unfair pricing and that
24 explicitly refers to the importance of accounting for
25 economic value.

1 So obviously the difference between us is not that
2 point of principle, but it is what type of evidence is
3 relevant and what framework to adopt in order to
4 consider the question of economic value.

5 The framework that I take into account, and I take
6 a direct reading from my understanding of how the
7 framework for excessive pricing cases has evolved, most
8 recently, for example, in Hydrocortisone, and even more
9 recent cases that the Tribunal has looked at in this
10 area, is to think about what is the price that an
11 operator would be expected to earn in a workably
12 effective competitive market, and a number of factors
13 then I think need to be taken into account.

14 The first is that begs the question, well, what is
15 the market context within which the actual commission
16 rate has been set? I think the answer to that question
17 is very clear. I set it out in section 4 of my third
18 report. The competitive context is in these relevant
19 markets there is no direct rivalry, no scope for entry,
20 the barriers to entry are very high, and there is very
21 limited countervailing buyer power to assist developers
22 in preventing the potential exercise of market power to
23 the extent of having unfair prices. So that is the
24 first factor: what is the market context within which
25 the actual rates have been applied?

1 The second aspect is, well, how do you devise -- or
2 within the framework, what sort of evidence might be of
3 interest? There is a whole range of economic approaches
4 that can in theory be adopted to look at
5 counterfactuals. The one I find of most interest and
6 most relevant in this case is to look at other market
7 comparators. The main reason for that is the factors
8 that have erected the barriers to entry in this case,
9 the restrictions have been in place the entire time, so
10 you cannot do a within market before and after type
11 analysis which you would often do in many antitrust
12 investigations, and I will say a bit more about
13 comparators in a moment.

14 The third type of evidence is what is happening
15 within the iOS framework. Professor Hitt has referred
16 to a number of things, including the economic value
17 associated with iOS and the innovations that are
18 brought. I note we have a potential question coming up
19 on innovation, but just as a sort of prelude, my more
20 general answer to that is if we are focusing on
21 innovation, it needs to be on the relevant markets, not
22 just Apple's innovation in general.

23 Secondly, from a point of economic principle, there
24 is an important concept that economists focus on in
25 terms of the incentives for innovation which is that

1 contestability matters. If firms are having to out
2 compete each other within a market, that is an important
3 inducement for innovation.

4 Now, of course, if the market becomes too
5 competitive then some of that incentive can dissipate.
6 But certainly from the perspective of a monopoly moving
7 into a more competitive environment, one would expect
8 more innovation.

9 Let me just pick up on a couple of points then that
10 Professor Hitt identified. He mentioned growth in
11 billings as an indication of higher value. Now, of
12 course it is not contentious that the size of the market
13 is very large. My take from that is that would have
14 been an obvious signal to enter in the context where
15 workable competition would have operated. Moreover,
16 therefore, it is the wrong counterfactual to simply say,
17 look, the market has gotten bigger, therefore an
18 operator is immune from any potential charge of
19 excessive pricing because of that.

20 I think Professor Hitt has also made a number of
21 comments about the need to account for the quality
22 differential between the App Store and other potential
23 comparators. He has mentioned it in relation to
24 Microsoft and various others. I think he is, in my
25 view, quick to conclude that the App Store is

1 necessarily of a higher quality than other potential
2 rivals. I already mentioned that in a competitive
3 environment, Apple would have to work harder in iOS App
4 distribution to offer better customer service. I set
5 out in my third report a range of evidence from
6 developers which question whether the App Store should
7 indeed be considered as innovative and of high quality,
8 and indeed there were references by Apple's head of
9 App Store which seemed to indicate that he himself felt
10 that the App Store was antiquated and had been subject
11 to very limited innovation over the years.

12 Moreover, quality is a multi-dimensional factor. So
13 to just say there is some concern, for example, about
14 Microsoft, when in fact if you look at the evidence from
15 developers there are a number of areas in which
16 Microsoft scores very highly, or if you look at Steam,
17 it has a very strong community set of features that go
18 beyond what the App Store has, I do not think it is safe
19 to say in general the App Store is of high quality.

20 DR SINGER: Can I say a few things about economic value.

21 First point is there is tremendous value to the Apple
22 ecosystem, even at the 30% tax. How else can you access
23 if you are a developer? How else can you access this
24 subscriber base if not through the App Store? So
25 tremendous value.

1 Second point is that the only thing that an
2 economist can infer, if I see a developer willingly
3 surrender 30% of its revenues to Apple as the price of
4 doing business here, all I can infer is that their
5 willingness to pay exceeds 30%. For any developer who
6 voluntarily submits to that negotiation, their
7 willingness to pay is above the price. So I think there
8 is no dispute that WTP, willingness to pay, is above the
9 price.

10 But the only relevant question in today's
11 proceeding, in my opinion, is the overcharge. That is
12 the difference between the monopoly price made possible
13 through the restraints and the competitive price. To
14 me, we immediately will admit that the willingness to
15 pay exceeds the price of anyone who has voluntarily
16 consummated the transaction on the platform, and to the
17 extent that developers turned around and passed through
18 that excess commission to consumers in the form of
19 higher app downloads or in-app purchases, then consumers
20 also had their surplus drained as a result of the
21 conduct. I will leave it at that.

22 DR BISHOP: Thank you.

23 MR FRAZER: Sorry, one follow up. There seems to be
24 a consensus that economic value needs to be taken into
25 account, can be taken into account. Case law allows us

1 to do so at different stages, it could either be at the
2 first limb in relation to excessiveness, or the second
3 limb in relation to unfairness.

4 Is there any view as to where, in this case, it
5 would be most useful to take that into account, or does
6 it make no difference at all?

7 MR HOLT: Yes, so just to be precise, I think I have most
8 explicitly carried for it in the second limb. In my
9 view, the first limb is trying to understand the
10 question as to the margin between prices and costs or,
11 in an alternative way of looking at it, the degree of
12 profitability earned by the operator. Obviously
13 I suppose you could try and bring economic value into
14 that by adding some costs and then saying, well, net of
15 those additional costs, is there still excess
16 profitability? I do not think there is anything to be
17 gained in doing it in that way because obviously, in the
18 approach that I have adopted, the concept of economic
19 value is fully given its relevant consideration.

20 I think the question as to exactly what you would do
21 if you were to try and consider it in the first limb is
22 somewhat unclear in terms of exactly what cost
23 adjustment might you make. One approach of course is to
24 look at intangibles, and that is an approach that I took
25 into account, including based on some calculations by

1 Mr Dudney, and sort of taking a cue from the framework
2 that the CMA has implemented on many occasions in
3 relation to that issue. So to some extent I have taken
4 that into account.

5 I think the other point I would make here is that in
6 one sense, because I am not setting a threshold as to
7 either the first limb test or the second limb test as to
8 a cost-plus approach, or a ROCE must equal WACC
9 approach, that already enables the capture of producer
10 surplus in the form of economic value under each of
11 those two limbs.

12 So just to be precise by what I mean by that. There
13 is clearly a huge amount of what I characterise as
14 excess return above a normal rate in the first limb
15 analysis. I am not saying that none of that can
16 conceivably be represented by economic value. For an
17 assessment of that, one needs to do more analysis and
18 look at the second limb. Even when I do carry out that,
19 and then I sort of put it back into the profitability
20 assessment, indeed on my approach there is still
21 significant economic value captured by the App Store in
22 the form of contribution to all these IP services,
23 ecosystem, that are to the tune of many billions, again
24 without wanting to give precise numbers.

25 MR FRAZER: Thanks.

1 Is there a contra view or does that summarise it for
2 everybody?

3 PROFESSOR HITT: I have two brief comments. One, in terms
4 of the first limb, as I mentioned before, I think the
5 unfortunate situation is that because cost allocation is
6 difficult in the platform framework and the assessment
7 of intangibles is also difficult in the platform
8 framework, there is not much you can say about excess
9 profitability there. I will just point out, I think
10 this also came up in Mr Barnes's testimony, that even if
11 you adopt, for example, the counterfactual commission
12 rates they have adopted, you still reach the conclusion
13 that margins are high and return on capital is high.
14 That is part of why I said earlier that I did not think
15 it was informative to try to do it that way, mainly
16 because you reach the same conclusion regardless of
17 whether it is at the alleged monopoly price or the
18 counterfactual.

19 I think it does -- I would highlight again that
20 I think it is very useful to consider the value created,
21 and I think it is useful to consider value created on
22 the platform as a whole. It is the innovations of the
23 platform which enable developers to create the apps that
24 they offer, and part of that is -- and the way Apple
25 captures that is through a limited number of places

1 where they charge, which includes the App Store.

2 Then one other comment. I think there was some
3 discussion in the background about the quality of the
4 App Store. Certainly I view that individual developers
5 may prefer, for example, paying less rather than more,
6 that is not surprising, and individual developers may
7 have preferences over certain things. So, for example,
8 developers may prefer fewer competing developers in the
9 App Store, but that is not necessarily of benefit to the
10 platform as a whole. So there are all these trade offs,
11 and in platform economics there are always trade-offs
12 between the benefits of the different size of the
13 platform. So any assessment as to whether the App Store
14 is or is not at the frontier needs to consider those
15 kind of trade offs.

16 I note that developers do recognise that transacting
17 on iOS is a preferred platform to transact on and will
18 more often preference iOS for that reason.

19 THE CHAIRMAN: Can I just ask you one follow-up question on
20 that, just to understand, when you talk about looking at
21 the value across the platform, considering the value on
22 the platform as a whole, and also this concept that
23 Apple has made some choices about where it wants to
24 monetise the value it is producing, what are the
25 implications of that for the ability to assess what the

1 value is in relation to -- if we were to reach
2 a conclusion about a market as contended for by the
3 Class Representative? Am I right in thinking no one has
4 actually carried out that exercise of trying to
5 attribute the value in any way? Can you just explain
6 what your position is on that.

7 PROFESSOR HITT: Yes, so let me agree with your -- the last
8 statement you made, which is there has not been, for
9 example, the computation of a quality adjusted price
10 that would make this comparison much easier, and I think
11 that is inherently challenging. I have not been able to
12 do it. I do not believe my friends over here have been
13 able to do it.

14 So another way you can look at it that gets at that
15 is to think about the types of services, that is to
16 anchor it in the comparisons we are actually making. So
17 we are making a comparison between the charges in the
18 App Store, 30% headline commission and some other
19 variations on that, against some possible
20 counterfactuals that are less than that. We can make
21 a directional prediction which says there are reasons to
22 believe these may not be representative of the
23 marketplace as a whole, which would indicate that they
24 may be actually closer on that basis.

25 Also, I think it is relatively straightforward to

1 recognise the services provided in some of these
2 counterfactuals are not actually comparable and could be
3 of considerable value. For instance, Apple's tools and
4 technologies are compensated for through the App Store
5 commissions right now. There is no comparable in, for
6 example, either the Microsoft store, or at least not to
7 the degree, or for the Epic Games store.

8 So I think that is something that is useful to
9 weight but I do not think it is going to give you
10 a quantitative answer to what that might be.

11 THE CHAIRMAN: Yes, thank you.

12 I think Professor Sweeting might have something to
13 say. I do not know whether you want to say anything?

14 PROFESSOR SWEETING: So I would actually have said something
15 in response to Mr Holt and Dr Singer, but I do not know
16 whether you want to continue with your line of ...

17 THE CHAIRMAN: If you have something to say. It is my fault
18 for interrupting.

19 PROFESSOR SWEETING: Okay. So, you know, Mr Holt mentioned
20 we need to do a comparison with kind of a workable
21 competition set up. Dr Singer said we should do
22 a comparison kind of with a competitive counterfactual
23 without the requirements. So that is -- there is also
24 a way that I think about it. So I think it is important
25 just to make clear that kind of a principle in

1 competitive markets is that firms will charge customers,
2 will be able to charge customers for the value that they
3 provide to them and they will be able to exclude
4 customers who do not pay.

5 So why is this relevant? When we are thinking about
6 the counterfactual, and we are thinking about iOS
7 developers who will be using lots of services and tools
8 and technology from Apple in their apps but then
9 distributing them through alternative iOS transactions
10 platforms in a counterfactual or using an alternative
11 iOS payment service, it seems very clear to me that one
12 has to recognise that in a competitive outcome one would
13 be expecting Apple to be able to monetise the value that
14 it is providing to those developers who are choosing not
15 to get all of their services from Apple.

16 Similarly, if we think about removing the conduct,
17 if we were going to talk about -- if we were looking at
18 a hotel that was, say, tying guest rooms and breakfast
19 and we said, okay, remove the tie, what would happen?
20 There would be a charge for the hotel room and there
21 would be a charge for the breakfast. There would not be
22 an idea that if you buy the breakfast you get the hotel
23 room for free.

24 So I think it is just important to keep in our mind
25 in the counterfactual that the one that really makes

1 sense with a competitive kind of framework will be
2 basically a disintermediation of the current kind of
3 commission structure so that developers who choose to
4 use an alternative distribution platform or transaction,
5 iOS transactions platform, or an alternative payment
6 service through the App Store, will be making some fees
7 or commissions, payments, beyond the £75 or £79
8 developer fee in recognition of the value that Apple is
9 providing to them.

10 DR SINGER: Is it okay if I just make some very quick
11 points? Just three ones.

12 The first is that high value cannot be the basis for
13 the restraint. I cannot say that enough.

14 The second point I want to make is that In-App
15 Support Services, which is where the bulk of the money
16 being spent, at least amongst this Class, is looking at,
17 is largely a homogenous offering. The principal
18 component of this offering is payment processing. So it
19 is hard for me to accept the notion that Apple is going
20 to bring some kind of special value added or quality to
21 payment processing above and beyond that which could be
22 offered by some rival.

23 I note there are a few services in Apple's in-app
24 support offerings that are not offered by Paddle
25 currently, I think you have heard in testimony today,

1 but Paddle has a few services in its portfolio which we
2 could not find in the Apple offering. It is just ...

3 I just want to conclude by saying that I do not
4 think that the value, the value added in In-App Support
5 Services that Apple is going to offer in our
6 counterfactual world is going to exceed by vast sums
7 that which is offered by its rivals.

8 MR HOLT: Could I make one brief observation.

9 Professor Hitt referred to the prospectives of
10 developers and perhaps downloading, because they would
11 always want something better, so you cannot really put
12 much weight on that.

13 I do not agree with that proposition, so I have
14 looked at some of the evidence in relation to what
15 developers say about the App Store, and there are two
16 sort of components to that. One is regarding price and
17 what value they consider Apple to provide and what would
18 be a reasonable price to pay. Now, that actually comes
19 out at not only a significant reduction relative to what
20 Apple actually charges, it is even a reduction compared
21 to the range and the midpoint and the best estimate that
22 I have.

23 Of course I recognise that perhaps there is an
24 element of developers that would rather pay less, but
25 that is certainly consistent with my view that they do

1 not feel that the actual commission reflects the
2 services paid for.

3 Leaving aside price. In terms of quality, the
4 evidence suggests that the developers have identified
5 a number of issues with the platform, the platform over
6 time, at least the distribution component: aspects about
7 visibility, the availability of AB testing, which is
8 available on other platforms which was not available on
9 Apple and making it very difficult for them, concerns
10 about the way in which the search algorithms were
11 working.

12 So there is actual evidence from developers which
13 again puts in question this general view that, oh, the
14 App Store, like Apple, must necessarily be high quality.
15 I do not think that is the case.

16 PROFESSOR SWEETING: I was going to just return to what
17 I said earlier. So a 30% commission on an in-app
18 transaction I do not think can be understood as a 30%
19 payment processing fee. This is the monetisation of all
20 of the value that Apple is providing to the developer
21 who is doing the in-app transaction through its tools
22 and technology, through its payment services. You know,
23 some of those services are actually benefiting
24 consumers, maybe in terms of ask-to-buy or family
25 sharing, as well as the things that have gone into the

1 distribution and the matchmaking and the curation of
2 apps on the App Store.

3 So I just think it cannot be an accurate portrayal
4 to say what the value is being given to the developer
5 from an in-app transaction is the payment processing
6 rate. It is all of the value that they are receiving.

7 In alternatives, once again, if they use an
8 alternative payment processor, as I said, they will be
9 getting lots of valuable things (inaudible) that will
10 help make their apps successful.

11 DR SINGER: Can I just respond quickly?

12 THE CHAIRMAN: This is a helpful discussion.

13 DR SINGER: I will be very quick. I think we might be in
14 agreement on this one, that the service that Apple is
15 performing in the aftermarket is not just payment
16 processing. If it were, we would have gone and looked
17 at comparables from payment processing in the order of
18 3%. I do not think anyone is offering up 2 or 3% as the
19 Commission here. We acknowledge that there is a suite
20 of services that Apple is offering in the In-App Support
21 Services market, and I have listed that suite for you in
22 my reports. So it is all of those things that you are
23 getting. That is why we would look at someone's like --
24 situated like Paddle as the competitive benchmark, and
25 not just a pure payment processor.

1 So I think I am in agreement at least on that point,
2 that we are not trying to suggest that that is the only
3 offering that Apple makes in the In-App Support Services
4 market.

5 THE CHAIRMAN: But I think Professor Sweeting said something
6 a bit more than that, and I am very interested in your
7 response to that, because I think Professor Sweeting is
8 saying it is open to Apple to choose where it recovers
9 what it sees as its value, and in this case it has
10 chosen to monetise that by directing the charge, if you
11 like, at that group of developers who are paying for an
12 app processing, and no doubt have lots of good
13 commercial reasons for that decision, but that is
14 basically what he says they are doing.

15 So in other words, it is almost like a cross-subsidy
16 from that small group of developers who we know pay the
17 charge, and indeed the small group of users who pay it,
18 in favour of all those other people who I think, as
19 Professor Sweeting put it, all those people who might be
20 monetising off the platform, so in-app advertising,
21 presumably also in the business model all the people who
22 are getting free app distribution.

23 So that is all going on, is it not? At the same
24 time, we know that at least a driver for that is the
25 desire for Apple to sell more devices, because that is

1 obviously to keep up the business model as well.

2 In that context, I was wondering if you had any
3 observations about what Professor Sweeting ... He has
4 his microphone on and he is going to come back. I will
5 just take Dr Singer and come back to you, if that is all
6 right.

7 DR SINGER: On this point of whether Apple is free to choose
8 how it is going to monetise the value it creates,
9 absolutely, Apple should be free to do that.

10 What we are interested in here, however, is to
11 determine to what extent has Apple artificially raised
12 the Commission, in particular in both markets but I am
13 focused on the aftermarket because that is where most of
14 the overcharges occur, as a result of the restraint that
15 it has put in place. If this restraint is found to be
16 anti-competitive, then we can go back and try to
17 simulate a world in which the Commission was lower.

18 But on the question of how Apple decides to do it,
19 it is how it decides to do it in a world absent the
20 restraint. In a world of unfettered competition, in an
21 open market, how would they go about monetising. If
22 this is how they choose to do it, which is to get it on
23 the back end in light of this freemium model that app
24 developers have chosen, that is fine.

25 THE CHAIRMAN: But you say there is a constraint, there is

1 a limit on how much they can do that in a market in
2 which they have market power.

3 DR SINGER: Absent the restraint, correct, correct.

4 THE CHAIRMAN: Professor Sweeting.

5 PROFESSOR SWEETING: Just to come back on how you
6 interpreted what I said, Mr Chairman. I was not
7 necessarily considering anything to do with
8 cross-subsidisation between different types of
9 developers or different users, but what I was trying to
10 say, which I think was the first point you were making,
11 is that an in-app -- a commission on an in-app
12 transaction is not -- should not be thought of as just
13 a commission for in-app payment services, even broadly
14 defined, but it is a reflection of all of the value
15 which is coming partly from investments in hardware, the
16 APIs that let developers to kind of exploit the value in
17 the hardware, all of the things that have gone on to
18 curate apps and distribute apps even before the
19 payment -- before we get to the actual moment of the
20 in-app transaction. So in that sense it certainly is
21 broader, but I was not necessarily making any comment at
22 all about cross-subsidisation.

23 Then just returning to the point. If we are
24 thinking about the counterfactual, this value, lots of
25 parts of that value will still exist even for developers

1 who use an alternative payment processor or a payment
2 services provider.

3 THE CHAIRMAN: Yes, it was my word, and I did not intend it
4 to carry any connotation.

5 The point I think I am taking from it, and I think
6 this is probably not contentious, is that this is quite
7 a complicated exercise because on the one hand you have
8 got this whole question of what is the value, and in
9 that you have got what is the value delivered by
10 innovation on the device that is relevant to the
11 App Store. So you have got that sort of question. So
12 there is this whole question of how you look at the
13 value and what you do it.

14 Then there is this question of the way in which
15 Apple has chosen to set up its business model, and in
16 respect of that some people are paying for things that
17 other people are not paying for, and that is the way --
18 just the way it is, and I do not mean anything by using
19 the expression cross-subsidise, it is just the way it
20 is.

21 So those two factors complicate any visibility of
22 what is going on here. It makes it quite hard to work
23 out what is going on. Then we get to the counterfactual
24 and it is even more complicated, because one is starting
25 from, if I can put it, a degree of opacity, and you are

1 trying to draw conclusions in a situation with more
2 opacity. It makes it sound more difficult and
3 unpleasant than it is, but that is what I am taking from
4 the decision. Is that fair?

5 PROFESSOR SWEETING: Yes, so I would agree that if the
6 Tribunal is trying to go through the exercise of
7 allocating value to different things, particularly on
8 a numerical basis, that is a stunningly complicated
9 exercise. My point is actually if one is thinking
10 about, in a qualitative way, what the counterfactual
11 will look like, I actually think the economic principles
12 are quite straightforward. You would be expecting --
13 you should recognise the value that will be provided to
14 developers who, absent the requirements, would choose,
15 say, an alternative distribution platform or an
16 alternative payment processing platform, recognise there
17 would be monetisation of that. Of that value you would
18 expect there to be, consistent with what Apple does
19 currently, monetisation of that value, and then you can
20 just kind of think through what are the implications of
21 that.

22 So I think there is part of this which is
23 conceptually simple, and then there is a quantitatively
24 very difficult exercise and, on that, I would certainly
25 agree with you.

1 THE CHAIRMAN: To some extent I am not sure we can duck the
2 quantitative exercise because of course that is part of
3 what the excessive pricing case involves but
4 I understand what you are saying. I think we are going
5 to come on and talk about Apple's incentives in the
6 counterfactuals. I do not want to lose that.

7 Just before we do that, is there anything ...

8 MR HOLT: Yes, perhaps very briefly on the monetisation and
9 the relevance of that in terms of the framework I have
10 adopted.

11 So firstly, from the first limb analysis, while it
12 is the case that the actual structure sort of recoups
13 different amounts of sort of value from developers in
14 different contexts, and obviously the Commission applies
15 under the relevant purchases but not for some other
16 types of purchases, but the profitability analysis takes
17 all that in the round. In other words, if there are
18 some areas where there is less revenue, and even if
19 there were some costs, that is already taken into
20 account in terms of looking at the profitability.

21 Secondly, from the hypothetical or counterfactual
22 effectively competitive market, the very same principles
23 would apply. So it might well be the case that the
24 efficient pricing structure is to focus commission on
25 these types of transactions, and less so on some other

1 types of things like physical goods that might be sold
2 by Amazon or whatever else. But that is something that
3 you would expect that entrants and rivals would be
4 taking into account as well.

5 Then I go back to the core principles of, well, what
6 is the question about value in the counterfactual? You
7 have got several elements of value that I think need to
8 be recognised as to whether anything above the 15%,
9 whether it be higher commission or, alternatively, new
10 fees, would still represent a fair value nonetheless.

11 Those, just to briefly recap, are the high
12 profitability even in the counterfactual situation, the
13 fact that you have got further contributions from all
14 developers, the fact that the developers are
15 contributing not only the developer fee but also to the
16 ecosystem, and then finally that if you look at how
17 operating system monetisation works in some other
18 contexts, then you do not have the specific tools and
19 APIs that allow the creation of the developer to create
20 an app typically charged for. In other words, Google
21 does not do so for Android, Microsoft does not do so for
22 Windows, and even Apple itself does not do so in the Mac
23 operating system context.

24 I think what that reflects is that in general, in
25 a workably competitive market, you would expect that

1 letting the developers have access to the ability to
2 create apps does drive value, it drives value in the
3 overall ecosystem, ie in this case at least the devices.

4 DR BISHOP: Okay. Have we finished?

5 PROFESSOR HITT: Can I make a small contribution on the
6 margin of Mr Holt's comments. I will be very brief.

7 So number one, I agree with Mr Holt's assertion that
8 if you could do the profitability analysis and come out
9 of the profitability, the problem is they have narrowed
10 the profitability analysis to the App Store, whereas
11 a lot of the value is being created elsewhere on the
12 platform. So an overall profitability analysis might
13 capture this, but the idea that the high profitability
14 that has been claimed for the App Store would capture
15 things like Apple's tools and technologies I do not
16 think is correct.

17 The second thing I will note is you can interpret
18 Mr Holt's claim that maybe Apple should configure its
19 entire ecosystem in a different way. Microsoft has
20 historically configured the Windows ecosystem as open.
21 Google has also configured their ecosystem as open.
22 Apple has made a different choice. This ecosystem has
23 been wildly successful through those choices. Consumers
24 have decided, when they are given a choice, for example,
25 between the Google ecosystem and the Apple ecosystem,

1 some significant fraction of consumers make that choice.

2 So the idea that a workably competitive market involves

3 a redesign of the way the ecosystem operates, starts

4 getting into areas where, if that were to actually

5 occur, that actually may destroy a significant amount of

6 value, especially for consumers who have chosen to opt

7 into this system.

8 DR BISHOP: Have we finished at this point?

9 DR SINGER: I am going to ... It is hard when he says

10 "destroying value", but I think we are going to get to

11 the question of whether or not value is going to be

12 destroyed in an open environment, so we can table that.

13 DR BISHOP: Okay, let us just move on, not moving on very

14 far. There are two related issues that we want to

15 explore under this theme of economic value. It is

16 pleaded and it has been alleged in various submissions

17 that if Apple were constrained to charge only some lower

18 commission, say 15% or something like that, then it

19 might choose to charge for use of its proprietary

20 technology, there was some reference made to it a moment

21 ago.

22 So that is the first part of this two-part theme: is

23 it likely that Apple would? If so, what type of

24 charges? Are these patent licensing fees or are they

25 something else?

1 The second part is if in the counterfactual the
2 Commissions were lower, 15%, say, but also there were
3 these new Apple fees or licensing charges, and let us
4 assume for this purpose only, let us assume pass on, we
5 do not want to go into incidence/pass on in this matter,
6 let us assume there is some, then would the prices that
7 resulted in this different type of charging structure
8 mean that there was no real difference in the prices
9 charged to the consumer, and hence no loss to the Class?

10 So we have a two-part question. Would there be
11 other fees in this counterfactual world, 15%, let us
12 say; and second, what would the effect be, assuming pass
13 on, what would the effect be on the Class? Would it
14 mean the whole case would go up in a puff of smoke
15 because there would be no loss?

16 Who wants to have bids to start this? Dr Singer?

17 DR SINGER: I think I have got all of it. There are some
18 multiple parts, so if I fail to answer, please ... but
19 I just wanted to come back with three quick points,
20 which is might Apple try some different pricing regime
21 in this counterfactual world? That is how I am
22 internalising the question.

23 DR BISHOP: Yes.

24 DR SINGER: We do have some agreement among the experts, at
25 least between Professor Sweeting and I. We both agree

1 no consumer charges, no new consumer based charges in
2 a counterfactual world. Where we disagree is about
3 other forms of charges.

4 But I want to make this point clear. Apple is
5 currently charging what an economist would call an
6 infinite penalty price for breaking the bundle. That
7 is, you cannot even get access to the store unless you
8 agree to buy, on an exclusive basis, their in-app
9 services from Apple, right? Economists recognise that
10 you can also -- a monopolist can also drain consumer
11 surplus in the tied market via a finite penalty price.
12 This is the article by Greenlee, Reitman and Sibley.
13 But the essence of it says: I do not have to literally
14 charge infinity to force you, to coerce you into buying
15 my bundle, I can just charge you, say, a 27% technology
16 fee. If you decide to break the bundle then you will
17 pay 27% to me as a penalty price.

18 But economists recognise that such a penalty price
19 can also be used to drain surplus, and I want to make
20 this point, it is important. In our primary
21 counterfactual world, remember we not only lose the
22 payment restriction but we also lose the distribution
23 restriction. If Apple is not a monopolist in the
24 primary market and they try to go to a developer and
25 say, you know what, we are going to impose a 27% new

1 charge on you if you ever have the audacity to use some
2 other payment processor, no one would go to Apple. I am
3 telling you that you could not make that offer stick,
4 the 27% finite penalty price, unless you are
5 a monopolist in the primary market.

6 But in our counterfactual, Apple's monopoly power is
7 not immediately eviscerated but it is largely shrunken
8 down. We have scenarios in which Apple has, say, 50% of
9 the primary market, but they would not be able to impose
10 that penalty if they tried. Developers would say,
11 forget it, we are not going to go with you. If there
12 are other ways for us to get access to iPhone users
13 through a rival app store that you have heretofore
14 prohibited, why would we ever go along with such
15 a penalty?

16 My last point, this is all kind of interrelated, but
17 if we did allow them to do that, and if that is what
18 Professor Sweeting has in mind, this 27% finite penalty
19 price, then we have merely reconstituted the tie. We
20 are just back to the same anti-competitive outcome that
21 we were with the infinite penalty price. I submit to
22 you there is not a big difference in the consumer
23 welfare harms that come about from an infinite penalty
24 price as compared to a 27% finite penalty price. They
25 both serve the same function, that is to drain consumer

1 surplus, leverage one's power in the tying market to
2 drain consumer surplus in the tied market.

3 MR HOLT: Unless there are any immediate follow-up
4 questions, I can perhaps build on that in terms of the
5 excessive pricing context that I focused on, or ...

6 DR BISHOP: Does one of you want to respond to -- before
7 Mr Holt goes on to excessive pricing?

8 PROFESSOR SWEETING: Yes, I am happy to.

9 DR BISHOP: Okay, you can respond now.

10 PROFESSOR SWEETING: So let me just make four points kind of
11 in response to the question, also what Dr Singer said.

12 So as I explained, independent of kind of the level
13 of prices, what I would expect to happen if either of
14 the sets of requirements we are talking about were
15 removed is some type of disintermediation of Apple's
16 commission structure. That could take slightly
17 different forms, with a mixture of fees and commissions,
18 but broadly I think it makes, as a piece of economic
19 logic, absolute sense that one would be expecting Apple
20 to monetise the value of its tools and technology and
21 the services it is providing, for example, to developers
22 who choose to use an alternative payment processor.

23 What comes from that is then how is it going to
24 price this different menu of options that developers are
25 going to have? What economics would suggest is Apple is

1 going to set kind of an implied competitive price of its
2 own payment service, so the IAP service. The people
3 would use, if they choose the Apple option, would be
4 choosing something else. It could be Paddle, it could
5 be Stripe, if they want to go kind of in a different
6 direction and that option is available to them.

7 Now, of course the evidence we see, for example,
8 from the Netherlands and South Korea is kind of
9 consistent with this kind of disintermediation and menu
10 structure taking place. What I would note is I said the
11 principle would be Apple would want to set a competitive
12 price of its payment service, so obviously now the
13 definition of payment processing and payment services
14 has kind of broadened, but if you look at some of the
15 benchmark payment processors that Mr Holt and Dr Singer
16 have cited, some of them charge very low percentage fees
17 although often with something of a fixed component.

18 The second point would be if you want to do the kind
19 of 15% comparison you need to do a, no pun intended,
20 kind of apples is apples kind of comparison. So
21 previously you have got at least a headline 30%
22 commission rate which is monetising all these things
23 developers are providing, you know, if the implied Apple
24 distribution price is, say, 15%, because that was the
25 number that was mentioned, it is no longer an apples to

1 apples comparison. You do need to think about the total
2 cost obviously to developers and not say if something
3 dropped from 30% to 15% when those commissions were
4 really reflecting different value provided.

5 So there was this discussion that Dr Singer gave
6 about Apple will not be able to levy fees on people if
7 they can go to an alternative distribution platform. To
8 be clear, in the distribution platform, alternative
9 distribution platform context, the key thing is those
10 developers are still going to be receiving technology,
11 tools and services that are not directly connected to
12 distribution from Apple, which is going to be
13 contributing in a fundamental way to the value of the
14 content that the developer creates for the consumer.

15 So it is an economic principle of competition that
16 if you want competitive markets to work, firms have to
17 be able to monetise the value they provide to customers
18 and they also have to be able to exclude customers who
19 would not be able to pay. So the idea they would not be
20 able to do some exclusion makes no sense to me.

21 Then, thirdly, obviously we are going to discuss
22 kind of tying in more detail probably later on in the
23 discussion, so I do not want to pre-empt that
24 discussion. But as I said before, if an economist is
25 thinking about a tie of products in two separate markets

1 and the counterfactual is what happens without the tie,
2 is that you charge for each of the components of the
3 value you are providing. It is not that suddenly
4 the price of one goes to zero even though it is
5 valuable. I just think that is important to keep in
6 mind.

7 DR SINGER: Can I deal with a quick ...

8 DR BISHOP: I think Professor Hitt wants to.

9 PROFESSOR HITT: I just had a couple of points.

10 So I just want to be careful that I think there is
11 significant evidence to suggest that the 30% rate with
12 15% for other types of services, for example, audio and
13 hearing subscriptions, and so forth, is the competitive
14 price, so I just did not want to lose that in all the
15 discussion. But that actually, compared to many other
16 benchmarks, that very well could represent the
17 competitive price as we have discussed before.

18 Second, Dr Singer brought up the point that
19 nobody -- Apple -- nobody would use Apple if they
20 charged a certain fee structure. Currently developers
21 do have the opportunity to not pay the fee by going to
22 alternative platforms, direct distribution, in-app
23 advertising, and many of the developers avail themselves
24 of those options. So they are competitively constrained
25 by these outside abilities, for example, the ability to,

1 like Netflix has chosen, sell subscriptions only on
2 Netflix.

3 More specifically to the points we are on here.
4 I am not sure what the right fee structure would be in
5 this case, but I will note there are at least three fees
6 that could be on the table, as Professor Sweeting noted.
7 One is some kind of tools and technology fee, and even,
8 you know, regardless of whether Apple is a monopolist or
9 not, I think there is agreement that Apple could
10 conceive of, in a competitive environment, to be able to
11 charge for their tools and technology. Similarly, they
12 provide free downloads for app developers who do not
13 monetise in any way. I do not think there is any
14 competitive principle that requires Apple price things
15 at zero to be outside of the realm of -- a non-zero
16 price to be considered anti-competitive. I also note
17 that various types of levies against advertising existed
18 as well.

19 So there are other mechanisms in here that they
20 could do where they currently charge a zero price would
21 be a higher price. It seems plausible there might exist
22 these kinds of charges that would be perfectly within
23 the realm of normal competitive behaviour that they
24 would be able to do, so that at the minimum has to be
25 factored into it. What the actual levels and

1 configuration would look like, I do not think anybody
2 can say with any certainty.

3 MR HOLT: Okay, yes. Just in the excessive pricing context.

4 So what we are taking about here is if the evidence
5 suggested that an iOS App distribution and/or sort of
6 aftermarket workably competitive effective benchmark of
7 15%, and that a commission above that were potentially
8 excessive and unfair, would that general finding be --
9 sorry, a 30% therefore would be excessive and unfair,
10 would that finding be put to one side because new fees
11 would be or could be added and, as a result, no real
12 difference between the actual and the counterfactual.

13 DR BISHOP: -- a few years back, Apple was more lawyer
14 dominated than it is, and someone said, oh, we must be
15 very aware of European competition law and so on, and
16 so, yes, we can only charge 15% from tomorrow, and then
17 someone said, what else are we going to do now?

18 MR HOLT: Exactly. I think we are on the same page as to
19 what we are contemplating here.

20 So, firstly, would Apple potentially have an
21 insensitive to do something like that? Perhaps. I am
22 not disputing that at all. In my view, whether Apple
23 has the incentive to do that is not actually
24 particularly relevant in the context of whether, if it
25 were to do so, it would nonetheless contribute to the

1 excess of an unfair contribution.

2 I think one thought is: is that additional fee being
3 levied in a workably competitive market? If it were to
4 be, then fine, it would be potentially not subject to
5 any further consideration. But if that was not the
6 case, then in my view it would stand to be considered
7 under the very same brands framework, ie a first
8 analysis which would, obviously if we are saying fees,
9 fully replicate the lost revenue from the 30 down to 15%
10 commission, then you would get, almost obviously, the
11 exact same outcome on the first limb analysis, and in my
12 view you would get a similar outcome, albeit from
13 a slightly different basis of reasoning, on the second
14 outcome analysis. Overall, what would be happening here
15 is you have just supplanted the excessive component of
16 the Commission with an alternative version of a gateway
17 tool, because apparently in terms of what are these
18 fees, they are effectively able to be charged because of
19 the gateway access to the device orders that is levied
20 on the developers.

21 DR BISHOP: I understand that. Apple's argument is, well,
22 we do not charge them now because it is all in the
23 Commission. The alternative way of approaching it in
24 this counterfactual is that we have some patent
25 licensing fee. You are saying, I suppose, are you, that

1 those too can be anti-competitive. For example, the
2 typical requirement of patent licensing fees is that
3 they be fair, reasonable and non-discriminatory, that
4 sort of -- and you are saying that the law would apply
5 there, and that of course must be true.

6 Can you go so far as to say that these restrictions,
7 that the patent licensing and other technology fees must
8 not be anti-competitive themselves, must not be
9 excessive themselves, can you go as far as to say those
10 fees would not wipe out the difference between a 30% fee
11 versus as much as the difference between a 30% fee and
12 15%?

13 MR HOLT: Yes, I think if you apply the framework you would
14 get to the same answer, and that is not sort of relying
15 on whether on the individual assessment of licensing
16 they are anti-competitive in and of themselves, but,
17 rather, taking in the round the services provided to
18 developers, is it excessive by reference to the first
19 limb and fair by reference to the second? You would
20 essentially get similar outcomes in analysis under those
21 two cases. I think part of that thinking relies also on
22 the points I made earlier in terms of one needs to think
23 about the contribution that the developers are making in
24 several veins already, ie the high operating margin they
25 are contributing to even at the 15% level of app fee and

1 so on.

2 DR BISHOP: Just pause for a moment. The economists at the
3 other end of that long table have in fact suggested that
4 these other fees, technology fees, patent licensing
5 fees, would wipe out the difference and we would be back
6 to where we are. I believe they suggest that might do.
7 Do you want to comment on that?

8 PROFESSOR HITT: Sir, I would say the following. I do not
9 know what the counterfactual fees might be. It does not
10 take very much -- when 90% of the volume of commerce,
11 for instance, is free downloads, it does not take much
12 adjustment to those fees to generate fairly large
13 numbers if they were to, for example, change that to
14 a counterfactual. Similarly, it would not take
15 a very -- it may not take a very large intellectual
16 property fee.

17 Again, I do not know what those numbers are, but
18 certainly the idea that they could charge, for example,
19 an intellectual property or a download fee, perhaps some
20 kind of commission related to advertising, is not
21 implausible, and it does not take very much in those to
22 come up with a relatively large number.

23 My main concern about their approach is not that it
24 necessarily wipes out all of that, although it could.
25 It is just simply that the comparison they are making is

1 just not accurate as a result of that. Some fraction of
2 that would expect to be recovered.

3 THE CHAIRMAN: I just want to clarify something here which
4 I think is possibly clouding the discussion. We are
5 talking about the counterfactual, and I think the point
6 Mr Holt is making actually is really more of a legal
7 point, and no criticism of you at all. Certainly my
8 understanding is that if the counterfactual carries with
9 it an infringement of its own, then it is not about
10 a counterfactual, and so hopefully it is not surprising
11 for anybody.

12 So I think the two questions we are really
13 interested in here, as I understand it, and tell me if
14 I am wrong about this, are, firstly, to what extent are
15 we able to work out what the incentives of Apple might
16 be, in other words, what sort of things might they do,
17 appreciating that none of us actually know. The second
18 one is what the effect of the presumed competition that
19 the counterfactual brings with it is on that market.

20 So I do not think we want to get too much into the
21 question of whether a counterfactual might be permitted
22 or not. I think we should take as a given that if it is
23 infringing a counterfactual it is not permitted. So
24 therefore, at least on the Class Representative's case,
25 the expectation is that there would be some degree of

1 competition for distribution and in-app payment.

2 I think that is probably the way to look at the question
3 in the first instance.

4 I do not know whether that changes the view that
5 anybody has expressed or they want to say anything else
6 about that.

7 Dr Singer?

8 DR SINGER: Yes, I have been waiting patiently just to
9 respond to something Professor Sweeting said and
10 Professor Hitt. I will be brief.

11 I said that if in the counterfactual Apple is no
12 longer a monopolist in the primary market, that they
13 would not be able to impose, regardless of whether they
14 wanted to, but they would not be able to, as a matter of
15 ability, impose a 27% developer fee for breaking the
16 bundle.

17 To that, Professor Sweeting responded, well, look at
18 what they did in the Netherlands where they did impose
19 such a thing. That was a very surprising answer to me,
20 because we have agreed in the Singer-Sweeting joint
21 statement that the Netherlands and -- none of these
22 experiments this we have looked at in other
23 jurisdictions could serve as the counterfactual. So
24 I was surprised that he said that, number one, given
25 that we have agreed to that.

1 Number two, in the Netherlands, or these other
2 jurisdictions where Apple did impose the technology fee,
3 Apple's monopoly power in the primary market was
4 maintained. So that does not disprove my contention
5 that if you remove Apple's monopoly power on the
6 primary, you have other app stores on the phone, that
7 they would be able to impose a finite penalty for
8 breaking the bundle.

9 I just want to say something very quickly to
10 Professor Hitt who said that his competitive
11 benchmarks -- he talked about the words in our
12 competitive benchmarks, we haven't talked about the
13 words in theirs. He liked to point to Google's 30%
14 commission on the Play Store. I would just remind
15 everyone that Google has been the subject of antitrust
16 scrutiny, in the United States at least, and a jury has
17 found Google to have been in violation of the antitrust
18 laws.

19 So I do not think that we can -- doing the very same
20 things here, not allowing other apps on their platform,
21 and dominating and requiring that the developers use
22 Google to consummate in-app transactions. So, yes, they
23 do 30, they are doing the exact same routine. They are
24 a protected monopoly. They have subject to the
25 antitrust scrutiny, they have been found guilty by a

1 jury, I do not know why that can count as a competitive
2 counterfactual.

3 He also likes to look at other monopoly consoles
4 like the Xbox and says those are 30 as well. That is
5 a good -- I will grant him if we are going out and
6 looking for monopoly platforms 30% is a good benchmark
7 but that is not what we are trying to do. We are trying
8 to find out what the benchmark would be in a competitive
9 market and that is why we go back to the PC gaming
10 environment where you watch what Steam did in reaction
11 to the entry by Epic and Microsoft to an extent. That
12 is forcing them to drop their rate.

13 THE CHAIRMAN: Yes, Professor Sweeting.

14 PROFESSOR SWEETING: So to be clear, you know, Dr Singer and
15 I have agreed that the Netherlands and South Korea are
16 not exact comparisons, so what would happen in the UK,
17 and specifically obviously those changes are only in
18 relation to kind of the in-app, so the kind of payment
19 requirements point.

20 The way in which I was pointing to those examples is
21 simply as an illustration of the principle, but what one
22 would expect is a disintermediation of the Commission.

23 Now, this would also apply if we thought about
24 a removal of the distribution requirements because it
25 will still be the case that iOS developers will be using

1 tools and technology and services from Apple even if
2 they choose to go through a distribution platform, and
3 the key principle, so I am not necessarily making
4 a comment about what exact level of charge for tools and
5 technology is appropriate or is consistent with
6 different legal principles but as a principle that they
7 can charge something and I think also as a principle
8 that they would be making -- that they could potentially
9 focus on developers who do certain kinds of
10 monetisation, that to me seems quite a straightforward
11 not much debated kind of piece of economics.

12 THE CHAIRMAN: Okay.

13 DR BISHOP: There may be some further comment before we
14 break.

15 PROFESSOR HITT: I would like to respond to the
16 counterfactuals. So this is in my second report and you
17 can look at the chart, okay.

18 So as of October 2015 you can look at all sorts of
19 digital platforms. Almost every single one of them has
20 a headline rate of 15%. I will not trouble the court
21 reporter by rattling them all off but I am counting more
22 than ten platforms that have headline rates of 30%.
23 Epic Games did not exist at the time.

24 So the headline rate was 30% at that particular
25 time. That includes things like the Samsung Galaxy

1 store which I do not know if -- there are a number of
2 other stores that you would not have the same kinds of
3 arguments for. Dr Singer highlights Google has been
4 under antitrust investigation. I will note that I do
5 not believe any of the practices that Google has been
6 accused of are the practices here, number one. Second
7 is, there are other app stores in that world including
8 the Samsung store who presumably has scale and they have
9 charged a headline rate of 30%.

10 If we fast forward to a little bit closer to the
11 current period you can look down at and there are the
12 two exceptions to this 30% roughly rule with again other
13 prices for other kinds of services like other
14 subscriptions is really Epic Games and Microsoft.
15 I think we safely say we do not know what Steam's rate
16 is, so I do not think you could say anything there but
17 you also find they are in the realm of 30%.

18 So if you look at something in the order of more
19 than 10 of these also you are in the same kind of realm.
20 That is useful when you think about what the competitive
21 price would be. For the reasons I believe I do not
22 believe those two prices in the PC market are
23 necessarily representative of the competitive price and
24 if you look broadly you see roughly that the prices
25 being charged have been and are generally consistent

1 with the prices of Apple.

2 THE CHAIRMAN: I just wonder, on the comparators point, two
3 things. One is it is not strictly I think the point we
4 were driving at and the second is I will be very
5 surprised if you are not cross-examined up hill and down
6 dale and on them so I do not want to discourage you from
7 making anything you want to say, Dr Singer, but just so
8 you are clear, we understand what you say about
9 comparators and we understand there is a debate to be
10 had there and we are expecting it to be examined very
11 forensically in cross-examination. I am not sure you
12 are taking us much further by dwelling on the rights or
13 wrongs of the debate at the moment but I do not want to
14 discourage you if you want to add something.

15 DR SINGER: I will be brief, but just I do not understand
16 the infatuation with 2015. Why cannot we roll the clock
17 forward a few years and see what happened in 2018 after
18 competition broke loose in PC gaming systems. So he
19 wants you to close your eyes to what happened in that
20 experiment and Steam's reaction as well. I think he
21 said Steam is at 30. Steam is not at 30 any longer in
22 reaction to what happened with Microsoft and Epic.

23 Also Samsung is not a good comparable either.
24 Samsung is on the Android system. Samsung, as you know,
25 is a distributor of the Android operating system for

1 Google so they have a relationship there, and Samsung
2 has to be careful about how vigorously it competes
3 against Google in the Google app ecosystem. In
4 particular, if Samsung gets too aggressive there are
5 various things that Google can do in response, and
6 I will leave it at that.

7 THE CHAIRMAN: I think we have decided we will take a short
8 break now, ten-minute break and come back at 20 past.
9 Thank you.

10 (3.10 pm)

11 (A short break)

12 (3.20 pm)

13 DR BISHOP: Now, we are moving on to theme 3 at this point
14 which is the counterfactual. A thorny issue. There are
15 various issues. Let me just lay out what we want to
16 consider.

17 First is the estimation of commission rates, the use
18 by Dr Singer of the Rochet and Tirole model in the App
19 Distribution Market and the Landes and Posner model in
20 the payments market. These are estimates of the
21 Commission rates that would result in these
22 counterfactuals.

23 Secondly, the market shares to be used in trying to
24 estimate the effects, and there are different, I will
25 not read them out, you know what they are, different

1 percentages suggested for the distribution market and
2 for the in-app aftermarket, and these are justified by
3 reason, by reference to comparables or suggested
4 comparables.

5 Then we have payment system counterfactual. Again,
6 market shares are estimated there for the in-app
7 aftermarket and the -- for the in-app aftermarket
8 (inaudible).

9 So those are the things we want to cover today, or
10 this part of it. So shall we begin with the first thing
11 I mentioned, which is the Commission rate, the
12 estimation of the Commission rates, use of the modified
13 version of the Rochet and Tirole model for the app
14 distribution question, and then of Landes and Posner for
15 the payment system market.

16 Dr Singer, you are the person --

17 DR SINGER: Yes, I am happy to defend.

18 DR BISHOP: Perhaps you can --

19 DR SINGER: Yes, I used the Rochet and Tirole model to
20 simulate the competitive rate in the primary market, in
21 the app distribute market, a two sided model, and that
22 model contemplates originally a monopoly platform, who
23 is then invaded by a platform rival, and it contemplates
24 steering as a means to put downward pressure on the
25 Commission rate. I would note that Tirole, not just for

1 this, but his work on platforms generally, has
2 a Nobel Prize.

3 The good news for you, I will start with an area
4 where I think there is agreement, Professor Sweeting
5 does not claim that the Rochet and Tirole model is
6 infirm or unscientific or does not -- is not well
7 regarded as a two sided platform model, so that is good.
8 He also does not dispute that I have executed the model.
9 There is no criticism that I have received, at least up
10 until now, that in our conversion of the model from
11 prices into commissions, and the execution and the
12 calibration of the model with the various inputs that we
13 use, there has been no criticism that we made a mistake
14 in the maths, right.

15 The dispute here is over whether the model can be
16 applied, that is a reasonable place for us to quibble.
17 He -- the principal critique, and I definitely want
18 Professor Sweeting to be able to say if there are
19 others, but I want to focus on what I think was the
20 principal critique, is he thought the model was naive or
21 overly simplistic and that it generates a single but-for
22 commission in the primary market, and he says that is
23 not reasonable, we observe multiple commissions, so how
24 could that be a legitimate model.

25 To this -- he makes a related criticism too, that it

1 is too simple because Apple, when it is setting its
2 commission in the primary market, also has its eye on
3 the aftermarket, and so the two decisions are obviously
4 interconnected. He is effectively arguing that the
5 Rochet and Tirole model was too simple, it was not hard
6 enough, it needed to be harder than it was, which is
7 funny given how hard it was to execute.

8 So let us take on the single price thing. I just
9 want to make it crystal clear that when we calibrate the
10 model for the monopoly state before we shock it with
11 this entry, we are inputting into the model the weighted
12 average commission that Apple currently charges in the
13 primary market. We are not just putting in the simple
14 headline benchmark of 30%, we are putting in a weighted
15 average. So it follows that when we shock the system
16 and we ask it to produce the rate under the duopoly with
17 entry, right, it is in turn giving us back a weighted
18 average.

19 So it is just wrong for Professor Sweeting to say
20 that the model is a simplification because it produces
21 one price. That is not true. The model produces
22 a weighted average commission in the primary market,
23 just like it took into account a weighted average
24 commission as an input.

25 Let us talk about the -- I cannot even read my

1 handwriting, it is getting so bad. Maybe it is late in
2 the day.

3 Let us talk about his second attack, that there
4 would be a recalibration of both commissions at the same
5 time.

6 Oh, now I know the point that I could not read, I am
7 sorry. In Sweeting-Singer joint statement we put in an
8 analysis of what the Commission would be if it was
9 calculated all at once for both markets as if it were
10 a single market, right. So we have, I hope, pre-empted
11 this notion that the Rochet and Tirole model cannot be
12 relied upon because it only solves for the Commission
13 and the primary. We can actually calibrate it so it can
14 solve for a unified commission across both markets.

15 I want to make, and this is a related point, when he
16 says that it is too simplistic as it is only focusing on
17 the primary market, he is effectively arguing that I am
18 being too conservative in my damages. Let me explain.
19 When we do the payment restriction counterfactual, which
20 is we leave the monopoly in the primary and we take away
21 the payment restrictions, so we are only looking for the
22 competitive outcome conditional on Apple having monopoly
23 power in the primary, we leave it at 30%.

24 But to the extent Professor Sweeting is correct, and
25 that Apple is somehow concerned about consistency in its

1 rates across the two markets, primary and secondary, and
2 given the fact that almost all the economic activities
3 are occurring in the secondary market, it stands to
4 reason that, if anything, we were too conservative. In
5 other words, we could have conceived of Apple
6 recalibrating its primary commission down from 30% in
7 our payment counterfactual but we did not. We just left
8 it at 30. We assumed no damages could be taken in that
9 counterfactual, we only took damages in the aftermarket,
10 and Professor Sweeting is saying these markets are
11 interconnected. Well, if that is the case, then what he
12 is arguing for is that we basically have left damages on
13 the table. We should have reduced the Commission in the
14 primary market in that payment counterfactual and we did
15 not.

16 DR BISHOP: I think you are the natural person to respond.

17 PROFESSOR SWEETING: Yes. Thanks. Okay, so there are lots
18 of things to say. What I am going to try and do is say
19 a small number of things in detail, and then just point
20 to a few other things that obviously questions can kind
21 of come back to.

22 The first thing to say, I think it is important to
23 understand at a high level, Rochet and Tirole wrote down
24 their model in order to understand how a two sided
25 platform would allocate charges to the two sides. What

1 Dr Singer has done, maybe not unreasonably, is to not
2 think about that question, just to assume that all of
3 the charges on the developer's side, and then add
4 a whole set of extensions to look at a counterfactual,
5 not about kind of the relative allocation of charges to
6 the two sides but about the level of a charge in
7 a counterfactual in the context of a market structure
8 that is not one which Rochet and Tirole kind of
9 considered.

10 So it is fine that we used the label, I am kind of
11 not objecting to that at all as a kind of shorthand, but
12 I think we should be clear this is going way outside the
13 setting that Rochet and Tirole are really interested in.

14 So then on to kind of the more kind of specific
15 criticisms. Okay, so the first one, what Dr Singer is
16 doing is he is doing this process of writing down
17 a mathematical model, calibrating the parameters and
18 resolving for a counterfactual outcome, in this case the
19 price. So obviously the key things when any economist
20 writes down a mathematical model is that you explain how
21 that model relates to kind of key features of the actual
22 world, and then specifically it is really capturing how
23 things are going to change in the counterfactual.

24 So in terms of capturing the actual decision, the
25 kind of thing I have in mind is the fact that the

1 payment, the in-app purchase commission and the paid out
2 commission are clearly being set simultaneously within
3 also all of Apple's kind of monetisation choices,
4 whereas, at least until the final calculation which
5 entered the joint report, Dr Singer was considering two
6 completely separate and independent models for these two
7 things, when really one has to conceptualise them
8 jointly.

9 Then I have explained in the counterfactual, the key
10 fact is that we should expect Apple to disintermediate
11 its pricing, so it is levying some fees or commissions
12 on developers who are choosing to use, in the Rochet and
13 Tirole case, alternative distribution services, and that
14 fact is missing.

15 So while I do not present kind of a mathematical
16 model, my explanation of what I predict will happen in
17 the counterfactual is really focused on capturing
18 those -- the key feature of how this -- the fact this
19 disintermediation is going to happen, that is the
20 natural counterfactual to think in the context of
21 removing the alleged conduct, and what are the
22 implications of that for kind of developer's choices.

23 Okay, now let us just put all that to one side and
24 just think about Dr Singer's models -- model on its own
25 terms, so just thinking about one kind of distribution

1 cost. Okay. So here kind of the key criticism is about
2 how this is done, not in a mathematical way, but in
3 a fundamental economic conceptual way.

4 So what an economist would do, if computing
5 a counterfactual using a model, is going to be
6 recomputing prices or equilibrium prices and market
7 shares simultaneously so they are consistent with what
8 the evidence that I think probably everyone in this room
9 agrees is true about developer's demand.

10 Now, Dr Singer is not doing that. He is assuming,
11 rather than thinking about shares as an outcome of
12 competition and developer's choices, he is imposing
13 a counterfactual share as a parameter exogenously, and
14 what this is causing to happen is that the economics of
15 the model are becoming completely topsy turvy and upside
16 down.

17 So what do I mean by that? In Dr Singer's
18 framework, if you assume a low counterfactual share for
19 Apple, you get a low counterfactual distribution price.
20 But let us just suppose that Apple is competing against
21 other iOS distribution platforms and sets a really low
22 commission price for that distribution service.

23 We understand that the App Store is very likely to
24 be pre-installed, will be pre-installed on all devices.
25 That the App Store is likely to provide higher security

1 and privacy for users and additional services and
2 security and performance for developers and it is going
3 to lead to networks effects, and developers and
4 consumers are going to choose, in the vast majority of
5 them, to transact through the App Store. So Apple's
6 market share is not going to be low, which is where we
7 started, it is actually going to be high. In fact, if
8 you dig into the math, you see this is going to happen
9 kind of even more strongly.

10 So as Dr Singer acknowledged in the joint report, to
11 make this work, the way he has extended it is by
12 incorporating the dominant firm competitive fringe model
13 into the Rochet and Tirole framework. So in that model,
14 what happens is firms set quantities and all firms are
15 setting the same -- are getting the same price. They
16 are choosing quantities but they are getting the same
17 price.

18 So now let us suppose that all iOS distribution
19 platforms are setting the same price, and we then think
20 about the App Store is going to have these advantages,
21 it is going to be trusted by consumers, it is going to
22 provide potentially more value for developers and
23 benefit from the network effects, so in fact it is
24 really going to have a large share.

25 Of course, this is really consistent with what we

1 see, for example, in the Android market in the UK where
2 Google Play actually has a 90% market share, is
3 pre-installed, benefits from network effects, and so on.

4 So the key problem is when you do this exercise of
5 imposing a counterfactual market share, you are getting
6 the economics kind of messed up and topsy turvy, because
7 you are not kind of recognising the key characteristics
8 of the platforms and how we think that is going to
9 affect developers' choices.

10 So I said I would briefly mention some other things.
11 So obviously one can argue about although this is not
12 kind of my corner of this analysis about the particular
13 inputs that are assumed, such as the incidence rate and
14 the cost. Professor Hitt can and Dr Singer can debate
15 that. But the key thing is where is the source of the
16 counterfactual share coming from? Okay, so for -- this
17 is absolutely critical to getting the number out of
18 Dr Singer's analysis. The counterfactual share is -- he
19 is thinking about a 30 to 60% range for Apple's
20 counterfactual distribution share. Where is this coming
21 from? Well, a 50% mid number is coming from a rough
22 approximation of Apple's share of mobile devices in the
23 UK, I believe, and then the 30 and 60% are coming from
24 looking at Alcoa, so an aluminium producer's share in
25 the US aluminium market after the Second World War, and

1 then the other number is coming from AT&T and an
2 analysis of AT&T's market share of the long distance
3 telephone market in the US after the AT&T antitrust
4 decisions, I am guessing that is some point in the late
5 80s and early 90s. Those are simply not reliable bases
6 to get the critical number which is going to be plugged
7 in, in this unusual way, into what we are calling the
8 Rochet and Tirole model.

9 DR SINGER: Can I respond?

10 DR BISHOP: I think it is natural for you to respond.

11 DR SINGER: Okay, and I will try and go quickly.

12 His first critique was that Rochet and Tirole is not
13 appropriate because it is set up for a two sided market
14 with prices on both sides. So it certainly is set up
15 for two sided markets, but the fact that Apple does not
16 charge a price on one side does not mean it is no longer
17 a two sided market. It could charge a price, it just
18 elects to choose a zero price, and we maintain that in
19 our counterfactual. The price that Apple charges to
20 consumers is an input to the model, it is just set at
21 zero, so I do not understand why that makes the model
22 unreliable.

23 It is two sided because Apple is bringing together,
24 just as any platform, the two sided platform is bringing
25 together buyers on both sides, matching developers and

1 users in their indirect network effects. That is what
2 makes it a two sided model. The fact that Apple does
3 not charge a price on the consumer side does not mean
4 that Rochet and Tirole is not applicable, number one.

5 Number two, he brought back the complaint that the
6 primary commission and the in-app commission are not set
7 simultaneously. We have already dealt with that. Of
8 course, I have now solved for it in our joint statement
9 if you want to do it simultaneously.

10 But the real thrust of that critique, as I said
11 before, is that he is upset that we did not go back and
12 recalibrate the primary commission. We have basically
13 left money on the table, we have understated damages in
14 the payment counterfactual.

15 Number three, this one was a new one, number three,
16 to me, which is fine, it is fine to offer new arguments
17 here, and that is that the prices and shares are
18 endogenous, and therefore it was inappropriate to treat
19 the share as an exogenous variable.

20 My reaction to that one is that Rochet and Tirole
21 have solved for the equilibrium price in the duopoly
22 set. It is a big, very complicated formula. We made it
23 even more complicated by putting it in commission terms.
24 But one of the inputs to solve for the incumbent's new
25 price in the face of entry is the share, is his share.

1 So I do not see how using that as an input to solve for
2 the equilibrium price is somehow violating some concept
3 of endogeneity.

4 DR BISHOP: Let me ask a question. You are saying that
5 Rochet and Tirole, in their own model, treat the share
6 not as endogenous but as an exogenous --

7 DR SINGER: It is endogenous in the sense that it is all
8 being determined -- when you solve for the equilibrium
9 price in duopoly model, as you toggle from the monopoly
10 to the duopoly platform it is all being solved for
11 simultaneously. So if that is what Professor Sweeting
12 is saying, I do not dispute that.

13 Where I think the contention is, is that I can take
14 the new equilibrium price of the incumbent platform in
15 the face of competition and I can parameterise every
16 single variable that goes into that, and then I can
17 shock the system by asking what would happen if they
18 were to lose share. I have an equation from Rochet and
19 Tirole, and he has never quibbled with it. I have never
20 heard this argument until now. But I do not think that
21 the endogeneity of the share, that is the share loss, is
22 something that all gets determined at the same time.
23 What Rochet and Tirole are basically saying is we are
24 not going to write out the number for you, we are going
25 to tell you what the relationships between these

1 variables are.

2 Let me go to the next -- there are only two -- well,
3 there are unfortunately three more but I will be quick.
4 He thinks that the share is going to be high, higher
5 than what I think it is going to be in the
6 counterfactual. That is fine. What really surprised
7 me -- we filed reports simultaneously, speaking of
8 simultaneous, and he came back with 50% share loss as
9 a lower bound based on the Steam example. He says Steam
10 lost 39% and then he adds 11% for reasons -- sorry,
11 Steam went to 39% but he adds back 11% saying that Apple
12 is special. That is fine.

13 When we got this we could not believe it, because we
14 felt the major bone of contention between the economists
15 here would be how big of a share loss would Apple
16 sustain if it could not restrict other app stores from
17 being on the phone. I came in with 30 to 60, and he has
18 I think 50 to -- well, I do not know what his upper
19 bound is, but we have 10 percentage points of overlap.
20 He is saying 50 is the lower bound. I am saying it
21 could go as low as 30, but I have simulated and solved
22 for every commission rate from 30 to 60. So if he is
23 right and it is 50%, I have an answer for the 50%.

24 So it is strange that he is attacking me on the
25 share loss given that, when we filed our simultaneous

1 reports, so this would be Sweeting 1, he said 50% is the
2 lowest it could go, based on the Steam example.

3 Now, he does not like the scenarios that I am using
4 to form the 30 and the 60 because they come from other
5 antitrust cases, one of which was in the aluminium
6 industry, which is not a two sided market, but one of
7 which was in a two sided market, the AT&T long distance
8 service, a network industry at a minimum. To that
9 I would respond, we do not have a lot of examples of
10 markets opening up from antitrust interventions, for
11 good or bad. I will not make a normative statement, but
12 we just do not have many of them to choose from. There
13 were not many monopoly cases. We were in the
14 United States for about 30 years without pursuing
15 a monopoly case, or the DoJ did not.

16 So we have some examples of firms like AT&T that
17 used a tie to leverage its power from local and the long
18 distance, and then they were forced to open up their
19 networks by an antitrust consent decree. We thought
20 that was a reasonable approximation. At the end of the
21 day, I am not telling you I know it is going to be 30 or
22 I know it is going to be 60, I am just telling you that
23 30 to 60% is a reasonable bound, we have got the
24 solutions at every point, and Professor Sweeting gave us
25 50%. So I do not think there is that big of a dispute

1 here.

2 I think there is one more -- oh, he did say
3 something, and it is an error that made into one of the
4 cells that I typed. We did not alter the model to be
5 dominant fringe, that was an error. That was for the
6 Landes and Posner model was dominant fringe.

7 We are implementing Rochet and Tirole exactly as it
8 is contemplated, and that is we do not think you are
9 going to have a bunch of fringe firms as distributors.
10 We think that there is going to be a small number of
11 competitors, could be a duopoly, could be an oligopoly,
12 but it is a very different market for distribution where
13 you have got to build up both developers and users to
14 get a foothold.

15 That is very different from the economics of
16 competing and payment processing and other In-App
17 Support Services. There we do think a fringe set of
18 firms, each with smaller shares, could be something
19 which could more closely approximate the counterfactual.
20 In the Rochet and Tirole we were always thinking about
21 one or two entrants, exactly the way that Rochet and
22 Tirole was thinking about it.

23 DR BISHOP: Professor Sweeting, I will get to you in
24 a minute, but first a question. The last point that
25 Dr Singer makes. If I recall correctly, you do not

1 disagree very much with that. You contemplate some of
2 the big players coming into the market. Is that
3 correct?

4 PROFESSOR SWEETING: So in the distribution counterfactual
5 it is correct to the extent we can kind of guess our way
6 around what would happen, that I expect Apple to be by
7 far the largest iOS distribution platform. There would
8 then likely be one or two other quite significant
9 players and then maybe some more niche kind of players
10 serving particular kinds of needs and interests.

11 But to be clear, I would disagree with what -- if
12 you look at the appendix, if you really want to get into
13 the math and you look at the appendix the way Dr Singer
14 is computing some elements of his table, such as what is
15 going to happen to total output and that kind of thing,
16 is by using the single price dominant firm competitive
17 fringe extension.

18 Now, in spirit that does not seem to fit the
19 counterfactual we are talking about. We could obviously
20 have a discussion about how much it really matters, but
21 my understanding of the math that is laid out in the
22 appendix is that that actually is the working
23 assumption.

24 DR BISHOP: Can we clarify this right now since we are right
25 on the subject; is this correct?

1 DR SINGER: No. The only thing that the model needs to run
2 is Apple's counterfactual market share. It is agnostic
3 as to who it loses or how many firms it loses to. You
4 just need to input to calibrate the model. You need
5 Apple's counterfactual share. Professor Sweeting and
6 I are in agreement here, I hope, I think we are, that we
7 are not expecting a rush of entrants, atomistic firms
8 coming in and competing in distribution. We think maybe
9 one or two others, it is hard to say who they could be,
10 but Facebook, Amazon, but it would be some big
11 competitors would be coming in and offering up app
12 distribution on a platform in the absence of the
13 distribution requirements.

14 PROFESSOR SWEETING: Just very quickly. When you report
15 numbers such as total market output you are making
16 assumptions about the other people, their output and
17 effectively kind of what their prices are. So it may
18 not be -- you may not view it as central but certainly
19 I am understanding you make additional assumptions from
20 the dominant firm competitive fringe framework to solve
21 for some of the numbers you are finding, but obviously
22 that can be discussed later.

23 DR BISHOP: Can I just make a comment here and I will ask
24 whether you agree with this or not. In models of this
25 sort we are not dealing with things that are, let us

1 say, an engineer might deal with applying the laws of
2 physics which are very precise and very well known and
3 can be calculated exactly or to an extremely precise
4 approximation. We are dealing instead with things of
5 which there are always a lot of unknowns even when you
6 can get things to populate -- data to populate the model
7 with.

8 So the use of these models is indicative, is
9 suggestive, is useful in the sense in which the famous
10 quote from the great statistician George Box which
11 everyone has heard: all models are wrong, some are
12 useful. I take it that that is the spirit in which it
13 is put forward and the spirit in which you would expect
14 that we might make use of it; is that correct? Do both
15 of you agree with this?

16 DR SINGER: I think that is totally fair. This, I will just
17 say and I will pass the mic I promise, but we have just
18 two quick points. We have other comparative benchmarks.
19 We have talked about the PC games giving us a benchmark
20 as well. So this is meant to corroborate, inform,
21 indicative was your words, I think that is absolutely
22 right.

23 I just want to remind everyone why we are even here
24 which is in most of my cases we go looking for a change
25 in the restraint and then we try to map that change in

1 the restraint into changes in the outcome variable,
2 whether it is wages in one of my monopsony cases or
3 prices in a monopoly case or a cartel case, right.

4 Here we have no change in the restrictions, so we
5 have a few exceptions that are made multi-platform and
6 the reader rule but with those exceptions the restraints
7 have largely been in place since day one of the
8 App Store: thou shalt not use a rival payment processor
9 if you want to access the store and we are not going to
10 allow another app distribution platform on the phone.

11 They have been in place since day one. So the
12 notion of coming at this in the conventional way which
13 we repeatedly do throughout my career, we build an
14 econometric model to try to map changes in the restraint
15 into changes in prices or changes in wages. We cannot
16 do that here so we had to do something harder. But this
17 is the best we can do and I feel like supplemented with
18 the PC game experiment of what happened when competition
19 broke out there, that combined we can have a good
20 foundation in what we think the rates in the primary
21 market could go.

22 PROFESSOR SWEETING: So I am just -- right, in my reply
23 report I was very clear that economists should be
24 thinking of prices and shares as a reflection of an
25 outcome of competition and in this setting of developers

1 and also kind of consumers' choices. That is in the
2 sense in which when I described it today in terms of
3 really pointing out the kind of directional relationship
4 between prices and shares that Dr Singer imposed in the
5 way he has done his model by treating the counterfactual
6 share as a parameter to be picked from seemingly
7 unrelated examples but however it is picked put into the
8 model to calculate the price, you know, that is both not
9 standard as economic practice using models to think
10 about counterfactuals but more specifically and more
11 usefully getting to kind of the fact, what are we trying
12 to do here, it is inconsistent with what I think we
13 understand about developers' demand and what they are
14 going to choose.

15 So if it is the case that Apple's price is low for
16 its distribution service, and we are operating in
17 Dr Singer's world where there is the one price being
18 charged, we are going to understand that Apple is going
19 to have a lot of advantages and offer a lot of value in
20 its distribution service and benefit from the network
21 effects and therefore end up with a high share.

22 So this criticism, maybe it is framed in a slightly
23 different way to the way in which I put it in the joint
24 report but it is this same thing. You have to
25 understand the relation between prices and share in the

1 right way and not do this picking a share, shoving it in
2 kind of exercise.

3 DR BISHOP: Okay, last word on this, Dr Singer.

4 DR SINGER: What I am hearing Professor Sweeting saying is
5 that the intuition just is not right. It is not
6 capturing the developer's calculus. You can search for
7 the word "steering" inside of Rochet and Tirole.

8 Imagine Apple wants 30% on your £10 sale of your app
9 and in the absence of a distribution restriction there
10 is another App Store that is on the phone and they are
11 yelling out a commission of 10%. What would happen
12 there is that the developer says to himself or herself,
13 if I could induce my customers to make the leap with me
14 to the lower cost platform, I could shed £2 of taxes on
15 every transaction and I made up a £10 thing of 30%. If
16 I could get you to come with me over to the lower cost
17 platform -- this is the spirit and the intuition of
18 Rochet and Tirole -- I could evade \$2 or £2 of taxes.
19 Now I have got £2 extra to be charitable by my customer.
20 How about I give you a percentage of that savings and we
21 take this ride together over to the low cost platform.

22 The mechanics of that if you allowed that to happen,
23 which Apple never did, it would start to put downward
24 pressure. Customers would leave. That is the share
25 loss that he does not think is going to happen or he

1 puts a lower bound of 50%. That is the share loss, but
2 there is also going to be new found price competition
3 that has never been able to occur on the Commission rate
4 because now Apple is watching these developer customer
5 pairs leave the door and go to the low cost platform and
6 their response is to lower their own commission rate.
7 That is the intuition of Rochet and Tirole and that is
8 why it suits the case right here.

9 PROFESSOR SWEETING: Very quickly. Steering in Rochet and
10 Tirole is actually something done by platforms and not
11 by one side of the market. More significantly once
12 again if we are thinking about Apple has a low price and
13 particularly if you do understand that other platforms
14 are charging the same price people are not going to be
15 trying to steer away. So once again if the share load,
16 the price is low developers might well be trying to
17 steer people to the app store and that is once again
18 going to lead to --

19 DR BISHOP: We are going to stop this now. This is
20 something put forward as indicative and to be put in the
21 mix with many other things for us to evaluate after both
22 of you have been cross-examined by the distinguished
23 counsel sitting behind you.

24 Now, that is we are going to stop on Rochet and
25 Tirole. Do we need a specific discussion of Landes and

1 Posner? Less complicated. I do not feel a need for it,
2 but do you want to say a few words?

3 DR SINGER: For the record I was going to allow you to pass
4 on it but if he is going to say something, I am going to
5 say something too.

6 PROFESSOR SWEETING: Yes, many of the criticisms and the
7 issues are the same, so just kind of can you think about
8 a world where Apple is not charging something to
9 developers who are using other payment services? That
10 is something which is kind of missing from this model
11 but kind of seems fundamental.

12 Obviously there are -- what I would say is -- and
13 then the kind of relationship between share and price,
14 the same kind of issues are going on.

15 In the Landes and Posner framework the dominant firm
16 competitive fringe assumption is there in the original
17 paper and it is being maintained in the implementation
18 and it is assuming that all payment processors or
19 payment services' providers are viewed kind of as
20 identical, including Apple, by the developer customers
21 and they are charging the same price.

22 That seems kind of wrong partly where we think about
23 Paddle's -- firms like Paddle that seem to be
24 differentiated, able to charge kind of different prices.
25 But once again it kind of goes to this point: if Apple

1 has the same price as everyone else, once again I think
2 we expect that the convenience of IAP, the fact that
3 consumers may trust the IAP kind of payment more and the
4 fact that consumers will benefit from the kind of
5 additional services once again is going to tend to mean
6 that it is by far the dominant choice and it does not
7 make sense to consider kind of low shares.

8 Then there is one other input that kind of matters
9 here which is the elasticity of the supply of the fringe
10 and in this case that is coming once again from an AT&T
11 analysis. So once again that is not very connected with
12 necessarily what we think about payment services'
13 providers on an apps transactions platform.

14 DR SINGER: I will be quick. I am just going to talk about
15 three.

16 The first critique is that Landes and Posner does
17 not come contemplate Apple responding when it loses
18 share in the aftermarket by imposing a new fee. Of
19 course Landes and Posner cannot be faulted for not
20 contemplating that. That was not the purpose of the
21 model. The model was trying to figure out if a dominant
22 firm loses its grip on a market to a competitive fringe
23 by how much would the dominant firm reduce its price?
24 That is what it is trying to do.

25 So it is not really a critique of Landes and Posner.

1 It is just it does not drive with his view of the
2 counterfactual but I am telling you again that Apple
3 cannot impose a penalty price if you break the bundle in
4 a world in which they are no longer the monopoly
5 platform. That offer would not stand. So I do not make
6 anything of that criticism.

7 He says that Landes and Posner assumes that the
8 products are homogenous in the eyes of the consumers.
9 I respectfully disagree. That is what allows the
10 dominant firm to command a premium over the price that
11 is being charged by the fringe. So in my case the
12 fringe is going to come in lower than Apple. Apple is
13 going to command a premium and the reason why they are
14 able to command a premium is because of brand loyalty,
15 inertia, all the other things that are going to keep a
16 certain fraction of the consumers with Apple. That is
17 what is going to allow Apple to charge a premium over
18 the competitive rate.

19 The competitive rate, by the way, we used as an
20 input, one of the other experts' margins and I think the
21 marginal cost estimates I think they put it in the order
22 of around 6.5 or 7%. So that is something that you
23 could conceive of as what the fringe is doing. Apple is
24 going to be coming in at a premium over the fringe.

25 He is resisting low shares again. He does not like

1 the range, 30 to 60%. Apple is resisting of that too.
2 That is why they have a payment restriction. What they
3 are worried about is if they try to impose a 30% and
4 a fringe comes in, Paddle, and is undercutting them with
5 an offer of, say, 8 or 9% there is going to be a giant
6 sucking sound as developers induce their customers to
7 come with us to the lower cost platform. If you do it
8 we will incentivise you by sharing in the savings.
9 Apple's response to that would be to have to cut its
10 commission in order to at least partially offset that
11 defection.

12 DR BISHOP: Right.

13 PROFESSOR SWEETING: Could I ...?

14 DR BISHOP: Yes, please.

15 PROFESSOR SWEETING: Tell me to shut up if you want.

16 DR BISHOP: No.

17 PROFESSOR SWEETING: Let me just kind of say one thing. The
18 way the model works, it is all homogenous prices or the
19 same price. I understand there is a narrative here
20 about maybe really what we are trying to think about is
21 a world where other firms are setting lower prices, they
22 are kind of undercutting Apple and that is the sort of
23 competition even if that is not really quite what is
24 going on in the model. Maybe this is still a useful
25 conceptualisation.

1 What I would point out, and we will talk about this
2 obviously in the context of separate demand, if we do
3 want to think about what is going to happen to share
4 here it is relevant I think to kind of look at the Epic
5 Games example where developers can avoid a 12%
6 commission, as I understand it, by using their own
7 payment processors and very few have done. So to extent
8 there is actually quite a significant gap in that
9 example it does not seem consistent with the kind of
10 share that Dr Singer is using to get to the range of
11 counterfactual prices he is giving us.

12 DR SINGER: Can I respond to that or are we tapped out?

13 DR BISHOP: Go ahead.

14 DR SINGER: This is an important point. He likes to make a
15 big deal out of the fact that he says an insignificant
16 number of Epic customers are availing themselves of the
17 option of the lower cost payment processing. Remember,
18 the reason why there is a seemingly small share is
19 because Epic is already at 12%. You do not have
20 opportunities to steer. The opportunities to steer is
21 based on the delta between what you are being charged
22 and what the competitive processors in-app support
23 providers are charging. So if the delta is small, you
24 do not have as powerful of an insensitive to engage in
25 steering.

1 In contrast, in our case if Apple is starting at 30%
2 and some attacker comes in at 10, you have got 20
3 percentage points of savings to assist the user in
4 making that move. That creates very strong incentives
5 for the developers to try and steer. So I am not
6 persuaded when he says there are not a lot of developers
7 availing themselves. The option of 12% is a pretty darn
8 good rate to begin with.

9 PROFESSOR SWEETING: May I just say that you are predicting
10 that if Apple charges a 9% rate it is going to have
11 a low share. Which does not seem consistent with the
12 Epic Games evidence.

13 DR SINGER: Can I respond? So I am assuming that Apple is
14 going to come in above the competitive rate by something
15 on the order of 3, 4, 5 percentage points. Right, there
16 is going to be pure payment processors out there. That
17 is all they do, charging 3%, 2%, right.

18 There is going to be some more sophisticated
19 entrants who are doing a suite of services like Paddle
20 who are going to go up. But Apple is going to be
21 charging a premium over and above the competitive rate
22 and as a result they will lose some share. In one
23 scenario that I model is they lose 40% share. I do not
24 think that is outside the bounds of the possible.

25 DR BISHOP: Right. We can stop there. Anyone else have any

1 comments they want to make on this issue? I think we
2 have really discussed the prices, that is the Commission
3 rates and market shares and the assumptions that went
4 into it in both the in-app aftermarket and the
5 distribution market and in the payments market. I think
6 we have done everything. So we could stop it now, and
7 I think we have ...

8 THE CHAIRMAN: I think it has been quite a long day and
9 I imagine that you are feeling the strain from it.
10 I think we have got, I would say, plenty of time to deal
11 with themes 4 and 5 tomorrow, so I think we would rather
12 have you fresh to do that, and I think even on that
13 basis it may well be that we run a bit short tomorrow
14 morning. I suspect we might not take the full two and
15 a half hours.

16 DR BISHOP: We will have time in hand for the
17 cross-examination to begin.

18 THE CHAIRMAN: So on that basis, we will rise and start
19 again at 10.30 tomorrow morning. Usual rules apply in
20 relation to discussing your evidence with anybody else:
21 please do not. Thank you.

22 Ms Demetriou.

23 MS DEMETRIOU: Sir, just one short question. Of course the
24 warning is duly heeded about the experts not discussing
25 their evidence, but it might be helpful if we could send

1 them a copy of today's transcript. Would the Tribunal
2 object to that?

3 THE CHAIRMAN: No, that sounds like a sensible suggestion.

4 We would be very happy with that, thank you.

5 MS DEMETRIOU: Thank you.

6 THE CHAIRMAN: Good, in that case we will see you at 10.30

7 tomorrow morning. Thank you.

8 (4.09 pm)

9 (The hearing adjourned until Tuesday, 4 February at

10 10.30 am)

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