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**IN THE COMPETITION**  
**APPEAL TRIBUNAL**

Case No: 1403/7/7/21

Salisbury Square House  
8 Salisbury Square  
London EC4Y 8AP

Thursday 13<sup>th</sup> 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**

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**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

Thursday, 13 February 2025

(10.31 am)

Housekeeping

THE CHAIRMAN: Good morning, Mr Hoskins. Just before we start, can I just raise a timetable issue with you.

MR HOSKINS: Sure. Of course.

THE CHAIRMAN: You might have thought we should not have any more timetable issues, but I am afraid I am going to create one.

I have been asked if I can attend a meeting at 2 o'clock tomorrow afternoon, probably only for half an hour, but it does rather, I am afraid, throw a bit of a spanner in the works in terms of tomorrow's timing. I wondered if that was going to be possible, if we can arrange things so that would be possible. I think I probably need to be away for about 45 minutes from 2 o'clock.

I suppose the options -- I suppose it depends a little bit on what you think your timings are going to be and whether you think -- I was not sure whether you thought we would be going into the afternoon and, if so, how much, and obviously we may have some re-examination.

MR HOSKINS: Sure. It is not my time to play with, because it is Mr Ward who is going to be taking over from me, and I know he is keen to have sort of all the time

1           allotted.

2       THE CHAIRMAN:   Yes, okay.

3       MR HOSKINS:   He will be here, obviously, to take over from  
4           me, and that is probably going to be around lunchtime,  
5           so why do we not, if you do not mind, pick up the  
6           conversation with him then.

7       THE CHAIRMAN:   No, that is fine.   I think, on that basis,  
8           I do need to give some indication of my position ...

9       MR HOSKINS:   Before then, okay.

10      THE CHAIRMAN:   As soon as I can, really.

11      MR HOSKINS:   Do we start early?

12      THE CHAIRMAN:   I think that is the position, obviously  
13           subject to Mr Ward being able to do it, but I think  
14           if -- well, what we could do -- what might be better  
15           might be to start at 10.30 and go through to 1.30 and  
16           then take an hour and 15-minute break for lunch, short  
17           adjournment, and obviously if it Mr Ward thinks he  
18           needs -- if he needs that 15 minutes back we can find it  
19           somewhere, we can start a little bit earlier or  
20           whatever.   What I do not want to do is to subject  
21           Professor Hitt and the transcriber and indeed everybody  
22           else to too long a continuous session, but I think  
23           logically sitting until a little bit later and then  
24           starting after lunch a little bit later is probably the  
25           right answer.

1 MR HOSKINS: Sure.

2 THE CHAIRMAN: Can we perhaps ask -- here he is indeed,  
3 Mr Ward.

4 MR HOSKINS: Sorry.

5 MR ARMITAGE: We were in the breakout room, so sorry.

6 THE CHAIRMAN: That is absolutely fine. The idea is that  
7 people can come and go. I was not intending to summon  
8 you, Mr Ward.

9 MR WARD: No, no, I was in the breakout room. As Mr Hoskins  
10 said, I am taking over later in the day, and I heard you  
11 open this topic that is very close to my heart, so  
12 I thought, rather than muck about, I would come in and  
13 explain the position.

14 THE CHAIRMAN: That is just my special powers being able to  
15 summon you. I promise to exercise them sparingly.

16 I do not know whether you caught all of that,  
17 because you were on your way, but just to let you know  
18 where we got to and see how that fits in. We were  
19 thinking we might start at 10.30 as usual and go through  
20 until 1.30 and then start again at quarter to 3, so we  
21 have a slightly extended short adjournment, but I do not  
22 want you to feel you have lost 15 minutes in that  
23 construct, and if you think you might need it then we  
24 will give it back to you somewhere.

25 MR WARD: Sir, we do think so. In fact, sir, Mr Hoskins is

1           going to lunchtime. That would give me a day and  
2           a half. We lost a little time on Tuesday because of  
3           Professor Hitt's travel arrangements, which is fine. My  
4           estimate, together with Mr Armitage, is at the very  
5           least we would need the allotted time. We had in mind  
6           we might even be trying our luck to ask you to extend  
7           time a little, depending on how quickly it goes, and of  
8           course, as always with cross-examination, that slightly  
9           depends on the answers as well as the questions.

10           But the idea that we actually lose allotted time in  
11           fact really concerns me, and it is not just some sort of  
12           petty "Oh, well, we need exactly the same as Apple", it  
13           is just, based on having prepared the cross-examination,  
14           having worked very hard to try and bring it within the  
15           time limits, I would be entirely both amenable and  
16           grateful for any extended sitting, however it is  
17           arranged, whether it be short lunch, early start, late  
18           finish. I am just in your hands on that.

19       THE CHAIRMAN: Yes.

20       MR WARD: I certainly do not, if I may say, want to lose any  
21           time. I might be pressing your indulgence just for  
22           a little more.

23       THE CHAIRMAN: I see, okay. Well, it is helpful that we are  
24           having the conversation now rather than later. What  
25           I suggest then is we try and get a bit of extra time

1           today, give you the time back today.

2       MR WARD:   That would be really great.

3       THE CHAIRMAN:   So if you are able to, and provided nobody  
4           else objects, we might have a shorter short adjournment  
5           today.   I do not know whether --

6       MR WARD:   Then we can give you a progress report at 4.30 and  
7           see how we are doing.

8       THE CHAIRMAN:   Yes, exactly, and then we can decide whether  
9           we need a little bit longer.

10           So in terms of today, if the transcriber is happy to  
11           have just have an hour for lunch?   (Pause)

12           Good, so that is what we will do.   We will have  
13           a short short adjournment today and then we will see  
14           where we get to, and I will work on the basis that we  
15           are going to -- I am going to be free for 45 minutes  
16           from 2 o'clock tomorrow and we will work that round  
17           somehow.

18       MR WARD:   As I am here I will be taking over from Mr Hoskins  
19           seamlessly, without loss of time, should he go short  
20           this morning.

21       THE CHAIRMAN:   Yes, good, that is very helpful.   Thank you.

22       MR WARD:   Thank you very much.

23       THE CHAIRMAN:   We probably should not spend me any more time  
24           talking about it.   Unless anybody else has anything to  
25           say?

1           Mr Hoskins.

2                   PROFESSOR LORIN HITT (continued)

3                   Cross-examination by MR HOSKINS (continued)

4   MR HOSKINS:   Good morning, Professor Hitt.

5   A.   Good morning.

6   Q.   Still on market definition, I wanted to ask you some  
7        questions relating to the use of an HMT in this case.  
8        Can we go to the joint expert statement {C4/7/16}, and  
9        proposition 32, and the proposition is:

10            "An HMT based on supra-competitive prices would  
11            suffer from the cellophane fallacy'."

12            You agree with that, and you say:

13            "In theory, applying an HMT when a firm is  
14            exploiting market power over the product in question  
15            (setting supra-competitive prices) may lead to defining  
16            too broad a market.  However, this is not relevant in  
17            this case - Apple's Commission rates are competitive.  
18            Indeed, Dr Singer's alleged HMTs are entirely circular  
19            and uninformative to assess substitutability and market  
20            definition ..."

21            So again that is just to frame the debate between  
22            you and Dr Singer.

23            I would like to go to the European Commission's 2024  
24            market definition notice.  That is {AB6/44/13}.  If we  
25            could look at footnote 55, if we could focus in on that

1           please. Are you familiar with this notice? Have you  
2           seen it before?

3       A. Maybe.

4       Q. Why do not we go to page 1, sorry, so you can see where  
5           this is taken from {AB6/44/1}.

6       A. I think I may have seen this. I do not specifically  
7           recall it but I may have seen this.

8       Q. So back to page 13, thank you {AB6/44/13}, and if you  
9           read footnote 55 to yourself, please. You understand  
10          this is European Commission guidance that has been  
11          issued, yes?

12      A. Yes.

13               (Pause)

14               Okay.

15      Q. So at the end of footnote 55, the Commission says:

16               "Therefore, when market definition is performed in  
17               the context of a case that requires an assessment of the  
18               degree of existing market power, such as in the context  
19               of an assessment of dominance in an Article 102 TFEU  
20               case, the fact that the prevailing price may already be  
21               at a supra-competitive level needs to be taken into  
22               account. In such cases, the Commission may apply the  
23               SSNIP test starting from a counterfactual price that  
24               would prevail under (more) effective competition; or it  
25               may rely on other evidence to define the relevant



1 market."

2 Presumably you agree that that is a reasonable  
3 approach, do you?

4 A. Yes.

5 Q. One of the ways of identifying what the Commission  
6 describes as a counterfactual price that would prevail  
7 under effective competition would be to look for  
8 appropriate benchmarks, yes?

9 A. Yes, in general benchmarks are one way you can look for  
10 counterfactuals.

11 Q. If you could find an appropriate competitive benchmark,  
12 there would be no circularity in an HMT conducted on  
13 that basis, would there?

14 A. I think I would have to see the context, but I think if  
15 we are talking about the circumstances described here,  
16 I think there is no issue.

17 Q. Can we go to the joint expert statement at {C4/7/16}.

18 A. Sorry, let me put an addendum to that: it depends  
19 exactly on what the analysis is that is being conducted,  
20 but in principle choosing that benchmark -- the idea of  
21 choosing a competitive benchmark as a starting point is  
22 fine. It then depends on what you do with it.

23 Q. Sure. So we have gone to proposition 33 in the  
24 statement and the proposition is:

25 "Google's Play Store commission may be

1 supra-competitive and thus not serve as a competitive  
2 benchmark for the HMT."

3 You say:

4 "Neither agree nor disagree. I have no opinion or  
5 factual basis to opine on whether commission rates on  
6 the Google Play Store have been supra-competitive in the  
7 EU or the UK during the Relevant Period."

8 But you go on to suggest that:

9 "In any case [you say], Apple's Commission rate is  
10 comparable to the rates set by Google, but also to the  
11 rates set by several other app transaction platforms  
12 (through which developers and consumers can and do also  
13 transact), such as the rates for Android Devices (such  
14 as Amazon Appstore, Huawei AppGallery, and the Samsung  
15 Galaxy Store), those for personal computers (such as  
16 GOG, the Mac App Store and Steam), [and finally] and  
17 those for game consoles (such as the Microsoft Store for  
18 Xbox, Nintendo eShop and the PlayStation Store)."

19 Looking first of all at the reference to "other app  
20 transaction platforms", and you note that Apple's  
21 Commission rate is comparable to the rates set by  
22 several other app transaction platforms, and you mention  
23 Amazon Appstore, Huawei AppGallery and the Samsung  
24 Galaxy Store.

25 Can we go back to the CMA's report, that is

1 {AB6/25/137}. I would like to look at paragraph 4.202  
2 where the CMA states:

3 "In addition, other Android app stores are not  
4 an appropriate benchmark as we have found that the  
5 barriers to competition set out above (eg indirect  
6 network effects) mean that in practice these app stores  
7 do not have strong incentives to lower their commission  
8 rates due to their limited ability to attract customers  
9 away from Google's Play Store."

10 In your reports you have not addressed the issue of  
11 whether, in practice, those app stores do not have  
12 strong incentives to lower their commission rates due to  
13 their limited ability to attract customers away from  
14 Google's Play Store, have you?

15 A. No, that is correct, I did not do a competitive analysis  
16 of Google Play. I think the discussion in my report is  
17 reasonably summarised by what you read in the paragraph,  
18 which is I have looked across all the other benchmarks  
19 and seen that you see these types of rates prevail, but  
20 I have not done a competitive analysis for Google.

21 Q. Then the second category of comparators you refer to, as  
22 we saw in the joint statement, is the rates set for  
23 personal computers, such as GOG or G-O-G, I do not know  
24 what it is, the Mac App Store and Steam.

25 If we go to your second report {C3/4/45}, you deal

1 with this at paragraph 71 to 74, and again my  
2 understanding is that whilst you look across at the fact  
3 that other app transaction platforms have similar  
4 commission rates and indeed a similar exercise for PCs,  
5 that is again as far as your analysis goes. For all of  
6 these categories you are just looking at the spread of  
7 commission rates rather than conducting any further  
8 analysis, is that right?

9 A. I do not think that is quite right because there is --  
10 I think it is in -- I think in Hitt 2 somewhere, I go  
11 through and look at the characteristics of some of these  
12 stores and some of the description of these stores as  
13 well to think about quality issues, so there is more  
14 analysis than simply looking at the headline rates.

15 Q. Okay. Well, can we go back to the CMA's report. That  
16 is {AB6/25/137}. It is paragraph 4.204 and 4.205.  
17 Perhaps you could read that.

18 (Pause)

19 A. Okay.

20 Q. Again, correct me if I am wrong, but I do not think you  
21 have addressed these specific points set out in these  
22 three bullets in your report, have you?

23 A. So not with reference to this report, but many of these  
24 points I have addressed in the discussions of some of  
25 these stores as alternatives, and Games Jolt I believe

1           has a different business model. I will have to look at  
2           my report for that. I do address the question of  
3           whether or not the commissions on the Microsoft Store or  
4           the Epic Games Store are reasonable benchmarks when you  
5           think about it on a quality adjusted basis.

6       Q. What about the first bullet?

7       A. I am not sure that goes in the direction that they  
8           think, so -- (overspeaking) --

9       Q. Have you addressed it?

10      A. Oh, I think in the general point that -- yes, there  
11         are -- I agree with the point that there are a wider  
12         range of distribution, but I do not think I address that  
13         particular point specifically. The idea that there is  
14         more competition in PCs yet the prices are 30% I think  
15         is consistent with my opinion, but I do not think  
16         I specifically address that point. Again, I was not  
17         asked to specifically rebut the CMA's Ecosystem Report.  
18         I did address these issues in my report to the extent it  
19         was relevant to my analysis.

20      Q. What about Steam? Did you consider Steam's potential  
21         market power?

22      A. So I understand that there are allegations of market  
23         power related to Steam. I have some discussion in my  
24         report as well about the interpretation of those  
25         benchmarks as well, so I have considered it. Again I do

1 not know the factual basis upon which they are relying  
2 to reach their conclusion, so I do not know -- I do not  
3 know conclusively whether you can say that Steam has  
4 market power or not. They certainly are successful, and  
5 they certainly seem to be the preferred -- for at least  
6 on most of the period, the preferred venue for  
7 distribution of games and they have competitive prices.  
8 But I did not do a full competitive analysis of Steam,  
9 and I am not sure I could have given the available data.

10 Q. Then the final category of comparators or potential  
11 comparators you refer to in the joint statement is game  
12 consoles, and you said that Apple's Commission rate is  
13 comparable to the rates set for game consoles such as  
14 the Microsoft Store for Xbox, Nintendo eShop and the  
15 PlayStation Store.

16 If we go to paragraph 4.203 in the CMA's report  
17 {AB6/25/137}, perhaps you could read that.

18 A. Okay.

19 Q. Have you addressed those two bullet points in your  
20 report?

21 A. So the -- so I think the first one in particular, yes,  
22 in the sense that if you think about platform pricing  
23 business models, you can have many different platform  
24 pricing business models, and the fact that Microsoft has  
25 configured their store in a way -- and Sony at various

1 times has configured their business to lose money on  
2 consoles and make it up on games is a business choice  
3 that they made.

4 I think I would note that Nintendo has not chosen to  
5 do that, that they are actually profitable on both sides  
6 of the platform, and I think -- and I discuss this  
7 extensively that, you know, when you have platform  
8 pricing strategies you can configure prices in any  
9 number of ways, and in this particular case they have  
10 chosen to lose money on the hardware, at least for  
11 periods of time until costs have gone down, and make it  
12 up elsewhere, and that just illustrates that there are  
13 many different ways of engaging in platform pricing.

14 But the point that these -- this 30% is a prevailing  
15 rate I do not think is changed by that.

16 Q. Have you addressed the point that the console games  
17 stores are profitable without the App Store revenue and  
18 therefore are different from Apple and Google? Is that  
19 a point you have addressed?

20 A. Sorry, I ...

21 Q. So in the first bullet, the CMA makes the point that  
22 unlike Apple and Google the console games stores are  
23 profitable without the App Store revenue. I am sorry,  
24 it is the other way round. So have you addressed the  
25 point that Apple and Google are profitable without the

1 App Store revenue when compared to the business models  
2 operated by the console games stores?

3 A. I certainly consider it, but there is no economic  
4 principle that forces businesses to -- on a platform to  
5 price in any particular way. They configure their  
6 business as what they think is profit-maximising. So  
7 the idea that, for example, you lose money in something  
8 else and make it up elsewhere does not enable you to  
9 charge a higher price than the available market price.

10 Q. So you accept the difference, but say it does not make  
11 any difference to your recognition or your suggestion  
12 that they are appropriate comparators?

13 A. So in the -- so let me separate this into two parts.  
14 One is I do not think this is a correct economic  
15 argument, that because they have configured their  
16 business in this particular way that they can charge  
17 a higher price than the market would -- than would  
18 prevail in the market.

19 From the perspective of my comparators, what I note  
20 is that this 30% price has been the pre-dominant way  
21 that you have seen pricing in these markets that go back  
22 all the way to the beginning of the App Store and  
23 actually before, and have persisted today, so I think  
24 that is an accurate observation. I have not tried to go  
25 through and do a detailed competitive analysis, nor do



1 I think I could, of each one of these things, but I will  
2 note, if you look down those charts that I show in my  
3 report, you will see almost all the headline rates are  
4 30%. That was certainly true through 2018 and is still  
5 essentially true today, with a couple of exceptions, and  
6 I think that is the point I am making and --

7 Q. That is your big point, is it not?

8 A. (Inaudible - overspeaking)

9 Q. You set out your table and you look at the rates, yes?

10 A. Yes, and, you know, considering characteristics of these  
11 things, that seems to be the predominant rate, and when  
12 you think about the quality adjusted basis, you can see  
13 that the higher quality -- you know, that 30% appears at  
14 least on many of the higher quality stores as well.

15 Q. Have you taken account of the fact that the console game  
16 stores limit direct competition from other providers  
17 because they do not allow more than one app store being  
18 allowed on a games console?

19 A. So, again, I did not do a detailed analysis of consoles,  
20 but again consoles compete with other consoles, and they  
21 also -- you know, the same analysis that I did in the  
22 App Store would have the same implication for consoles.  
23 You know, it is my position that the games market  
24 transcends mobile and would include consoles, and  
25 therefore the same -- you know, to the extent that

1 App Store and PCs and consoles are all competitive, you  
2 could start from the other side and say that the  
3 consoles are competitive with app stores and PCs.

4 But certainly the statement -- the factual statement  
5 that the consoles -- that there is restrictions on the  
6 use of -- and obtaining games for consoles are  
7 restricted to those through the console store who are  
8 authorised by the console manufacturer is correct.

9 Q. Can we go to your second report at {C3/4/47}. This is  
10 where you set out your tables with the commission rates  
11 and over the page also at 49 {C3/4/49}.

12 A. Right.

13 Q. So these are the two tables you have just been referring  
14 to, yes?

15 A. Yes, and I think there is a -- there may be, in a later  
16 one, there may be a chart too, but the tables have the  
17 same data that are in the chart.

18 Q. So if we stay on page 49, the point you make is that  
19 the headline commission rate in most of the examples you  
20 give is 30%, yes?

21 A. Yes, and I -- I would broaden that very slightly to say  
22 that I tried to be comprehensive in the examples  
23 I considered to focus on; those are services engaged in  
24 digital distribution for which this is known.

25 Q. The exceptions, the notable exceptions are the Epic

1 Games Store at 12% and the Microsoft Store and  
2 Windows -- sorry, if we can just move the page down  
3 a little. This is on page 49. Thank you.

4 So Epic Games Store at 12 and the Microsoft Store on  
5 Windows and you we see the changes over time. Do you  
6 have that?

7 A. Yes, I am just orienting myself.

8 Yes, right, at certain periods I think when the Epic  
9 Games Store entered they came in at 12, and Microsoft  
10 has experimented with different commissions but  
11 on August 1st they lowered it to 12% for game apps.

12 Q. We have seen that the chronology indicates that the Epic  
13 Games Store and the Microsoft Store seek to compete with  
14 each other on price, have we not?

15 A. I do not think you can get that solely from the  
16 chronology. I think it is absolutely true that the Epic  
17 Games Store entered at a lower price for their various  
18 business reasons and that Microsoft also has entered at  
19 a lower price. The causal connection between this  
20 competition and other things that may be going on in the  
21 market I think is less clear, but certainly they have  
22 entered at a lower price.

23 Q. Well, it is likely at least one of the principal aspects  
24 they have taken with setting the rate is that they wish  
25 to compete on price because, as we have seen, all of the

1           other comparators you have pointed out are just  
2           monolithic at 30%?

3       A.   So I think that is one of -- I think Epic has expressed  
4           that they are competing on price, but the 12% price is  
5           not the only component of the underlying strategy of  
6           Epic, so I think -- and the effect of that on  
7           competition among players is a little less clear, but  
8           certainly they came in to try to attract business to  
9           their store, and I have a discussion of Epic's  
10          positioning. In particular, for example, a lot of their  
11          distribution is first party Epic Games, so they may have  
12          an especially good incentive to want to bring in as many  
13          consumers to that platform as they can, because then  
14          they can sell Epic Games, which is the majority,  
15          I believe, of their revenue to those consumers as well.

16       Q.   I am still -- sorry, it is probably my fault -- at a bit  
17           of a loss. Are you accepting that the Epic Games Store  
18           and the Microsoft Store on Windows, at least part of  
19           their commercial strategy was to compete on price, or  
20           are you suggesting that was absolutely no part of their  
21           strategy?

22       A.   No, I think it is partially to compete on price, but as  
23           I note in my report, there may be reasons to believe  
24           that the reason that those prices have to be where they  
25           are is because of either quality differentials, or that

1           those prices may be chosen for other reasons other than  
2           pure stand-alone competition of an app store. In  
3           particular, Epic has a lot of incentive to attract  
4           customers because they can sell first party titles, and  
5           also on a -- again, that they are not profitable and not  
6           expected to be profitable for some time.

7           Q. The fact that the Epic Games Store and Microsoft Store  
8           have sought to some extent to compete on price makes  
9           them particularly valuable as comparators in a world in  
10          which we see the monolithic 30%, is that not correct?

11          A. I do not think it is particularly valuable. I think  
12          they are interesting data points that you certainly need  
13          to consider. What I would not do, contrary to Dr Singer  
14          or Mr Holt, is claim that those are the competitive  
15          price solely on that basis. But, yes, I think they are  
16          useful and informative to see the dynamics of pricing in  
17          this industry.

18          Q. I would like to move on to ask you in particular about  
19          an appropriate comparator in the delayed counterfactual.  
20          You know what the delayed counterfactual is, yes?

21          A. It might be good for you to define it precisely for me  
22          since the counterfactual was not within the scope of my  
23          work, that was more in Professor Sweeting's.  
24          I understand the term, but it would probably be good for  
25          you to clarify the term as you are using it now.

1 Q. Well, it assumes that in the counterfactual, Apple's  
2 conduct changes only in 2015 onwards.

3 A. Okay.

4 Q. Yes?

5 A. Yes.

6 Q. Can we go to your third report {C3/8/57}, paragraph 111.

7 A. Okay.

8 Q. You say:

9 "Dr Singer starts with a set of candidate benchmarks  
10 including mobile device app stores (Aptoide (iOS and  
11 Android) ...) ..."

12 Then you go on to name some others. So Aptoide has  
13 two types of mobile device app stores, one for iOS and  
14 one for Android, yes?

15 A. Yes. Well, I think the iOS one is relatively recent,  
16 but the Android one has existed for a while.

17 Q. Then if we go to your paragraph 112(c), you say:

18 "Dr Singer also arbitrarily dismisses as potential  
19 benchmarks a number of Android app transaction  
20 platforms ... Huawei AppGallery, Samsung Galaxy Store,  
21 Android Aptoide store, One Store and Amazon Appstore)  
22 that charge headline commission rates comparable to  
23 Apple's App Store."

24 You refer here, as we see, to the Android Aptoide  
25 store but not the Aptoide iOS store. Do you see that?

1 A. Yes.

2 Q. You say that Dr Singer has arbitrarily dismissed those  
3 benchmarks. But can we see footnote 145 on page 58 of  
4 your report {C3/8/58}, and you quote there from  
5 Dr Singer's second report. Perhaps I could ask you to  
6 read footnote 145 to yourself.

7 (Pause)

8 A. Okay.

9 Q. So it is not the case that Dr Singer has not provided  
10 any reasoning for his view on these comparators; on the  
11 contrary he sets out a number of reasons, as you have  
12 cited in your footnote, and Dr Singer explains that in  
13 his view Google Play is dominant and the smaller  
14 competitors are price takers, and in his view for this  
15 reason Android app transaction platforms are not good  
16 comparators for a competitive counterfactual. He is  
17 right about that, is he not?

18 A. No, so he stated that he has provided absolutely no  
19 analysis on that point, so that is why I -- you know,  
20 my -- that is what I mean by arbitrarily dismisses. He  
21 simply says these things. He invokes the idea of  
22 steering or the idea that Google may be a monopoly and  
23 says "Okay, therefore we cannot look at any of these  
24 things". But he -- as I recall, he does not provide any  
25 support for those points.

1 Q. So your point is a complaint about a lack of further  
2 analysis?

3 A. So I do not know if I would characterise it as  
4 a complaint, but I note that he has not conducted any  
5 analysis on supporting those points, and that is --  
6 again, if this is an important issue, you know, he  
7 should have some underlying basis other than simply  
8 saying so.

9 Q. But you are not offering any analysis on this either,  
10 are you? I mean Dr Singer is saying these are not good  
11 comparators for this reason. If you are saying they are  
12 good comparators, presumably you should have conducted  
13 some analysis?

14 A. So I am not sure what the appropriate burden is here for  
15 these purposes. I think the way I have described these  
16 things is that the 30% is a prevailing rate and it is  
17 present across many different app transaction platforms,  
18 and many of the critiques that you might have for some  
19 of these, for example, they lack scale or they have  
20 other reasons why they might be disadvantaged, do not  
21 apply to all of these Android app transaction platforms.

22 So I think the idea that they are at 30% in an  
23 environment in which -- which is open, in the sense that  
24 there are other app stores, I think is informative, and  
25 I discuss that in my report, but that is the extent of



1 the discussion.

2 Q. Can we go to Dr Singer's second report {C2/8/88}.

3 A. Dr Singer's report?

4 Q. Dr Singer, yes.

5 A. Okay, I will consult it on the screen.

6 Q. Paragraph 183, he says:

7 "The Aptoide iOS App Store is a potential iOS App  
8 Store competitor. As of March 2023, it is currently  
9 only available to iOS Device users who jail break their  
10 iOS Devices. The Aptoide iOS App Store charges a 20%  
11 commission."

12 Then if we go to page 92, paragraph 193 {C2/8/92},  
13 he sets out his position on the primary counterfactual  
14 in paragraph 192, and then in paragraph 193 he says:

15 "By contrast, the delayed counterfactual - where  
16 Apple is assumed to no longer be dominant or to have  
17 ceased the alleged conduct at the advent of the relevant  
18 period, is best reflected by the Aptoide iOS App Store  
19 with its 20% commission."

20 Again, correct me if I am wrong, but you do not  
21 address the use of the Aptoide iOS App Store as  
22 a comparator in your reports, as far as I am aware?

23 A. No, I think that is fair. I think -- you know,  
24 considering the fact that you have to jail break the  
25 phone in order to use it I think would make this

1           somewhat different, but, no, I did not address it.

2       Q.   As we see, the Aptoide iOS App Store is offering a 20%  
3           commission rate rather than Apple's 30% Commission rate,  
4           do you see that?

5       A.   Yes, it is well above what Dr Singer's benchmark is, but  
6           yes, 20% is -- well, at least that is what he claims.

7           I do not think I did a complete investigation of that.

8       Q.   We are dealing with the delayed counterfactual here, not  
9           the primary counterfactual. So he has offered up a set  
10          of comparators for the primary counterfactual, which is  
11          the Epic Games Store and the Microsoft Store, but in  
12          relation to the delayed counterfactual he has identified  
13          the Aptoide iOS App Store. You are absolutely right, it  
14          does have a higher comparator. That is precisely what  
15          he has done. Do you understand that?

16      A.   So again I did not engage with Dr Singer's various  
17          counterfactuals. I will note that there are reasons to  
18          believe that this would not necessarily be a comparable  
19          figure, but this is not something I evaluated in my  
20          report.

21           So I agree with that point, that I did not look at  
22          the Aptoide iOS App Store. I am not aware of how much  
23          commerce goes through there. Also, since it does  
24          require jail breaking the phone, which has issues for  
25          iOS users, that is not something I considered.

1       Q. Now, as we have seen, the Aptoide iOS App Store is  
2       offering a 20% commission rate rather than a 30%  
3       commission rate, so it is not a price taker in relation  
4       to Apple's App Store, is it? It is trying to compete on  
5       price.

6       A. Again, I do not know what their -- so they may be  
7       competing on price, they may simply have -- be having to  
8       lower their price due to the fact that you have to  
9       engage in a jail breaking activity in order to use it.  
10      So, again, this is not something I evaluated, and so  
11      I cannot say what they are attempting to do or not to  
12      do, and I have no idea if any material amount of  
13      commerce goes through there.

14      Q. So it sounds like you are not really in a position to  
15      address whether Aptoide iOS is a potential comparator  
16      for a competitive counterfactual in the delayed  
17      counterfactual, you just simply have not really looked  
18      at the point, have you?

19      A. So I do not have a particular opinion on Aptoide iOS,  
20      but I noted the reasons why, that I do not necessarily  
21      think that that is a -- simply ... Again, simply  
22      treating the 20% as an appropriate price benchmark may  
23      not be appropriate given the circumstances here, but  
24      I did not do an extensive evaluation of the Aptoide iOS,  
25      so, again, I do not know if any significant amount of

1 commerce goes through there, given the requirement to  
2 jail break the phone and its relative recency.

3 Q. Can we go to -- back to the joint statement {C4/7/16} at  
4 proposition 34, and if we go over the page, please  
5 {C4/7/17}, in your comments you say:

6 "Paddle is also not a relevant comparator because  
7 there are several services offered by Apple (including  
8 Apple tools and technologies for producing apps), as  
9 well as other value generating services of the  
10 App Store, that are not provided by Paddle."

11 Then you give some references. Now, the references  
12 you give are to paragraphs 113 and 115 of your third  
13 statement, and it is paragraph 115 which is relevant to  
14 Paddle, so if we can go to that at {C3/8/60}.

15 You say there:

16 "Thus, Dr Singer focuses on purported benchmarks  
17 that do not and cannot provide the same services that  
18 Apple provides and ends up using Paddle as the relevant  
19 comparator. As acknowledged by Mr Howell, there are  
20 several services offered by Apple, as well as other  
21 value generating services of the App Store, that are not  
22 provided by Paddle."

23 Have you also seen from Mr Howell's evidence that  
24 there are certain services offered by Paddle that are  
25 not offered by the App Store?

1 A. I believe he makes that claim, yes.

2 Q. Well, it is not just a claim; you are not presumably in  
3 a position to disagree with that evidence as a matter of  
4 fact?

5 A. No, it was not something I evaluated one way or the  
6 other.

7 Q. If we look at your footnote 158 on this page, you quote  
8 from Mr Howell's report and you say -- or he says,  
9 rather:

10 "It may be that Paddle's current offering does not  
11 extend to certain services, such as parental controls or  
12 Family Sharing ... Paddle's SDKs and APIs allow for  
13 integration with app ecosystems for direct content  
14 delivery, tracking, and management functionalities.  
15 However, for advanced ecosystem functionalities like  
16 cross-device and family sharing specific to Apple's  
17 ecosystem, additional custom development or integration  
18 with third-party services via API may be required."

19 Now, have you read Mr Owens' witness statement?

20 I cannot remember if we have covered that already.

21 A. Yes, I believe I did, yes.

22 Q. Can we go to that, please. That is {B1/1/1}. You are  
23 aware that Mr Owens founded Paddle and was its CEO for  
24 a while, yes?

25 A. Yes.

1 Q. If we go to page 7, if you could read paragraphs 20 to  
2 21 {B1/1/7}.

3 (Pause)

4 A. Okay. Oh, sorry, 20 and 21?

5 Q. 20 and 21, please, yes.

6 A. Okay.

7 Q. If we can look at paragraph 17 on page 6 {B1/1/6}:

8 "Paddle has received many requests over the years  
9 from iOS App developers to use Paddle's solution."

10 Do you see that?

11 A. Okay, yes.

12 Q. So I think we probably both agree that no comparator  
13 will be perfect, but whatever the differences, the  
14 relative merits and demerits between the Apple and  
15 Paddle offerings, the factual evidence before the  
16 Tribunal is that there is demand from iOS App developers  
17 to use Paddle, is it not?

18 A. So I would be very careful with that statement.

19 Certainly there are app developers who have expressed an  
20 interest in using Paddle. The problem with that is that  
21 the idea that there is demand for this may be because  
22 the -- of the thought that they could evade or not pay  
23 the 30% App Store Commission. So to the extent that  
24 that is what developers are seeking, I think that is --  
25 to the extent there is demand, it is not really a change

1 in demand, it is a shift in price that may or may not be  
2 appropriate in an appropriate counterfactual where, for  
3 example, there is a charge for tools and technology.

4 So I think making those inferences in the current  
5 state of the world is very difficult because, again,  
6 a lot of the interest is -- you know, you will see  
7 commentary in the public domain of "avoiding the Apple  
8 tax", is one of the reasons why developers might be  
9 considering this. But there could be some demand  
10 specifically for some of the services, and then the  
11 issue there becomes whether those services, you know,  
12 are also desired by -- you know, whether that particular  
13 configuration is also desired by consumers as well as  
14 developers.

15 So there are many things that developers, for  
16 example, might be interested in doing that consumers may  
17 or may not prefer as well.

18 Q. Clearly if there is demand from developers, that must be  
19 because they think they can get a better deal on quality  
20 and/or price from Paddle than they can for Apple. That  
21 is the very nature of demand, is it not?

22 A. I do not think I say that is the very nature of demand.  
23 What I would say is that there are some developers who  
24 may seek some of those services. I can agree with that.  
25 I can also suggest that much of -- at least some of that

1 demand may be simply due to the idea that developers  
2 think that the relevant counterfactual would be  
3 a payment processing price of a few per cent, rather  
4 than the 30% Commission. I do not believe that is  
5 correct because none of this could -- is even feasible  
6 without the contribution of Apple's tools and  
7 technologies. So distinguishing those two things  
8 I think is very important when you think about why  
9 developers might seek out these kinds of services.

10 Then also if you look at some of the services --  
11 this is the other point I made earlier. If you look at  
12 some of the services Paddle offered, Apple has  
13 configured their ecosystem in a very specific way, in  
14 a way that they think maximises value for developers and  
15 consumers. Developers may have different opinions as to  
16 what they think maximises value for them. Paddle may  
17 support those kinds of things, but that may be simply  
18 a transfer or some -- or something that developers may  
19 prefer while consumers may not prefer.

20 Q. Just to clarify your position, is your position that  
21 Paddle has some relevance as a competitive benchmark for  
22 iOS In-App Aftermarket Services, or is your position in  
23 your evidence to the Tribunal that it is completely  
24 irrelevant and should be entirely disregarded?

25 A. So I do not think I would put myself on either extreme.



1           What I would simply say is you cannot use the 10%  
2           reference point as a counterfactual price because that  
3           is simply incorrect. It does not provide the same  
4           services and does not account for the other things that  
5           Apple provides that would be provided in an environment  
6           in which a third-party payment processor, for instance,  
7           might (inaudible). Now, again, constructing what  
8           exactly those counterfactuals would be like is really in  
9           the realm of Professor Sweeting's report, but I think  
10          that is where I come down.

11                 Sure, you can look at Paddle, but then you would  
12          have to -- you know, you have to think about all the  
13          things -- all the additional potential charges as well  
14          as the other services that would have to be provided in  
15          order for a Paddle to be swapped in for at least  
16          a portion of the services provided in IAP.

17          Q. You said you would not come down on either extreme. So  
18          you think it is an extreme position that Paddle might  
19          have some relevance as a competitive benchmark? You  
20          think that is extreme, do you?

21          A. So I think the idea that the way it has been used as  
22          simply -- for example, that 10% (inaudible), that is  
23          wrong. Now, is it worth considering? Absolutely.

24          Q. So it is worth considering?

25          A. I think it is worth considering, but you cannot simply

1 take that number and say that is the relevant -- that is  
2 the relevant number for what it would be with  
3 third-party payment solutions. That cannot be right.

4 Q. I would like to move on now to ask you some questions  
5 about dominance. I would like to begin with what are  
6 hopefully some simple questions.

7 Apple has 100% share -- actually I should say, just  
8 as a term of clarification, I still want you to assume  
9 that the relevant markets I am asking you about, when  
10 I am asking you about dominance, are the markets that  
11 have been identified by Dr Singer.

12 A. Okay.

13 Q. You use the phrase to cover both those markets, you use  
14 a compendious phrase, you call them "iOS-only  
15 aftermarkets". That is the phrase you use in your  
16 reports, yes?

17 A. Yes, I have described it in that way.

18 Q. So I am going to try to use the same term so we are on  
19 the same page.

20 A. Sure.

21 Q. Apple has 100% share of the iOS-only aftermarkets, does  
22 it not?

23 A. Yes, if you follow Dr Singer's definitions, Apple is the  
24 only place you can distribute apps and Apple is the only  
25 place where you can perform IAP. Again, I do not think

1           that is the correct definition, but, yes, you get 100%  
2           share -- (overspeaking) --

3       Q. I am going to assume for this purpose -- let us just  
4       assume that the Tribunal has found against you on the  
5       market definition, so we will assume the caveat, every  
6       time I ask you a question on dominance, it is caveated  
7       on: only if the Tribunal has found against your position  
8       on market definition, okay? I am trying to make your  
9       life easier.

10      A. All good.

11      Q. Apple has had 100% share of the iOS-only aftermarket  
12      since the launch of the App Store in the UK in 2008, has  
13      it not, and in relation to the aftermarket for payments,  
14      that is since 2009, but it has always had 100% of those  
15      markets?

16      A. As long as there is -- under Dr Singer's definition,  
17      Apple is the only provider, it has 100% share, that is  
18      correct.

19      Q. We know as a matter of fact that by virtue of the  
20      trading terms that Apple offers to developers, it has  
21      been able to exclude any entry at all by competitors  
22      into the iOS-only aftermarkets. That is what its terms  
23      do.

24      A. So let me say that I can agree, within the scope of my  
25      report, that if you accept Dr Singer's definitions it is

1           100% share. I take no position on the issue of  
2           exclusion, exclusionary conduct, because that is not  
3           within the scope of my work. I will leave that to  
4           Professor Sweeting.

5       Q. Despite that, your position is that Apple is not  
6       dominant in iOS-only aftermarkets?

7       A. Yes, because I think that the market definition is  
8       incorrect, and under my market definition Apple is not  
9       dominant, and even if we accept Dr Singer's definitions  
10      they are certainly competitively constrained.

11     Q. Sorry, so if we accept Dr Singer's definitions, is your  
12     position that Apple is dominant or not dominant?

13     A. So if -- under his -- if you -- so -- again it depends  
14     on what you are using as the definition of dominance.  
15     If you are saying 100% share is the only evidence for  
16     dominance under Dr Singer's market definition, you would  
17     get that and that would make them dominant. It is my  
18     position that (a) that is not right, and (b) that Apple  
19     is competitively constrained regardless.

20     Q. But do you understand what we mean by the concept of  
21     dominance? I appreciate this is a UK/EU type concept,  
22     and I appreciate it is not one that is reflected in US  
23     law in the same way. You talk about market power,  
24     et cetera. But we have this notion of dominance --

25     A. Yes.

1 Q. -- and it is fundamental to the definition of this  
2 particular legal infringement that we are dealing with  
3 in this case. I mean, do you understand what we mean by  
4 "dominant"?

5 A. Yes, so -- and I go back to my answer which I gave  
6 previously, which is if you are going to define  
7 dominance, and the only requirement for dominance is  
8 having 100% share in the markets that Dr Singer has  
9 defined, then it would mean -- certainly that is the  
10 case. However, my understanding of dominance is the  
11 ability to act without respect to competitors or  
12 consumers. I do not believe that is the case here.

13 Q. So your position is that even on Dr Singer's market  
14 definition, Apple is not dominant?

15 A. It is not -- it would have 100% share, but it is still  
16 competitively constrained. They cannot act  
17 independently of consumers and other competitors because  
18 there are potential substitutes, and there are platform  
19 considerations in the device market, for instance.  
20 I have a number of points of why that is.

21 So I will agree on the 100% market share,  
22 absolutely. But in terms of the: are they competitively  
23 constrained, can we act without respect to competitors  
24 and consumers? I do not think that is the case.

25 Q. You are aware that a firm can be dominant even if it is

1 subject to some competitive constraint? It is not  
2 a complete absence of competitive constraint that is  
3 required for dominance. Are you aware of that?

4 A. Yes. Yes. I believe the competitive constraints are  
5 sufficiently strong here to prevent -- not only to  
6 prevent, to require Apple to be responsive to market  
7 conditions.

8 Q. Now, in the sections of your reports addressing  
9 dominance, again you rely frequently on the Accent  
10 survey commissioned by the CMA. So, for example, in  
11 your second report just a few footnotes, 448, 452, 453,  
12 455, 456, 458, 459, 463, I could go on for dramatic  
13 effect, but you are relying heavily on the Accent survey  
14 again, are you not?

15 A. It is one of the inputs there. It has the benefits of  
16 being relatively recent and covering a wide range of  
17 topics. Certainly that is not the only evidence, but  
18 yes, I do cite to the Accent survey.

19 Q. So that survey was commissioned by the CMA for its  
20 market study. Let us go back to the market study  
21 {AB6/25/82}. You will see "Competition in the  
22 distribution of native apps ... Key findings", then in  
23 the first bullet:

24 "App stores generated net revenues [over  
25 £600 million] in the UK in 2021 with over 95% going to

1 the App Store and Play Store. Apple and Google each  
2 have substantial and entrenched market power in the  
3 distribution of native apps within their ecosystems.  
4 The App Store has a monopoly over downloads on iOS  
5 Devices ..."

6 So yet again we find you disagree with the CMA's  
7 findings, do you?

8 A. Yes, on these points. I do not think Apple has monopoly  
9 power in this particular case. I think that would be  
10 a less subtle framing of it. I can agree that they --  
11 the first point, that they have a large share of app  
12 transactions that I agree with, that is actually  
13 correct, that is factual. But the rest of the analysis  
14 I disagree with for the reasons set out in my reports.

15 Q. Let us look at the European Commission's *Spotify*  
16 decision again {AB6/45/100}, recital 338:

17 "The Commission concludes that Apple holds  
18 a dominant position in the EEA on the market for the  
19 provision to developers of platforms for the  
20 distribution of music streaming apps to iOS users since  
21 at least 2015. This analysis is based on the market  
22 position and the market shares of Apple in this market,  
23 the extremely high barriers to entry and expansion that  
24 Apple created for the distribution of native music  
25 streaming apps to iOS users, significant (indirect)

1 network effects of app distribution platforms and the  
2 lack of countervailing buyer power."

3 So you also disagree with the European Commission's  
4 findings on Apple's dominance, do you?

5 A. In terms of the final conclusion, yes. Actually,  
6 you know, I do agree with the concept that you have to  
7 consider the possibility that there are many markets  
8 within apps, so for example they define the relevant  
9 market that focused on music streaming. I think that is  
10 consistent with my view. But in terms of the overall  
11 market power -- and, again, I have addressed each of  
12 these points, not with reference to this decision,  
13 I have addressed each of these points in my reports  
14 already and, as you know, I also address some of these  
15 in the report that we are -- that wound up not being in  
16 evidence here.

17 Q. We have already looked at the EU's Digital Markets Act  
18 regulation together, and we have seen that the DMA  
19 provides for the designation of certain large  
20 undertakings with considerable economic power which  
21 provide core platform services as gatekeepers. We have  
22 seen that, yes?

23 A. Yes, I am familiar with the DMA's rule.

24 Q. We have seen that Apple has been designated as  
25 a gatekeeper under the DMA in relation to the App Store,



1           has it not?

2       A.   Yes.

3       Q.   So, I mean, you are really out on a limb on this issue  
4           of dominance, are you not?  You disagree with the CMA,  
5           you disagree with the competition arm of the European  
6           Commission, and you disagree with the EU legislature?

7       A.   So I do not consider it being out on a limb.  I have  
8           done the analysis that I have done to reach the  
9           conclusions that I have.  I think there are certain  
10          things that I think in -- that they raise that I do not  
11          believe are correct, for example, the inference of  
12          dominance simply because it is the only place you can  
13          download apps.  Again, that is an unpriced service,  
14          everybody can do that for free, and that the relevant  
15          competition is over transactions.

16                So there are many places where I differ, and  
17                I differ for the reasons set out in my report, so ...

18       Q.   Can we go to your second report {C3/4/26}, paragraph 39.  
19           You say:

20                "Third, regardless of app type, and even if the  
21                relevant market were limited to the distribution of iOS  
22                apps as the Class Representative asserts, Apple's  
23                ability to exercise any purported market power ... is  
24                limited by a number of factors, many of which are  
25                related to products 'outside' the market under

1 consideration."

2 Then we see that you list five factors, do you see  
3 that?

4 A. Yes.

5 Q. Now, I have already covered some of those factors with  
6 you when dealing with market definition, and I am not  
7 going to go over old ground again, but I do have some  
8 additional questions for you.

9 First of all, I would like to go to the European  
10 Commission's 2004 market definition notice {AB6/44/1},  
11 just to show you again the notice. We looked at this  
12 before, yes?

13 A. Yes.

14 Q. If we go to page 7 {AB6/44/7}. Could you please read  
15 paragraph 17 to yourself.

16 (Pause)

17 A. Okay.

18 Q. So the Commission says that it takes into account:

19 "... all competitive constraints (whether effective  
20 and immediate or not) in the competitive assessment ..."

21 The competitive assessment includes an assessment of  
22 whether there is dominance, but then says that:

23 "... bearing in mind that out of market constraints  
24 are more remote constraints on the undertaking(s)  
25 involved."

1           Do you agree that factors relating to products  
2           outside the market under consideration are more remote  
3           constraints than factors within the market under  
4           consideration?

5       A.   So if you -- if the market is properly defined I think  
6           that is fair, but that does not stop them from being  
7           relevant competitive constraints.

8       Q.   I do not think the Commission suggests they are  
9           irrelevant, it says they are relevant but they are more  
10          remote. I think you are agreeing with what the  
11          Commission says, yes?

12      A.   So again, I would not use the language "remote", because  
13          I think at least in this context, from what I know,  
14          I believe the competitive constraints based on my  
15          analysis are very strong, that would be out of market  
16          here. But certainly if you defined a market and the  
17          market is correctly defined, you would expect things  
18          that are outside the market are weaker than the ones  
19          inside the market.

20           In Dr Singer's definition there is not anything  
21          inside the market, right, so -- but I do not think the  
22          market definition exercise prevents you from looking at  
23          what might be constraining competitive conduct, even if  
24          it winds up being outside.

25           I think that is consistent with what they are saying

1           here. They use the language "remote". I would not  
2           adopt that, but it is certainly less.

3       Q. Do you agree that in a case where an undertaking has had  
4           100% of the relevant market for 17 years, it would be  
5           quite surprising if factors outside the relevant market  
6           meant that it was not dominant? It would be quite an  
7           extreme and unique case, would it not?

8       A. So, again, you know, going back to my earlier comment on  
9           if the only thing you care about in dominance is 100%  
10          market share in an identified market, and you are not  
11          willing to consider the idea that there are outside  
12          competitive constraints, then that would be dominance.  
13          But if you are considering the environment in which the  
14          firm acts, you can be constrained, even having 100% --  
15          even having 100% market share, and it is just a question  
16          of, you know, what evidence do you think is necessary to  
17          establish dominance.

18                But certainly the idea that you can consider the  
19                ability of a firm to act independently of consumers and  
20                competitors, even in a situation where they may have  
21                a unique product that could be put into a market with  
22                100% share, I think is a relevant consideration.

23       Q. Do you agree that in a case where an undertaking is at  
24           100% of the relevant market for 17 years, you would need  
25           compelling empirical evidence to find that such an

1           undertaking was not dominant?

2           A.   So I do not -- if your requirement is 100% market share,  
3                I do not think the temporal dimension changes that  
4                analysis.  I think we have evidence of various forms of  
5                substitution and such here, but again, if that is the  
6                only requirement you are using, and you accept that  
7                market definition --

8           Q.   It is not the only requirement.  I am just giving you  
9                a factual situation which, lo and behold, is the one  
10               that Apple finds itself in.  It has had 100% of the  
11               market, it has had it for 17 years, and I am asking  
12               whether in your opinion you would want to find  
13               compelling empirical evidence before concluding that  
14               Apple was not dominant.  What do you think?

15          A.   Well, so again I think what you have done is you have  
16                framed the same 100% market share test as being -- being  
17                the only thing that is relevant, and I think absolutely  
18                you want to have compelling evidence, and I would not  
19                put anything forward in this kind of situation that  
20                I did not think was compelling.

21                So I think there is compelling evidence that they  
22                are competitively constrained, but again reframing it as  
23                17 years, or whatever it is, that is still simply going  
24                back to the 100% market share in a certain defined  
25                relevant market is sufficient, and I do not think that

1 is the case, and I believe I have compelling evidence  
2 that suggests that even if you were to define the  
3 markets that way, that those competitive constraints are  
4 relevant.

5 Q. Can we go to your second report {C3/4/164},  
6 paragraph 291. At (i) and (ii) you suggest that Apple  
7 is not dominant in the iOS-only aftermarkets because app  
8 developers can offer the same app on multiple platforms  
9 and they can monetise content through non-iOS platforms  
10 and transactions. Do you see that?

11 A. Yes.

12 Q. Go back to the CMA's report {AB6/25/121} and look at  
13 paragraph 4.148. The CMA report states:

14 "Most large and popular third-party apps are present  
15 on both Apple's iOS and Google's Android."

16 I think you agree with that, do not you?

17 A. Yes, that is correct.

18 Q. Then if we go to 4.149, the CMA continues:

19 "For app developers that have apps on both app  
20 stores, delisting from either the App Store or Play  
21 Store is unlikely to be a credible option. One of the  
22 key benefits to app developers of developing for iOS and  
23 Android is the ability to reach virtually all active  
24 smartphone users with the App Store and Play Store  
25 providing access to [50-60]% and [40-50]% of UK

1       smartphone users respectively. As these users do not  
2       multi-home across iOS and Android, the App Store and  
3       Play Store both provide app developers with access to  
4       a large number of unique mobile device users."

5               Now, it is clearly correct, is it not, that the  
6       App Store provides app developers with access to a large  
7       number of iOS mobile device users; that is  
8       uncontroversial, is it not?

9       A. No, that is not controversial. In fact, most of what  
10      they say in here is also not controversial. I think the  
11      point of departure, however, is this idea -- I think  
12      the --

13      Q. Well, I have not got to that stage yet, sorry,  
14      Professor.

15      A. No, but I think this is all -- I think that is perfectly  
16      fine. That is true.

17      Q. Then the next paragraph over the page, 4.150  
18      {AB6/25/122}, the CMA says:

19               "Delisting from the App Store is likely to be  
20      particularly unattractive as:

21               "The App Store also provides access to [50-60]% of  
22      active tablets ... and Apple users are more valuable to  
23      apps using in-app payment systems - for the UK in 2021  
24      the average App Store user spent £[25-50] through Apple  
25      IAP ..."

1           Et cetera, compared to Google. So Apple more  
2           valuable. Again, that is also a fair comment by the  
3           CMA, is it not?

4       A. Yes, I think everything they have said in here is right.  
5           I think where this goes, though, I think it is important  
6           to note that I think delisting is specially improbable  
7           too, I agree with them on that point, and --

8       Q. Sorry, before you go on to what you want to say, do you  
9           agree with what they say in 4.151:

10           "Ultimately, for these app developers, delisting  
11           from the App Store ... would mean foregoing existing  
12           revenue generated from users of that app store."

13       A. I am glad you asked that, because that actually is --  
14           that is where we have our -- that is also consistent  
15           with our point of departure, which is I think delisting  
16           is extremely unlikely because developers can, for  
17           essentially the developer program fee, which is nominal,  
18           participate on the App Store without having to pay  
19           anything to Apple.

20           So in a counterfactual where, for example, if they  
21           were unsatisfied with the commissions that they were  
22           being asked to pay, could find other ways to generate  
23           revenue that do not require they pay Apple commissions,  
24           and that is what some developers have chosen to do.

25           So I really do not think delisting is the right



1 counterfactual, because you can get all the benefits of  
2 the App Store without having to pay any commissions to  
3 Apple whatsoever, and many -- you know, 80% of app  
4 developers have done so, they offer free apps with no  
5 IAP, and some of the large developers have done the same  
6 thing.

7 There are many margins on which developers can  
8 react, though, that are not delisting. I just do not --  
9 I agree fully that (a) delisting is extremely unlikely,  
10 and (b) the iOS ecosystem is a very valuable place to  
11 offer apps, and that is an incentive for developers to  
12 participate and that is part of the value.

13 Q. Can we go to your third report {C3/8/95}. Here we are  
14 into some pink material, so we both must -- we must both  
15 be careful.

16 A. Yes.

17 Q. You say:

18 "I find that the top [X] developers alone ...  
19 account for [X]% of App Store commissions, while the top  
20 [X]% of developers - corresponding to only [X]  
21 developers - account for [X]% of App Store commissions."

22 Then you say:

23 "... developers could substitute away from the  
24 App Store (eg by steering users to web stores, selling  
25 virtual currencies on other app transaction platforms,

1           increasing monetisation through in-app advertising).  
2           This means that even a small number of large developers  
3           can constrain Apple if they start using monetisation  
4           strategies that do not generate any commissions for the  
5           App Store."

6           So here you are talking about what developers could  
7           do. You are talking about possibilities rather than  
8           actual events that have occurred, are you not?

9       A. So we are right now observing an equilibrium outcome,  
10       which is, under the current rules, the developers have  
11       chosen to use IAP in this manner. But I agree  
12       developers do have the option of doing these other  
13       things, and some at various times, for example Netflix  
14       and Spotify, have made that choice to withdraw from  
15       monetising through the App Store. Some have always made  
16       the choice to not monetise through the App Store and  
17       others have made these choices so -- and ...

18       So we do have examples where developers have made  
19       changes in decisions and that threat is always present.  
20       They -- some of these large developers, if they are  
21       unsatisfied with the benefits they are getting from the  
22       App Store and monetising through the App Store, can pick  
23       up and move and that can have a dramatic effect, and  
24       that is part of the competitive constraint that I have  
25       been talking about.

1 Q. So we have already looked at the Netflix and Spotify  
2 examples, so I am not going to go back to that. You  
3 have not referred to any evidence to show that Apple  
4 itself carried out the sort of analyses that you have  
5 presented in your report, have you? There just is not  
6 any evidence of that sort?

7 A. I think that is fair. Again, these are very unique kind  
8 of proceedings, and Apple has their own kind of way of  
9 doing things, so I would not expect them to do this kind  
10 of analysis because I think that is -- you know, much of  
11 this is unique to this kind of format and not sort of  
12 normal business conduct.

13 Q. You say you would expect them to do that type of  
14 analysis, but we have not seen any evidence -- you have  
15 not seen any evidence?

16 A. I said you would not expect them to do that kind of  
17 analysis. They have their kind of own way of doing  
18 things, and I think Apple is, at least from my  
19 experience of working with them for many years, they  
20 tend to focus a lot on consumer value and innovation and  
21 they seem to place emphasis on that. They may not go  
22 through and do this kind of detailed analysis as much.

23 Q. If we go to page 93, paragraph 174 {C3/8/93}, at the end  
24 of that paragraph you say:

25 "I find that the top [X]% of consumers by App Store

1           commissions account for [X]% of total App Store  
2           commissions on the UK Storefront, while the top [X]% of  
3           consumers account for [X]% of total App Store  
4           commissions. These results show that if a share of  
5           these high spending users substitute to other platforms,  
6           Apple's revenues will drop significantly."

7           Again, there is no evidence that Apple has carried  
8           out such an analysis or taken such considerations into  
9           account, is there?

10          A. I do not recall anything, I do not recall having seen  
11             anything where they have directly done this analysis,  
12             but I do think it is an important way to think about  
13             why, you know, working to try to generate consumer value  
14             is important here, and they are constrained by the  
15             ability to generate consumer value, because it only  
16             takes a few people to move, especially those that care  
17             a lot about this stuff, in order for it to have  
18             a significant effect.

19          Q. Can we go back to your second report at {C3/4/164}.

20             I am sorry, can we go through to paragraph 300. I must  
21             have given you the wrong page, I am sorry.

22          A. Let me catch up.

23          Q. We are all catching up, do not worry. You have time.

24          A. I am switching documents here. C/164?

25          Q. It is 168, it was a wrong reference {C3/4/168}.

- 1       A. Thank you. Okay, I am there.
- 2       Q. One of your points that you make, you say that Apple is  
3       not dominant in the iOS-only aftermarkets because app  
4       developers can choose to monetise content through in-app  
5       advertising; yes?
- 6       A. Yes.
- 7       Q. In relation to sales of iOS digital goods and services,  
8       developers have to pay Apple up to 30% commission, do  
9       they not?
- 10      A. They pay Apple a 30% commission if they have a paid  
11      download or use IAP. They do not pay any commission if  
12      they monetise outside the App Store or engage in  
13      advertising.
- 14      Q. That is right. So in relation to in-app advertising, on  
15      iOS apps developers do not have to pay Apple any  
16      commission?
- 17      A. That is correct.
- 18      Q. If it were possible to do so, presumably all developers  
19      of iOS apps would have switched away entirely from paid  
20      app downloads and in-app purchases to in-app  
21      advertising, because if they could monetise effectively  
22      they would go to advertising, because then they would  
23      avoid the 30% Commission, would they not?
- 24      A. No, that does not follow. What the conclusion is, is  
25      that they have many different ways of monetising their

1 apps. There are certain terms that Apple has for IAP  
2 and paid downloads, and given those terms they configure  
3 their businesses in the way that makes the most sense.  
4 But these are alternatives that they can choose, and it  
5 is an alternative that has been chosen by the vast  
6 majority. Well, we do not know how many actually  
7 advertise versus monetise outside, but 80% of all apps  
8 are free to download no in-app purchase.

9 Q. Let us go to {D1/449/1}.

10 A. Sorry, I believe that statistic I actually got slightly  
11 wrong. It is the transactions, but same ...

12 Okay, sorry. D?

13 Q. Sorry, {D1/449}.

14 A. Okay, this is a court case document.

15 Q. Sorry, it is still my fault {D1/1449}. I have lost a 1.

16 Thank you.

17 A. Yes.

18 Q. That is the one.

19 A. Yes.

20 Q. Have you seen this before?

21 A. Yes.

22 Q. If we go to page 4 {D1/1449/4}, and if we could see the  
23 chart, please. You will see, for example, take 2022,  
24 and compare the in-app advertising figure in black at  
25 the bottom and the digital goods and services figure at

1 the top, you will see this is estimated billings and  
2 sales facilitated by the App Store ecosystem. So it is  
3 clear that many developers still monetise by means of  
4 paid apps and in-app purchases, is it not?

5 A. Oh, almost certainly, yes. I mean in-app advertising is  
6 a big chunk. Physical goods and things outside is also  
7 a very large chunk. Yes, so certainly people use IAP  
8 because, you know, these developers perceive it is  
9 a fair value for the benefits they get.

10 Q. What it also suggests is that in-app advertising is  
11 either not a commercially viable or attractive option  
12 for many developers?

13 A. I am not sure you -- I reach that conclusion. I think  
14 at least in the analysis I have done, which has to focus  
15 on sort of top apps, just because it is so hard to  
16 figure out who is doing what without looking at them  
17 individually, I think you find that one of the  
18 predominant strategies is they do everything. But yes,  
19 there might be -- there could be environments where  
20 advertising is less attractive, but what I think I found  
21 is that many developers do both. That is a pretty  
22 common strategy.

23 Q. Can we go to {H2/18/1}. You will see this is the  
24 transcript -- or a transcript of the *Epic v Apple*  
25 Proceedings in California which I think you were

1           involved in, yes?

2           A.   Yes.   Down memory lane.

3           Q.   If we go to page {H2/18/1309}, this is the evidence of  
4           Matthew Weissinger, who was or is the vice president of  
5           marketing at Epic Games.  If you could read from line 22  
6           to line 7 over the page, please.

7                   (Pause)

8           A.   Okay.

9           Q.   Again a similar theme.  You are an economist, not an app  
10          developer, so you cannot give evidence about the  
11          suitability or unsuitability of in-app advertising for  
12          different types of app, can you?

13          A.   No, not on an app by app basis.  That is a decision the  
14          developers make, as to how they want to configure their  
15          monetisation.  I can do data analysis and show that many  
16          developers choose to do both, but certainly there are  
17          ones that will not choose to use advertising, not choose  
18          to use IAP, sell physical goods, so yes, sure.

19          Q.   Therefore, you would accept that there are important  
20          practical barriers to developers simply switching  
21          monetisation strategies from in-app purchases to  
22          advertising.  It is not quite as simple as simply  
23          looking at the 30% and 0% and switching across, is it?

24          A.   So again the question is -- so first of all many  
25          developers already do both.  Some have chosen not to do



1           so. Again, not all monetisation schemes are appropriate  
2           for all developers but there is a wide variety of  
3           things. So, for example, if we use Epic, Epic  
4           distributes V-Bucks directly through their website that  
5           are useable -- at least prior to the Hotfix event, were  
6           useable on iOS, and many developers do that as well. So  
7           they may choose not to use advertising but they can  
8           still use other monetisation schemes that also do not  
9           incur commissions.

10       MR HOSKINS: Sir, I have got one short point to deal with  
11       and then I have got closed session material, so if you  
12       are happy I will finish the short point in open and then  
13       we can start in closed when we come back.

14       THE CHAIRMAN: Yes, that is fine, thank you.

15       MR HOSKINS: Thank you.

16           I want to move on to a different topic, which is the  
17           extent to which you rely on market outcomes to suggest  
18           that Apple is not dominant. I would like to go to your  
19           second report {C3/4/178}.

20       A. Okay.

21       Q. Paragraph 319. You will see your heading at 9.5:

22           "Market outcomes support the conclusion that Apple  
23           has not exerted any dominance in app transaction  
24           markets, or the 'iOS App Distribution Market' asserted  
25           by the Class Representative."

1           In paragraph 319 in the final sentence, you say:

2           "If Apple were dominant and extracting  
3           anti-competitive rents from its customers, I would  
4           expect it to engage ..."

5           I am sorry, have you not got the page yet?

6       A. Yes, I am just flipping through to see the context.

7           Yes.

8       Q. "If Apple were dominant and extracting anti-competitive  
9           rents from its customers, I would expect it to engage in  
10          one or more of the following: raising prices (commission  
11          rates), restricting output and decreasing innovation."

12          I am going to deal with commission rates and output  
13          in a closed session, because there is confidential  
14          material there, so I am going to ask you in this open  
15          session about quality.

16          If we go to page 191 of this report {C3/4/191},  
17          paragraph 338, you say:

18          "Apple has introduced a number of innovations and  
19          made investments in its devices and operating systems  
20          that support the App Store ..."

21          Then if we go over the page, you then list out such  
22          innovations and investments in the paragraphs that  
23          follow, do you see that?

24       A. Yes.

25       Q. But you cannot help us on whether Apple would have

1 introduced a greater number, or better innovations and  
2 investments, if it had not excluded rival app stores and  
3 payment facilitators from the App Store, can you?

4 A. So let me take that in two pieces. So what you are  
5 getting at is whether we have a counterfactual on  
6 innovation, and that is right, there is no  
7 counterfactual on innovation. However, it would be --  
8 again, looking out at this market you see this  
9 tremendous rate of innovation in these devices, and very  
10 aggressive competition between Apple and Android in  
11 introducing new features to attract consumers.

12 So I will agree that I do not have an innovation  
13 counterfactual here, but if you take a look at,  
14 you know, page after page after page, and you could  
15 actually go back to Hitt 1 or 2 where we do a fair  
16 number of -- you know, there is a whole appendix ... Let  
17 me see if I can find it just for the reference, so I am  
18 not just talking ... Where is that?

19 Yes, appendix D of Hitt 1 as well goes through  
20 a very, very long list of innovations. Is it possible  
21 that they could innovate even more? Perhaps. But the  
22 rate of innovation here is very high by any reasonable  
23 standard, although I do not have a good comparison, it  
24 is very difficult to do so. But you do see Apple  
25 innovating aggressively, introducing things that are

1           then picked up by other competitors, adopting things  
2           that other competitors have done as well, and they are  
3           spending a tremendous amount of money on R&D.

4       Q.   Apple has an interest in increasing the number of iOS  
5           App transactions because that makes Apple's two sided  
6           platform more attractive to both developers and users,  
7           does it not?

8       A.   Absolutely, yes.

9       Q.   The more paid iOS transactions, the more money Apple  
10          will earn?

11      A.   If they -- that follows from -- if people engage in paid  
12          transactions on the App Store, that is one source of  
13          revenue that they get for the iOS platform.

14      Q.   One way to increase the number of paid transactions is  
15          by improvements, make it more attractive to developers  
16          and users, and then they will use it more, yes?

17      A.   Yes, I agree.

18      Q.   So regardless of whether Apple is dominant or not, it  
19          would still be in Apple's own financial interest to  
20          increase the use of the App Store by introducing  
21          improvements?

22      A.   So I agree it is in their interest to continue to  
23          innovate and that is why I think this is not dominant.  
24          Again, going back to the definition of dominance,  
25          ability to act independently of consumers or

1 competitors, and this innovation is exactly the -- is  
2 a reaction to maintaining a relative competitive  
3 position against other very aggressive, high investment  
4 firms in the devices market, as well as trying to  
5 generate a lot of consumer value, and I think that is --  
6 you know, you mentioned Apple is not focused so much on  
7 doing the detailed analysis, but, you know, my sense is  
8 generally, you know, again, having looked at these  
9 things for many years, that they are very sensitive to  
10 generating consumer value.

11 Q. But the fact that it is in Apple's own financial  
12 interest to increase the use of the App Store by  
13 introducing improvements means that merely listing out  
14 the improvements that Apple has made cannot help us with  
15 whether Apple is dominant or not. It is entirely  
16 consistent with Apple simply seeking to drive up the  
17 number of paid transactions. It tells us nothing.

18 A. So I disagree. I disagree. I think that this very high  
19 rate of innovation -- just to put it into context, so  
20 what I am responding to is the idea of the sleepy  
21 monopolist. I do not know if that is a UK term, but  
22 that is certainly something they use in the US. You  
23 obtain a monopoly, you fail to innovate, that is one of  
24 the ways which generates consumer loss, and I do not  
25 think, given this particular factual record, that you

1           have any good evidence that Apple acts as a sleeping  
2           monopolist in this context, they are tremendously  
3           innovating across the platform. Many of the things for  
4           which people could criticise in some cases are just  
5           simply tensions between various people on the platform,  
6           and I think this is consistent with that.

7           Sure I will agree that they have a commercial  
8           interest in doing so, and that is one of the reasons why  
9           I think they are constrained to continue to innovate,  
10          continue to offer services and continue to make sure  
11          that the App Store is of good value to the people who  
12          participate on it.

13       MR HOSKINS: Sir, that is a good moment.

14       THE CHAIRMAN: We will take a ten-minute break, thank you.

15       MR HOSKINS: I was just trying to say we do need to be in  
16          closed session when we come back, so if the arrangements  
17          could be made, thank you.

18       (11.55 am)

19                               (Short Break)

20       (12.06 pm)

21                               (In Private)

22       (1.05 pm)

23                               (The lunch break)

24       (1.38 pm)

25

1 (In Public)

2 THE CHAIRMAN: Yes, Mr Ward. Are we going to go back into  
3 public?

4 MR WARD: Yes. I am hoping I can do all of this in public.

5 THE CHAIRMAN: Good. We will turn the live stream on, then  
6 and proceed on that basis.

7 Professor Hitt, just so you know, we are back in  
8 public session, so no mentioning pink documents or the  
9 numbers.

10 A. I will do my best.

11 Cross-examination by MR WARD

12 MR WARD: Thank you very much.

13 Good afternoon, Professor Hitt. I am going to start  
14 by asking questions about economic value, Mr Armitage  
15 will ask you some questions focusing on comparators, and  
16 then tomorrow we will turn to the topic of incidence.

17 Now, I want to start with the structure of Mr Holt's  
18 analysis, because your report is structured a little  
19 differently, and I hope this will clarify the issues.

20 Can we go to {C2/10/16}, please. This is Mr Holt's  
21 third report. It should come up on the screen. This is  
22 just a reminder that if we look towards the bottom of  
23 the page we have the "Excessive Limb", which is  
24 "Profitability Analysis", and you will see he undertakes  
25 a profitability analysis based on the findings of

1 Mr Dudney, we do not need to read any numbers out, ROR,  
2 ROA and ROCE.

3 If we can turn the page, we see he emphasises what  
4 he describes as the persistence and high profitability  
5 of the App Store. {C2/10/17}

6 Then towards the lower part of the page, please, we  
7 see the "Unfair Limb", "unfair in itself", and there is  
8 a range of factors there, starting with the high levels  
9 of profitability and its persistence, then dealing at  
10 (c) with economic value, saying the Commission is not  
11 consistent with economic value; (d) much higher than he  
12 would expect in workable competition; (e), over the  
13 page, please {C2/10/18}, market context, no rivalry,  
14 limited constraints, and so forth, and then some other  
15 factors: limited reduction over time and so forth.

16 Then at the bottom of the page you can see at 1.5.5  
17 "'unfair' compared to relevant comparators". Then to  
18 cut to the chase, on the next page, please, paragraph 26  
19 {C2/10/19} he says -- thank you, at 26 the headline is:

20 "The evidence from PC app stores further suggests  
21 that the most likely Counterfactual Commission rate is  
22 15%."

23 That latter part you will be talking to Mr Armitage  
24 about.

25 But you disagree on all three limbs, do you not?



1 A. Yes, to varying degrees. Some of that is outside the  
2 scope of my report, but yes, I disagree.

3 Q. Absolutely. We are very conscious that the accountancy  
4 issues obviously are not within your expertise. We are  
5 here to talk about economic issues.

6 A. That is correct.

7 Q. Good. Let us now turn to economic value which, if I may  
8 respectfully say, appears to be at the heart of your  
9 critique. If we go now to your second report  
10 {C3/4/216}, we can see just the heading, 10.2, helpfully  
11 summarises the position, you say:

12 "Mr Holt's proposed approach is fundamentally flawed  
13 as it cannot account for the economic value that Apple  
14 provides consumers and developers."

15 We will be talking about the reasons for your view.  
16 But if we go forward now to {C3/4/343}, we will find the  
17 instructions you received on the law, and I just want to  
18 remind you of propositions I know must be well-known to  
19 you.

20 This is quoting from paragraph 97 of the  
21 Court of Appeal in *Flynn Pharma*, and I should reassure  
22 you of course I am not debating the law with you, merely  
23 reminding you.

24 Bullet point (ii):

25 "A price which is 'excessive' because it bears no

1       'reasonable' relation to the economic value of a good or  
2       service is an example of such an unfair price."

3           Then if we turn the page {C3/4/344}, there is -- at  
4       paragraph 30 of your instructions, your instructing  
5       solicitors say:

6           "With respect to the concept of 'economic value', we  
7       draw your attention to the following ..."

8           Which is paragraphs 154 and 155 of *Flynn Pfizer*:

9           "The concept of economic value is not defined. In  
10      broad terms, the economic value of a good or service is  
11      what a consumer is willing to pay for it. But this  
12      cannot serve as an adequate definition in an abuse case  
13      since otherwise true value would be defined as anything  
14      that an exploitive and abusive dominant undertaking  
15      could get away with. It would equate proper value with  
16      an unfair price."

17          Then at 155:

18          "The simple fact that a consumer will or must pay  
19      the price that a dominant undertaking demands is not  
20      therefore an indication it represents a reasonable  
21      relationship with economic value. But a proxy might be  
22      what consumers are prepared to pay for the good or  
23      service in an effectively competitive market ..."

24          Now, it is your view, is it not, that Apple's  
25      pricing satisfies this test?

1       A. Yes, I think that is a fair summary.

2       Q. Good. If we look now at the joint expert statement  
3       between you and Mr Holt at {C4/4/6}, please.

4             Thank you. Could we go to, yes, page 6,  
5       proposition 7, it says:

6             "The market conditions under which the App Store  
7       operates would allow Apple to set unfair prices."

8             Sorry, you are leafing. Forgive me. Do you have it  
9       now? Proposition 7?

10       A. Yes, thanks. I am going to be doing this on paper, so  
11       sometimes you have to give me a moment to catch up.

12       Q. Of course.

13       A. Okay.

14       Q. Do you have it now, proposition 7?

15       A. All good.

16       Q. "The market conditions under which the App Store  
17       operates would allow Apple to set unfair prices."

18             Mr Holt agrees, and says he has been instructed to  
19       consider Apple enjoys a dominant position and explains:

20             "Apple's conduct has prevented the emergence of  
21       rivals ... created artificial barriers to entry ..."

22             Et cetera. These are what I will loosely call the  
23       market power issues you have been debating with  
24       Mr Hoskins.

25             You disagree. You say:

1           "The App Store faces significant competitive  
2 constraints in the multiple app transaction markets it  
3 competes in. Moreover, the evidence establishes that  
4 Apple is not dominant in any of the [relevant]  
5 markets ..."

6           Now, I am sure you appreciate that unless Apple is  
7 dominant in a relevant market, then we never get to  
8 questions of unfair pricing. So if Apple wins the  
9 argument about dominance, frankly you and I are wasting  
10 our time in this discussion, so whatever view you take  
11 of that otherwise. But we have to proceed, therefore,  
12 on the basis that the Class Representative is right,  
13 that that is the premise on which this debate is  
14 happening, and of course, as you appreciate, the Class  
15 Representative's view is Apple is a monopolist, and as  
16 a result of the restrictions it imposes the markets are  
17 essentially non-contestable and subject to, if you like,  
18 at best, remote out of market constraints. We are not  
19 going back to that. You have had that discussion with  
20 Dr Singer and Mr Hoskins.

21           But would you accept if the Class Representative is  
22 right, if it is right in its market power analysis, the  
23 prices are not set under conditions of effective  
24 competition, are they? It is just tautological?

25       A. I think that is fair. If you accept the market

1 definition and the dominance points, yes, then that has  
2 to follow, right? You have kind of assumed away all  
3 possible competitive constraints. So if you assume away  
4 all possible competitive constraints, sure.

5 Q. So you and I are debating this, in a sense, on the  
6 assumption that Dr Singer, with the assistance of  
7 Mr Hoskins, have prevailed on these points. Yes?

8 A. Sure.

9 Q. We have to be careful from the case law we have just  
10 looked at not to conflate an actual price paid in  
11 monopoly with a price payable in workable competition.  
12 Would you agree?

13 A. Yes, I think that is fair.

14 Q. What I want to do now is look at your second report  
15 again at where you address the implications for the  
16 unfair pricing analysis if the Class Representative is  
17 right in her market analysis.

18 Can we go to your second report, page 221  
19 {C3/4/221}. There is a little text here we are going to  
20 look at before I ask a question. Just so you know, I am  
21 just going to highlight and remind you of what you said.  
22 So we are now at the top -- thank you. The first part  
23 is in paragraph 397 and then we are going to look at  
24 what you say in 398. Thank you.

25 So if we look at 397 in the fourth line, you say:

1           "Therefore ..."

2           We are going to come back to what comes before this,  
3       but I am isolating this point for now.

4           "... even if I were asked to assume that Apple's  
5       Commission rates are above what one would expect if  
6       Apple chose a different business model and allowed other  
7       app transaction platforms to distribute iOS apps or  
8       allowed other mechanisms for making in-app purchases  
9       within iOS apps ..."

10          Then you say:

11          "... (with the corresponding changes in quality ...)  
12       it would not follow from that assumption that Apple's  
13       Commission rates bear no relation to the value the  
14       App Store currently provides ..."

15          Then you develop this point more in paragraph 398.  
16       You start by acknowledging the findings of the CMA in  
17       its mobile ecosystem report, that Apple charges above  
18       a competitive rate for its devices and its Commission --  
19       sorry, above a competitive rate of commission to its app  
20       developers is the bit we are interested in, and then you  
21       note that in *Epic v Apple*, Judge Rogers described the  
22       App Store as earning "supra-competitive operating  
23       margins". But then what you say is this does not alter  
24       your analysis, undermine your analysis.

25          Then you say:

1           "Profitability is not a measure of value for an  
2           innovative, differentiated product like the  
3           App Store ..."

4           So just -- we are going to keep going, but just  
5           pausing there, what you are saying is that the CMA and  
6           the court in *Epic* were just wrong to analyse the  
7           profitability of Apple or the App Store. Is that really  
8           what you are saying there?

9       A. No, what I am saying there is that they may have  
10       analysed that, and they are certainly -- and they did do  
11       that. I am saying that that does not provide evidence,  
12       in my opinion, that the value the App Store is  
13       contributing -- that Apple is not providing value in the  
14       App Store commensurate with their pricing.

15      Q. You have seen a moment ago that Mr Holt's measure of  
16       economic value is not just based on his profitability  
17       analysis, it is a part of it, but it is much broader  
18       than that. You saw that?

19      A. Well, he -- I think my understanding is he has  
20       a profitability analysis and he has a benchmark  
21       analysis --

22      Q. Well --

23      A. -- a benchmark analysis --

24      Q. I --

25      A. -- we have been debating both of those things --

1 Q. We have.

2 A. -- for quite a while actually.

3 Q. I am trying to remind you the profitability analysis is  
4 the basis of his limb 1 finding of excessive pricing,  
5 and then in his limb 2 analysis he includes the high  
6 profit and its persistence but a range of other factors.  
7 It is not just profitability analysis, is it?

8 A. No, he has benchmarks, and then I think he articulates  
9 a number of specific points which I think I address one  
10 by one.

11 Q. Then you go on. Let us go back to what you say. You  
12 say:

13 "... were different prices to hypothetically arise  
14 in what Mr Holt may describe as a 'competitive' market  
15 in which, for the sake of argument, Apple were forced to  
16 allow developers to distribute iOS apps to consumers  
17 outside of the App Store ..."

18 In other words, our counterfactual.

19 "... such prices would not reflect the value that  
20 developers and consumers derive from the App Store.  
21 They would simply shift more of the profits from Apple  
22 to the developers."

23 When you say "different prices" here, "different  
24 prices", you mean lower prices, do you not, obviously?

25 A. Well, so to the extent that -- yes in this case here,



1 but what I would expect is potentially different prices  
2 for different kinds of services, but there could be a --  
3 in this particular next sentence, where I talk about  
4 developers getting more value, at least some developers  
5 would be paying less.

6 Q. When you say "shift more profits from Apple to  
7 developers", you mean developer prices would fall, do  
8 you not?

9 A. At least for some developers, yes, in the aggregate,  
10 yes.

11 Q. So on your analysis, in this passage you are saying if  
12 there were multiple app stores and that led to lower  
13 prices, the Apple -- the prices Apple could charge would  
14 not be a reflection of economic value, is what you are  
15 saying here, is it not?

16 A. That is correct. That is -- Apple is providing some  
17 amount of value for the services that they provide, and  
18 should developers pay less, that does reallocate  
19 profits, yes.

20 Q. Yes.

21 A. I also note, sitting underneath here, to the extent we  
22 are talking about the actual benchmarks, there is  
23 a question about whether or not they are actually  
24 getting more value from that perspective, when you --  
25 (overspeaking) --

1 Q. Take it --

2 A. -- quality adjusted, but on an accounting basis, if you  
3 pay less you get more profit.

4 Q. Take it from me, the benchmarks are coming, but quite  
5 a bit later when you start with Mr Armitage.

6 But what I am really putting to you here is what you  
7 are really talking about in this scenario that you call  
8 shifting profits would in fact be the effect of  
9 competition working to reduce the monopoly price.

10 Different additional app stores enter the market on this  
11 scenario, prices come down. That is competition, is it  
12 not?

13 A. If -- so, again, if you get additional entry and quality  
14 adjusted prices come down, then that could be --  
15 you know, some developers or consumers could  
16 potentially -- well, developers could benefit based on  
17 the totality of my analysis.

18 Q. What you are really saying here, then, is that an  
19 innovator like Apple, as you regard them, ought to be  
20 allowed to charge monopoly rents?

21 A. No, that is not what I am saying. What I am saying is  
22 that the commission rate is a division of the surplus  
23 created by the joint efforts of the developers and  
24 Apple. If you change that number, you are reallocating  
25 from one to another. That is all that is saying. I am

1 not saying that Apple can, should have a right to charge  
2 monopoly prices, because I believe that the price that  
3 they are charging are competitive, and heavily  
4 competitively constrained, especially when you look at  
5 them on a quality adjusted basis, but --

6 Q. That is exactly the point I tried to ask you to imagine  
7 against yourself, that the Class Representative has won  
8 the argument about competitive constraints, and that is  
9 why we are here talking about excessive pricing.

10 A. So again, if you assume away all competition and  
11 completely -- then it becomes the price set by  
12 a monopolist. That still can be constrained by all  
13 sorts of things. But, again, if you assume everything  
14 away, then sure, you may get -- you could get different  
15 prices. Absolutely no competition.

16 I think none of those pre-conditions hold, and that  
17 some of the things you are assuming away are still  
18 present, whether or not, say, the market is defined in  
19 a certain way or it passes the test for dominance.

20 But again, if you assume away all competition, and  
21 you assume it is a pure monopoly, and that that number  
22 is that, which is a very long chain of assumptions, then  
23 sure, if you get a lower price that is a price relative  
24 to a monopoly price, but that is tautological, almost  
25 entirely.

1 Q. Okay, let us go now to the previous page, 396, because  
2 I said I would look with you at some of the precursors  
3 to this, and what you say here at 396 at the top  
4 {C3/4/220} is that there is:

5 "... no fixed relationship ... between the economic  
6 value received by developers and consumers and the costs  
7 incurred by Apple ..."

8 Indeed, you reiterated this point in your third  
9 report. But you appreciate, do you not, that Mr Holt is  
10 not suggesting there is a fixed relationship of that  
11 kind?

12 A. Well, he is making that implication that I can take  
13 a look at cost, mark them up by an appropriate amount,  
14 or -- and either take that as an absolute percentage or  
15 compare it against a computation of capital, and that  
16 provides an informative number here, and what I am  
17 simply saying is that with innovative products you could  
18 have very substantial margins, and that does not change  
19 the fact -- you know, things can be profitable and --  
20 both profitable and highly valuable to consumers.

21 So that simple return -- you know, either return on  
22 capital or margin is not informative about the value  
23 that developers and consumers are actually receiving.

24 Q. No, indeed. As you know, he looks at economic value  
25 under the second limb of his analysis.

1           But let us look at what you say at 397. This is  
2 another fundamental flaw that you allege:

3           "This is the fundamental flaw in Mr Holt's proposed  
4 approach. Accounting profitability metrics do not  
5 measure the fairness of Apple's pricing because they  
6 cannot account for ... the value created."

7           Now, again, just to reiterate, we have already seen  
8 accounting profitability is used by Mr Holt to measure  
9 whether the charges are excessive, but then he has dealt  
10 with fairness and economic value under limb 2 with an  
11 in-the-round assessment of a range of evidence, has he  
12 not?

13       A. I think he has multiple evidence there. I do understand  
14 his excessive calculation is based on the profit margin  
15 analysis.

16       Q. Then if we continue in 397, you say:

17           "Specifically, one cannot assess the fairness of the  
18 division of profits between developers and Apple by  
19 assuming that developers should retain all revenues  
20 above Apple's costs (plus a 'reasonable return')."

21           Of course, a reasonable return would be WACC, would  
22 it not, in principle? WACC embodies a reasonable  
23 return.

24       A. Well, so I would not say that is the only possible  
25 metric. That is some that people have proposed if

1 properly calculated. Again, the paragraph generally is  
2 simply making the point that when you think about there  
3 is value being created, there is total cost incurred.  
4 Some of that value has been created by developers, some  
5 of it by Apple, costs are being incurred on both sides,  
6 and that altering the prices is altering the balance  
7 here. That, by itself, is dictated by -- is a result of  
8 an economic outcome, of an economic process going on in  
9 the background.

10 Q. You appreciate that Mr Holt has not concluded that any  
11 return above WACC is unfair. In fact, he allows for  
12 a 15% central case commission, which is far above WACC,  
13 is it not?

14 A. I would not -- again, we have to stay in context, right,  
15 so "far above", I am not quite sure. So, for example,  
16 I believe there was testimony earlier by Mr Barnes that,  
17 you know, the -- even under their counterfactual, the  
18 return on capital would be very, very large. So in that  
19 sense, saying 15 is too large in this industry I do not  
20 think is informative, especially since even under their  
21 world, which they would say -- even under Mr Holt's  
22 world, under which he says workably competitive setting,  
23 you still get a number that is very, very large, and it  
24 is one of the reasons why I do not think that analysis  
25 is especially informative, especially given the

1 testimony that I have seen amongst the accountants.

2 Q. Okay, thank you.

3 Let us now talk about innovation, which is one of  
4 the foundations of your economic value argument. Let us  
5 now look, please, at {C3/4/218} of your second report.  
6 What you say -- this is paragraph 391. You say:

7 "As an initial matter, in markets for innovative  
8 products and services that require substantial ...  
9 intellectual property (like Apple's iOS hardware and  
10 software) it is common for the innovator to be highly  
11 profitable in a highly competitive market."

12 So again, here what we are seeing is your view  
13 expressed, premised on the view that the market is  
14 competitive, is it not?

15 A. So I do not think it is premised on that. The statement  
16 simply says that the fact that there is high  
17 profitability does not -- is not informative about  
18 whether it is profitable or not, and that you could have  
19 competitive markets that have very high profit firms in  
20 them, especially, you know, since we are mostly talking  
21 about digital goods here, we are talking about  
22 businesses that have high fixed costs and low working  
23 costs in many cases, and those will look very  
24 profitable.

25 Q. But if we are right in the Class Representative's market

1 power analysis, then the profits Apple is making are  
2 monopoly profits rather than profits in workable  
3 competition, are they not?

4 A. So if -- so let me separate this into two pieces. If  
5 you strip away all possibility of competition, whatever  
6 that price is, is the price set by a monopoly. Is it  
7 the monopoly price? That requires additional  
8 calculations, like, for example, what is the cost  
9 structure, what is the demand, and so forth, what is the  
10 appropriate capital base and so forth. So I think I can  
11 agree with you that -- again, assume Apple is  
12 a monopoly, then the price they are charging is the  
13 price that is charged by a monopoly. Whether that would  
14 be the economic monopoly price, that is something else  
15 you would want to figure out separately.

16 Q. A monopoly -- it is our case that there are very limited  
17 outside constraints. I appreciate you do not agree with  
18 that, you have debated that already with Mr Hoskins.  
19 I am asking you to enter a world where the Class  
20 Representative has succeeded on those points.

21 A. Okay, understood.

22 Q. Then if we just look here at your report, still on the  
23 same page, but just go to the footnotes, you quote from  
24 an article by no less a source than Robert Bork, Bork  
25 and Sidak, in footnote 614, and you say in the third to



1 fourth line of this footnote:

2 "The owner of the unique knowledge assets often  
3 enjoys a temporary period of excess returns ..."

4 You appreciate Mr Holt's point, that in  
5 a contestable market the App Store's extremely high and  
6 persistent profits would have been eroded by entry. You  
7 appreciate that is what he is saying?

8 A. So that is a conjecture made by Mr Holt. I do not think  
9 it meets the -- it would be borne out in the conditions  
10 in this market where you are looking at continuous  
11 innovation, and, you know, just going back to what we  
12 were discussing earlier this morning, you know, page  
13 after page after page of innovations that are being  
14 introduced here, regardless of whether it is driven by  
15 device competition or platform competition.

16 This is a market that has ongoing innovation, and so  
17 to the extent that Apple is introducing new and valuable  
18 innovations over time, there is no reason that the --  
19 that that would necessarily be competed away. If  
20 innovation were to stop, perhaps, but this is not  
21 a market that has that characteristic.

22 Q. Let us just break that down slightly. You have seen the  
23 evidence that Mr Holt cites that there are people like  
24 Epic, for example, who would like to enter this market,  
25 would they not? We know that, do we not? I can remind

1           you if you like of Mr Holt's evidence on that.

2           A. If we could be more specific. But I could agree with  
3           you that Epic has expressed an interest in being able  
4           to, for example, have their own app store for various  
5           business reasons, you know, unique to Epic. I can agree  
6           with that, certainly.

7           Q. But if -- again, if the Class Representative's view on  
8           market power is right, if it is right, it simply is not  
9           possible, is it, for the profits to be eroded by  
10          competition? It is just a monopoly, and the  
11          restrictions imposed by Apple prevent entry, do they  
12          not?

13          A. Again, if you assume that there is absolutely no  
14          competition out there, once you have assumed away  
15          competition, then you have -- and if all that is indeed  
16          true, then by definition there is no constraint on the  
17          price and --

18          Q. To be clear, just to reiterate, I do not want you to be  
19          answering questions on a false premise, I am using the  
20          capsule phrase "the Class Representative's market power  
21          analysis", because it does not say literally zero, it  
22          says monopoly with very limited outside constraints.

23          I just want to make sure we are not on a false footing.

24          A. No, I think my answer would continue to apply, and what  
25          I would say is if you assume away all possible

1 competition, including the assuming away of all possible  
2 competitive constraints, then, sure, you are in  
3 a situation where there could be monopoly rents.

4 I think we have evidence to suggest that that is not the  
5 case here. But what this whole section is discussing is  
6 the fact that you have continuous high profitability,  
7 which is Mr Holt's point, is could be consistent with  
8 the exercise of monopoly power, it could be consistent  
9 with a highly innovative market where there is constant  
10 innovation, and what we are observing is the value  
11 created by innovation being captured jointly by the  
12 participants in the market.

13 Q. There is no evidence, is there, that Apple actually sets  
14 its price in any way by reference to this innovation, is  
15 there?

16 A. Well, you have to be careful about that structure. So  
17 if you think about, you know, the idea of an ad valorem  
18 commission, right, the commission rate captures  
19 a fraction of the value however it is created. So if  
20 Apple manages to create more value, their total revenue  
21 goes up but the proportion does not change.

22 So this is one way when you do not know necessarily  
23 what the value is that you are going to be able to  
24 create, or create jointly, you can divide -- you can set  
25 a division, and that then scales up and down with how

1           successful you are in accomplishing that.

2       Q.   I asked a more limited question.  You are aware that  
3           Mr Schiller's evidence is that the headline rate was set  
4           in 2008 without any reference to costs and so forth, and  
5           of course it has never been revisited, has it?

6       A.   So I think that second thing is --

7       Q.   I --

8       A.   -- false strictly, but the first part, it has never been  
9           revisited, I think they continually -- of course they  
10          have adjusted their commissions on various things.  They  
11          have not changed the headline rate but they have moved  
12          (overspeaking) --

13      Q.   So --

14      A.   -- many individual things down.

15      Q.   Headline rate has never been revisited, has it?

16      A.   Well, yes and no, in the sense that the headline rate  
17          does not apply to as many things as it did before.  So  
18          there have been cost reductions, but again -- and also,  
19          if we are going to go back to the beginning of time, it  
20          was set, at least under -- I think Mr Schiller described  
21          the process of setting it, it was set to be comparable  
22          to other digital platforms and significantly lower than  
23          some of the next best alternatives.  That is a -- that  
24          is something you would normally describe as being  
25          competitive.

1 Q. You yourself of course are not a software engineer, are  
2 you?

3 A. I was in a previous life but not currently.

4 Q. Oh, you were? Well, you have not made any attempt in  
5 your expert reports to actually value these innovations,  
6 have you?

7 A. Well, so that would not be a software engineer's  
8 activity anyway, but the -- but the idea is I have not  
9 tried to assign a specific value to this particular  
10 innovation, that is very challenging. I do that in my  
11 other job, by looking at information technology value  
12 generally. I am not sure whether you could put specific  
13 numbers on it.

14 Q. No.

15 A. What I think you can say, though, is that there is  
16 a continuous process of innovation that appears to be  
17 expanding value, and you can look at other evidence of  
18 this that it is creating value by watching the expansion  
19 of output. The one I happen to like -- Dr Singer  
20 disagrees with this, but I like this one too -- is that  
21 developers have been able to charge more, which suggests  
22 that consumers perceive that they are getting greater  
23 value through the apps that they are getting, which  
24 I think is also a good indication they are adding value,  
25 because now developers are able to create products that

1           create more value and therefore charge more for it, and  
2           that is one source of the expansion of output.

3       Q.   We are going to come back to that.  But equally, you are  
4           not an expert in the valuation of intellectual property  
5           either, are you?

6       A.   So it depends on what you call that, right?  So my --  
7           I got tenure for the economics of information technology  
8           in measuring the value of contributions of information  
9           technology to firms, including the assessment of IT  
10          related intangibles.  There is a world, you know, that  
11          CFAs do that is called valuation of intellectual  
12          property.  That is an accounting exercise.  That is not  
13          what I do.  But in terms of the economics of intangible  
14          assets, that is certainly within the scope of my  
15          research.

16      Q.   But you have not presented, have you, an actual  
17           valuation of Apple's intellectual property?  Let me  
18           stick with safer ground.  You are obviously a polymath,  
19           Professor Hitt.

20      A.   I am an academic; I do lots of things.  The specific --  
21           as I think I answered before, no.  I have not tried to  
22           put, say -- you know, when they introduced the ability  
23           to do parental controls, or when they introduced the  
24           ability to do subscription management, I have not tried  
25           to put a number on it.  Some of these, if you look at

1           them, seem to have created enormous amounts of consumer  
2           value. Subscription management is one of my favourite  
3           ones. But again I did not try to put a number on that.

4       Q. No, and what I am going to suggest to you is your view  
5           that this is justified by continuing innovation or  
6           improvements in quality is just an assertion based on  
7           your view that Apple operates in competitive markets?

8       A. No. If I -- the assertion is backed up by a careful,  
9           detailed, long-term examination of the kinds of things  
10          that Apple has contributed, or things where Apple has  
11          observed other competitors engaged in and have adopted  
12          or attempted to innovate. I think it is safe to say  
13          that this is a highly innovative market. There is  
14          a fair amount of documentation in Hitt 1 specifically on  
15          that line by line, and then there is a -- I think we  
16          talked about it, it is either in Hitt 2 or 3 there are  
17          some summaries of that as well.

18                So it is based on that, the actual observation of  
19           the innovations themselves, and some of the corollary  
20           discussion about why that might create value, but I have  
21           not tried to put a number on it, that is true.

22       Q. Indeed. But you understand that on the Class  
23           Representative's view, the obvious conclusion is that  
24           the price is driven by its market power which excludes  
25           competition. You do not accept that?

1 A. Sorry, I think I missed the beginning of your question.

2 Q. Let me put it again. Again taking into account the  
3 Class Representative's market power analysis, which  
4 I know you do not agree with, but bear with me, assume  
5 it is correct. In other words, Apple is a monopolist,  
6 competition is restricted and so forth.

7 A. Okay.

8 Q. What I am putting to you is on that premise, the obvious  
9 conclusion is that the price is driven by Apple's market  
10 power?

11 A. So I think that is the chain of argument that they made.  
12 I disagree with almost every part of that chain but that  
13 is what they are arguing, yes.

14 Q. You know of course -- we have already discussed that  
15 Mr Holt allows for a 15% counterfactual commission. We  
16 have talked about that just a moment ago.

17 A. Yes, he -- yes, that may be a little different than some  
18 of the numbers Dr Singer provided, but yes, I believe he  
19 suggests that a counterfactual commission could be 15%.

20 Q. Yes, and that would be a very large return on that  
21 innovation, would it not, even if it is lower than the  
22 monopoly price?

23 A. I think even at that 15% you -- again, this is not my  
24 calculation, but I believe Mr Barnes and Mr Dudney went  
25 back and forth on this, but that gives you a relatively



1 large as measured return on capital, which is why I do  
2 not think that analysis is informative in distinguishing  
3 the 15 from the 30 in that respect. But yes, you would  
4 get, by the measures that we have been talking about,  
5 a similar large outcome.

6 Q. I think you discussed with Mr Hoskins this morning of  
7 course that the apps on the App Store also help drive  
8 sales of Apple's devices, do they not?

9 A. Yes, it is -- it is my view, and I think I have  
10 expressed this, that the -- every aspect of the platform  
11 contributes to the success of the platform, and that is  
12 what generates the value for consumers, for developers  
13 and for Apple.

14 Q. Would you agree that these returns give Apple -- in the  
15 counterfactual -- sorry, let me put my question. We are  
16 in the counterfactual world now, thinking about the  
17 counterfactual that Mr Holt is proposing. These things  
18 would give Apple ample incentives to continue to  
19 innovate and continue to offer the service and quality  
20 that it does; would you agree?

21 A. Well, yes, there is a reason why you try to anchor these  
22 things. So as long as I am earning profits I have some  
23 incentive. If you reduce the price, I have less  
24 incentive. Without some kind of anchor, simply saying  
25 "I think 22, or 25 or 15 or 12 or 9 is the right number"

1 I do not think has any basis. Certainly there is more  
2 incentive to innovate and try to generate value when you  
3 capture more of it, but -- and I do not think you can  
4 make a judgment. I certainly wouldn't say they would  
5 stop innovating at 15 but it would be different.  
6 I mean, that is normal economic incentives.

7 Q. Would you agree if there had been alternative app  
8 stores, or there were, that could put additional  
9 pressure on Apple to innovate: it would have  
10 competitors?

11 A. So that is a hypothetical that I can agree with. The  
12 existence of alternative app stores may actually destroy  
13 value. So it depends on exactly what they are doing,  
14 what the configuration would be, what that  
15 counterfactual looks like. So the idea that there could  
16 be app stores out there that could be competitive, that  
17 is a conjecture one could make, but you could also  
18 envision a world in a platform competition environment  
19 where actually the existence of alternative stores  
20 actually destroys value.

21 Q. But there is no evidence that that would be the case, is  
22 there?

23 A. I think there is no strong evidence one way or the  
24 other, but you notice that one of the things -- at least  
25 there is no strong evidence that the -- well, we can get

1           into more specifically what would happen in potential  
2           scenarios, but what I can say is that Apple has chosen  
3           a particular ecosystem design that is a closed system,  
4           and they have chosen that for a reason, and consumers --  
5           we talked about this in the hot-tub, right? Consumers  
6           have a choice. They can go in the Android world, it is  
7           more open. They can go in the Apple world, it is more  
8           closed. Apple has made a choice, but that is the way  
9           their ecosystem has been designed, and consumers have  
10          responded favourably to it, at least those consumers in  
11          the Apple world.

12                 You are talking about now making some fundamental  
13          changes for how the ecosystem works, and in somewhat  
14          unspecified ways, it would not be implausible that the  
15          ecosystem is designed in a way that is sort of  
16          economically rational and that changing that could  
17          actually have negative consequences. That is the basis  
18          for it. That is all I can say.

19          Q. Let us go back to your second report. This time we are  
20          on page 219. So it is {C3/4/219}. Thank you very much.

21                 In paragraph 395 you deal with a point we have  
22          already touched on where you say:

23                 "... as a general matter, for innovative products  
24          and services that embody substantial investments in  
25          intellectual property, like iOS and the App Store, costs

1           are not a reliable measure of value."

2           We have talked about how Mr Holt approaches that,  
3           but then you make a point we have not discussed:

4           "Many of the costs incurred by Apple in ...  
5           operating the App Store are largely fixed ..."

6           Then skimming down about half a dozen lines you  
7           say -- sorry, let me make sure I am not skipping a part  
8           that we need to see. You say:

9           "This is similar to the position of songs or films:  
10          a song or film costs essentially the same to produce  
11          whether it turns out to be a hit or a flop."

12          So I am sure you would accept that Taylor Swift, or  
13          Magritte, to use a different example that has been  
14          bandied around, generate their sales in competition with  
15          other artists, do they not?

16       A. Yes.

17       Q. So of course in their case we do not even begin to ask  
18          the question whether the prices are unfair because they  
19          are not dominant?

20       A. I have not thought specifically about that, but I can  
21          accept that as -- you know, we have not -- that  
22          I have -- I am not aware of anybody who has considered  
23          that, yes.

24       Q. It may be all-pervasive and hard to escape from but not  
25          actually legally dominant, but let us talk about the

1 costs of producing. You are aware that Apple has  
2 created its own profit and loss accounts for the  
3 App Store, are not you?

4 A. Yes, I have seen documents where they have done that at  
5 various times.

6 Q. There is a debate between the accountants about exactly  
7 what they do or they do not show, but on their face at  
8 least they show billions of dollars of inputs of a range  
9 of kinds. Direct and indirect costs, just for example.  
10 Would you like to see one? I think you have said you  
11 have seen these before.

12 A. Mm-hm.

13 Q. But that is not really like a singer-songwriter sitting  
14 on a beanbag strumming a guitar, is it, who has a flash  
15 of inspiration; the App Store is much more like a record  
16 company, is it not, that an artist?

17 A. That is an interesting analogy. I think that I have  
18 always viewed it as a joint production process, and so  
19 you can think -- you know, you could think of it as  
20 setting the environment for which people can be  
21 successful, and depending, again, you know, who you  
22 attribute the value to when there is joint production  
23 I think is kind of a challenging economic question. But  
24 certainly all participants in the value chain, A&R  
25 people, record company, distributors, retailers, all

1           contribute to the value of Taylor Swift, for instance.

2       Q. Let us go now to page 211 of -- sorry, 210 we need to  
3       pick it up {C3/4/210}, because you have four metrics  
4       here which were relied on in Apple's opening as  
5       a measure of the value that Apple provides, and I just  
6       want to just quickly remind you of what you say. We can  
7       probably do it with just the headlines.

8           The total number of apps and total number of  
9       developers have increased drastically and then you say  
10      the total volume of transactions in the UK Storefront  
11      has risen significantly, then you say developer revenues  
12      in the UK Storefront have risen significantly, and then  
13      you talk about the total volume of commerce on the  
14      App Store.

15           Then at 375:

16           "... Apple has not increased its commission rate  
17      from 30% ..."

18           Although prices have increased. Now, of course the  
19      increasing volume and increasing developer prices means  
20      that Apple does not need to put up the rate of  
21      commission in order to enjoy increased returns, does it?

22      A. That is a very non-economic way of saying it, but as  
23      a factual matter, sure, they will -- if the market is  
24      expanding, if they enabled market expansion, holding  
25      commissions constant or declining can still lead to

1 increased profits.

2 Q. That is a much more economic way of putting my  
3 barrister's point but I think we are agreed, luckily.

4 In fact, if we look now at {C2/7/42}, this is  
5 Mr Dudney's report, please. We can see a table of  
6 operating profit, and I only need to talk to you about  
7 the numbers not in pink. I am not going to read out or  
8 say anything about the numbers in pink, and the  
9 operating profit is in the bottom line and we can see --  
10 of table 23. We can see operating profit from 2016 to  
11 2019 more or less doubling, has it not?

12 A. Sorry, what period ... We are talking about --

13 Q. 2016 to 2019. We are allowed to speak about these  
14 figures without going into closed session.

15 A. Oh, okay. Yes, that seems about right.

16 Q. Then we can just note, without talking about the numbers  
17 in pink, please.

18 A. Yes. Those are the numbers that Mr Dudney calculated,  
19 yes.

20 Q. Indeed, and there is a debate about those numbers. But  
21 again, what I want to do is ask you to contemplate the  
22 Class Representative is right in her analysis of market  
23 power. Just think along those lines, please.

24 If that is right, if she is right, none of this,  
25 none of these returns or the numbers that you talk

1           about, tell us whether the price paid for the commission  
2           is a fair price that would be paid in workable  
3           competition, it just tells you that developers are  
4           willing to pay, even at 30%.

5       A.   So I think it tells you that they are -- so again,  
6           separate this out, so it says -- it definitely says that  
7           developers are willing to get enough value from doing so  
8           and have done so at increasing rates over time. If you  
9           assume away all possible competition -- so that is  
10          always true, whether it is a monopoly price or  
11          a non-monopoly price. If you assume away all  
12          competition, again you can attribute that to -- you  
13          could attribute that to the exercise of market power,  
14          but that is only because you have assumed away  
15          everything else.

16       Q.   Or at least assumed away the amount on the Class  
17           Representative's case, but I think you have agreed that  
18           makes no difference to your point.

19       A.   So it depends exactly on the bounds of what you are  
20           assuming away. But if you assume away market  
21           definition, assume they are dominant and assume that  
22           they face no competitive constraints whatsoever, we are  
23           not left with much -- you know, then you have kind of  
24           assumed you have a monopoly at that point.

25       Q.   Not no constraints but limited constraints. That is the



1 case. You have seen it from Dr Singer. You have heard  
2 it from Mr Hoskins.

3 A. What Dr Singer is calling limited constraints I would  
4 call significant constraints, but we can agree to  
5 disagree for the purposes of this, yes.

6 Q. Okay. But let us think about a wider point now and see  
7 if we can agree on this. What we are talking about here  
8 in this section of your report essentially identifies  
9 values to consumers of the apps of the services provided  
10 and of course the value created for the developers by  
11 those apps, does it not?

12 A. The consumer revenue gives you some sense of -- some  
13 estimate of the consumer value and the developer  
14 commission gives you some sense of what developers  
15 have -- at least have been willing to pay for app  
16 services and that there is evidence to suggest that that  
17 value has been expanding over time.

18 Q. Those apps -- the value of those apps depend on inputs  
19 from the developers themselves, do they not? So their  
20 ingenuity or their intelligent property and so forth?

21 A. Absolutely, yes.

22 Q. So a game, for example, might involve all sorts of IP,  
23 might involve all sorts of creativity?

24 A. Yes.

25 Q. So the value or the popularity of those goods or

1 services with consumers is not the same thing as the  
2 value of the App Store services themselves, is it?

3 A. Well, this is a joint production process, so certainly  
4 developers -- developers have a contribution to make,  
5 and Apple makes a contribution by the ability to -- by  
6 the ability to make these games. I think -- I cannot  
7 recall if it is specifically in this case but I think  
8 folks from Epic have specifically noted that the  
9 capabilities of mobile devices driven by the people in  
10 the mobile ecosystem make it possible for what are  
11 called AAA games to be on mobile devices. So it is  
12 a joint production process: developers contribute  
13 something, Apple contributes something.

14 Q. Sure. So if we use an example away from the App Store,  
15 think about an electric car. An electric car -- perhaps  
16 you are going to tell me you are an expert on electric  
17 cars, but I am going to venture some completely  
18 hypothetical facts. An electric car will obviously  
19 involve a battery. I think we can safely agree on that.

20 A. Yes.

21 Q. This is where I am frankly way beyond my expertise but  
22 it is imaginable that a battery might involve some  
23 patented technology, to make it last longer or be  
24 lighter or something of the kind.

25 A. Okay.

1 Q. So it might be that the battery is an essential input  
2 into an electric car, might it not? You cannot build  
3 one without it and this battery might be particularly  
4 good.

5 A. Yes.

6 Q. But the value of the battery is not equivalent to the  
7 value that the finished car itself can reach on the open  
8 market, is it?

9 A. So the battery contributes some amount of value, and  
10 then the additional inputs from other processes  
11 contribute more to the finished product, along with sort  
12 of other inputs like marketing and sales and  
13 distribution service and such, yes.

14 Q. When we go back now to the App Store, what I am  
15 suggesting to you is your analysis makes no attempt to  
16 disentangle this, the input from the developers  
17 themselves that makes the products or the services  
18 popular, and the input of Apple, which is the  
19 distribution and payment services, among other things.

20 A. So I do not attempt to quantify it. What I note is that  
21 Apple has contributed substantial value, expanding  
22 value, and it has created the -- you know, going back to  
23 the terminology we have been using -- the tools and  
24 technology that enable developers to create their apps  
25 and for that they charge a commission. So they

1           certainly contribute to this. They are part of the  
2           joint production process and that amount has been  
3           expanding over time.

4           So that is what I can say, based on the evidence  
5           that I have looked at and the things I have described.

6       Q. Okay, let us turn to the next page of your second  
7       report, please, so {C3/4/212}, paragraph 377. Now, this  
8       is an example of a statement you make a number of times  
9       in your reports. You say:

10           "The commission Apple charges is Apple's  
11           compensation for providing all the products and services  
12           that contribute to the value consumer and developers  
13           derive from the iOS ecosystem."

14           You made a very closely related point in the  
15           hot-tub. If we could bring up the transcript please, it  
16           is Day 14, page 104. Slightly different but closely  
17           related. Let us see -- yes, that is it, thank you very  
18           much.

19           If we look at line 18 in particular {Day14/104:18},  
20           you say:

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

1           number of places where they charge, which includes the  
2           App Store."

3           Now, I think you would agree Apple has a choice  
4           about where it levies charges both across the ecosystem  
5           and on the App Store in particular?

6       A. Yes.

7       Q. It is not uncommon on a two sided platform to monetise  
8           some parts but not others, is it?

9       A. That is correct.

10      Q. But you appreciate that the question we are asking in  
11         this litigation is whether the charges Apple chooses to  
12         make for the services it provides on the candidate  
13         markets are excessive or unfair, yes? That is the  
14         question we are engaged with?

15      A. That is -- yes.

16      Q. Of course you differ from Dr Singer on market  
17         definition. I am in Dr Singer's world, if I can put it  
18         that way.

19      A. Fair enough, yes.

20      Q. You are not saying, even on your market analysis, that  
21         the phones, watches, cloud services, TVs, iPads, they  
22         are not in the same market as the App Store, are they?

23      A. No, that would be something -- most of those act in  
24         a different market. They act at the platform level and  
25         contribute value, but they -- I do not think anybody has

1           done a market definition exercise for devices or those  
2           other things.

3       Q.   No.  On the face of it at least, these are separate  
4           products which incur separate charges, are they not?

5       A.   They are separate products that incur separate charges  
6           that are part of the overall ecosystem.  So to the  
7           extent, for example, that people buy the watch and the  
8           phone and get incremental value for the two things  
9           together, then they are connected, but they are,  
10          you know, additional items that are priced separately,  
11          but are part of the ecosystem.

12      Q.   But your case is -- your case, sorry; your view again is  
13           that we should look at the -- that the Commission must  
14           compensate Apple for the value of all the products and  
15           services in the ecosystem.  I read that from your  
16           report.

17           Now, in the hot-tub again you confirmed that you  
18           have not been able to quantify this value across the  
19           platform that -- you refer to the value across the  
20           platform.

21      A.   No, I have not attempted to specifically put in an  
22           economic value in all these things.  I demonstrate that  
23           there is significant innovation, this innovation is  
24           important to the ability of developers to offer apps on  
25           the iOS ecosystem and it seems to be expanding.  That is

1           about as far as I can go with the available data.

2       Q.   Okay.  But is your case anyway that this ecosystem-wide  
3           value justifies the commission or renders the commission  
4           fair?

5       A.   So I do not think that is the position I am stating.  
6           I am saying that the failure to account for the fact  
7           that Apple provides many different services and charges  
8           for one means that doing static comparisons on the one  
9           segment -- on sort of the monetisation side of  
10          a multi-sided platform I think is misleading.  Now, it  
11          turns out that the App Store does pretty well when  
12          compared to other similar things, but I think it is  
13          misleading to say "We are going to look at the places  
14          where they actually charge and calculate profitability  
15          for that" without thinking about the fact that that  
16          charging comes from all sorts of other places.  As we  
17          saw from the, you know, back and forth with the  
18          accountants, that trying to disentangle it sufficiently  
19          that you could make that static comparison is very, very  
20          hard.

21      Q.   Let us look at the other benefits that Apple enjoys as  
22           well as the benefits to consumers.  So when you talk  
23           about developers creating new apps, Apple gets value  
24           from that too, does it not, because it helps drive the  
25           sales of Apple's other devices and services?

1       A. I agree with that, yes.

2       Q. When we talk about the tools and technology in  
3       particular, the T&T as it has been referred to, those  
4       tools and technology also improve the devices, do they  
5       not?

6       A. I think -- well, I think the Apple innovations broadly  
7       improve the devices. The ability to develop specific  
8       kinds of apps, that really -- for example, compilers and  
9       APIs and things like that, that really is directed at  
10      the app side of the world, but there are other  
11      technologies that are more on the device themselves, but  
12      yes, I think they all contribute to the ecosystem --  
13      (overspeaking) --

14      Q. So these improvements help drive the device sales, do  
15      they not?

16      A. I think -- again it is my view, and I think I have  
17      expressed this a few times, that the innovations and  
18      activities that Apple is engaged in create value across  
19      the platform. One of those is the App Store but there  
20      are many other places as well.

21      Q. Even free apps benefit Apple through driving device  
22      sales, do they not?

23      A. Oh, yes.

24      Q. You appreciate that when we are talking about free apps,  
25      the accountancy evidence includes the cost of the free



1 apps, it is not dependent on the charging structure  
2 Apple has adopted, it is just total profitability.

3 A. No, I am sorry, I may have missed the beginning of that  
4 question, I am sorry.

5 Q. Sorry. Just staying with free apps, in the  
6 profitability analysis the costs associated -- costs  
7 associated with the free apps are in the profitability  
8 analysis. Maybe that is --

9 A. I will defer that to the accountants. I think Mr Dudney  
10 would say yes, Mr Barnes would say no, so I will leave  
11 it to them.

12 Q. Fair enough.

13 A. Conceivably that would be one of the costs.

14 Q. Of course when we are talking about benefits to Apple,  
15 the App Store Commission is not the only source of  
16 revenue, is it, across the ecosystem?

17 A. No, that is correct, yes. There are typically devices,  
18 and then there are other Apple services are kind of the  
19 big categories.

20 Q. Yes, so phones and iPads and watches, they are not free.  
21 Cloud services, music, television services, they are not  
22 free either, are they?

23 A. Some of them are, but yes, not all of them are.

24 Q. What I am putting to you is that your analysis, your  
25 ecosystem analysis, just misses out all this

1 compensation to Apple in talking about only benefits to  
2 consumers?

3 A. So some of the -- let me respond to that in two ways.  
4 One is I do not think it is missing out of everything,  
5 it is just pointing out there is this ecosystem, Apple  
6 contributes innovations to that, developers contribute  
7 innovations, consumers show up and buy things and get  
8 value. So there is value being created by the  
9 ecosystem. Some of that value is being created by the  
10 App Store. It becomes very difficult to isolate that  
11 contribution and, in particular, it can be misleading to  
12 isolate that contribution to the App Store because it is  
13 just -- it is one of the limited number of places where  
14 they actually charge. I think that is my broader view  
15 on this. But I will agree that, you know, everything on  
16 every side contributes potentially to the value of the  
17 ecosystem as a whole.

18 Q. You are not suggesting the commission is needed to  
19 subsidise the rest of the ecosystem, are you?

20 A. Again, that is not an economic argument really, right?  
21 What is the appropriate -- again you are saying if  
22 I charge here, I have to charge there. What it is, is  
23 Apple has come up with a configuration of charges that  
24 they think is rational given the way they have  
25 configured their ecosystem. That I think is -- that is

1 the way I think of it as a whole. There are other  
2 ecosystems that may have different configurations and  
3 charges as well that may work for them.

4 So I do not think of it as, you know, "I need this  
5 to subsidise that". What it is, is there is a certain  
6 amount of value created, Apple is capturing a portion of  
7 it, and they have chosen to do it in this particular  
8 way, and if you change that you need to think about what  
9 the reaction would be.

10 Q. I am just going to put to you our case that your  
11 approach is wrong in principle and overly selective, but  
12 you do not agree?

13 A. I do not agree, no. Again, I am not attempting to do  
14 the actual quantification. What I am saying is that you  
15 need to think about -- when you look at a multi-sided  
16 platform, you think about where people are charging.  
17 Again, it turns out Apple does pretty well in direct  
18 comparisons against other marketplaces that do not  
19 provide the same technologies, but the idea that you can  
20 isolate just the places that Apple charges for, and make  
21 comparisons against other platforms that may not provide  
22 all the same services and so forth, I think that  
23 comparison can be misleading, and that overall the  
24 total -- both the App Store and the ecosystem as a whole  
25 benefit from the innovations that Apple is engaged in.

1           So, you know, it is appropriate to consider those  
2           when thinking about the value created, if you were to  
3           try to isolate it by the App Store.

4   THE CHAIRMAN: Professor Hitt, when you say multi-sided  
5           platform, do you mean -- is that another way of  
6           expressing the ecosystem? You are not just talking  
7           about a two sided platform?

8   A. Yes, so I have -- so "ecosystem" is a good word.  
9           I think I have used that a lot. I usually say  
10          multi-sided platform, because it used to be two sided  
11          markets, and then everybody realised that there are  
12          usually more than two sides in every two sided market.  
13          But it is generally -- this idea of either platforms or  
14          ecosystems in this discussion are largely  
15          interchangeable.

16   THE CHAIRMAN: So when you are talking about a multi-sided  
17          platform, one of the sides of that platform is the  
18          devices market.

19   A. Devices is one.

20   THE CHAIRMAN: Yes, I just want to make sure --  
21          (overspeaking) --

22   A. Exactly, yes.

23   THE CHAIRMAN: Thank you.

24   MR WARD: I want to now move on to a couple of points where  
25          your evidence is closely connected to the accountancy

1 evidence, so we want to tease out if there is anything  
2 else for us to discuss. It is {C3/4/218} now, please.  
3 So this is your second report, page 218. Thank you. It  
4 is paragraph 392, and I think it is really perhaps just  
5 part of the argument we have already been having where  
6 you say:

7 "... any attempt to isolate costs incurred by Apple  
8 solely and directly in connection with the App Store is  
9 artificial and ignores the economic realities ..."

10 Now, you are obviously well aware of the accountancy  
11 evidence that we have heard two weeks ago, and I want to  
12 be careful to tease out what there may be here that is  
13 not accountancy evidence. You will be aware that there  
14 is no debate between the accountants about the amount of  
15 direct costs when you talk about directly attributable,  
16 or revenues, even, to be attributed to the App Store,  
17 and obviously we are not going to go back to those  
18 accounting points with you, and what I am going to put  
19 to you is that insofar as there are costs that need to  
20 be allocated, there are established methods of doing it  
21 and Apple itself does it without difficulty.

22 So there is no difficulty here, is there,  
23 Professor Hitt?

24 A. So again I think -- I think -- let us see, what did  
25 I say to this?

1           Well, I think what it is -- you know, it is my  
2           contention from an economic standpoint that it is  
3           artificial. Sure, you could certainly apply accounting  
4           conventions for doing these allocations and it may be  
5           appropriate for certain business purposes, but if you  
6           are thinking about, you know, what the -- what the costs  
7           are that are needed to provide the infrastructure for  
8           the App Store to create its -- App Store to create its  
9           value, it is intertwined with the rest of the platform,  
10          but certainly accountants can provide a set of rules and  
11          guidelines for doing those allocations, it is just  
12          a maths problem, but does it -- it is my contention that  
13          it does not reflect the underlying economics of this as  
14          an ecosystem.

15        Q. You appreciate that it is our case that even from an  
16          economic point of view, there is no difficulty in  
17          disentangling the App Store's costs or revenues either,  
18          but you do not agree?

19        A. Again the disentangling -- when you are saying  
20          disentangling, what you are talking about is an  
21          accounting exercise. A certain amount of money comes in  
22          through commissions, a certain amount of staff are  
23          tasked specifically with the App Store. There may be  
24          other people who contribute in various ways where you  
25          could do that allocation. But from an economics

1       standpoint, the App Store is capturing a portion of the  
2       value created by the platform. It has its own dedicated  
3       people that you could probably isolate into a business  
4       unit and count up. But the way it has enabled -- the  
5       way it is possible to capture that value, to charge what  
6       it does, is because of all the things that are within  
7       the ecosystem.

8               That is my point about the artificial division. You  
9       can construct that, but I am not sure it reflects the  
10      economics.

11     Q.   So really we are back to your point about the economic  
12       value, whether it captures the economic value, are we  
13       not, this approach to the costs?

14     A.   I think there are two points embedded in here. One is  
15       whether you can -- again, you can look at a piece of an  
16       integrated business and say "I can isolate its  
17       contribution", accountants can do that using a set of  
18       rules. But when you are talking about platform  
19       economics, where contributions happen on all sides and  
20       costs are incurred in a variety of places, again I think  
21       that is artificial. So I think that is basically the  
22       contention I am making here.

23     Q.   You appreciate, going back to where we started, that the  
24       question -- the question arising under the law is that  
25       whether or not the charges that are levied, the ones

1 Apple chooses to levy, are reasonably reflective of the  
2 price that could be charged in workable competition.

3 That is where we started our discussion?

4 A. That is a perfectly -- yes, that is a perfectly  
5 appropriate legal framework to do so, and I think that  
6 my point being the kinds of comparisons, for example,  
7 that you -- that Mr Holt does to support that I think  
8 are incorrect comparisons because they fail to account  
9 for the additional services that are provided by the  
10 App Store.

11 But if we are looking at the excessive piece, the  
12 profitability piece, you have the further difficulty of,  
13 you know, looking at the profitability of the priced  
14 side of a multi-sided platform where there are many  
15 things that are unpriced. I think there are fundamental  
16 challenges. We have not talked about intangible assets  
17 yet, but that adds an additional fundamental challenge  
18 if you want to try to use a capital-based measure.

19 Q. You have absolutely anticipated my next line of  
20 questioning.

21 So let us look now again -- this time at the joint  
22 expert statement, so this is {C4/4}, and I have written  
23 page 6 here but I am lacking in confidence that I have  
24 actually got that right. Let us see. I have got it  
25 right. So it is {C4/4/6}.



1           We are now going back essentially to the argument on  
2 excessive, and the proposition here is:

3           "Comparing ROCE to WACC can provide relevant  
4 insights into whether a price is excessive and/or  
5 unfair."

6           What Mr Holt says here is, summarising his now  
7 familiar analysis:

8           "When available, it is preferable to analyse if  
9 profits are excessive by comparing a company's ROCE to  
10 its WACC. However, such an analysis needs to also  
11 consider the persistence ... If [it] is significantly  
12 and persistently higher than its WACC, it shows that the  
13 business is making significantly more returns than the  
14 cost of the assets or capital it has deployed. While  
15 a finding that ROCE is higher than WACC does not imply  
16 a competition problem on its own, in a market  
17 characterised by effective competition any excess  
18 returns above the WACC can be ... eroded over time ..."

19          We talked about those points.

20          What I want to do now is look at your answer,  
21 because you say it can be informative under certain  
22 circumstances, but then you say:

23          "However, a ROCE vs WACC comparison will not shed  
24 light on whether the App Store Commission rates are  
25 excessive/unfair. In fact, [very] high and persistent

1           profitability is common for an innovative and  
2           competitively constrained firm like Apple."

3           We have talked about that too, I think you will  
4           agree. So what we are left with is the intangible  
5           assets point that you just foreshadowed. You say:

6           "Furthermore, successful and innovative firms like  
7           Apple may generate significant intangible assets (which  
8           create value for its customers) that the accounting ...  
9           metrics ... do not capture."

10          Now, again you are obviously aware that there was  
11          a lively debate between the accounting experts about  
12          whether or not the ROCE -- how intangible assets should  
13          be treated under the ROCE analysis, you will recall an  
14          exchange of views on this topic?

15       A. Yes.

16       Q. The approach of Mr Dudney and Mr Holt is to focus, for  
17       the purpose of constructing ROCE, on the replacement  
18       cost of the assets, but obviously I am not debating any  
19       accountancy point here with you. But what you say  
20       here -- I am really trying to make sure we have  
21       understood your case. In the parentheses you talk about  
22       "intangible assets (which create value for ...  
23       customers)". So are we now back where we were, talking  
24       about the economic value that might be, as it were,  
25       reflected in those intangible assets?

1       A. So let me -- there may be a point of confusion so let me  
2       distinguish. Things like the Apple brand, the  
3       reputation they built up over decades, the innovations,  
4       the design. Those are the things I think of as being  
5       possible candidates for intangible assets that could  
6       have considerable amounts of value. So from that  
7       perspective, you know, this is certainly an environment  
8       where they have had a lot of innovative efforts and they  
9       have produced some successful innovations, and those  
10      would be intangibles, and that may or may not be  
11      connected to -- directly connected to things you can  
12      observe, like R&D investment. Sometimes you win,  
13      sometimes you lose, so what you produce may not be, for  
14      example, 15% of R&D, R&D rate of return.

15             So I think there are a lot of intangibles present  
16      here that will not necessarily show up in an effort to  
17      either look at, you know, the capital, or even if you  
18      included R&D in that. So that is one point.

19             If you do some assessments, there is a separate set  
20      of issues about how you figure out what those are. That  
21      could be -- there is potential to mix market power and  
22      other things when you do the assessments, for example,  
23      of overall profitability. That is not the part I am  
24      talking about here. What I am talking about is that  
25      Apple has a significant amount of intangible input and

1           that you need to properly account for that when you do  
2           a cost of capital -- sorry, a return on capital  
3           exercise.

4       Q. But we are not talking about the accountancy points  
5           here, are we? You are not an accountant?

6       A. No, I am an economist. So as I said, there could be  
7           conventions, for example, of how you compute the book  
8           value of capital or how you might choose to capitalise  
9           R&D, or other kinds of expenditures. It is known in  
10          the -- yes, sort of the general technology world that  
11          a lot of things that probably will go into intangible  
12          assets are often expensed, which kind of messes that up.

13                But even assuming they follow a standard accounting  
14           convention, that does not stop there being an existence  
15           of significant intangible assets, like the Apple brand,  
16           that can contribute a lot of the value and drive a lot  
17           of the choice, and that that is very difficult to  
18           quantitatively assess, and a failure to do so gives you  
19           misleading results, when you try to divide by capital,  
20           yet capital is a lot bigger than it appears to be.

21      Q. You will correct me I am sure if I am wrong, because in  
22          fairness there are about a thousand pages of reports  
23          from you, but I do not think in your reports we find any  
24          detailed analysis about these intangible assets, do we?

25      A. No, that is correct. I point out the existence of

1 potential intangible assets here that would be relevant,  
2 and again this is an area I do research in, so I think  
3 at that level my contribution is there are intangibles  
4 present here, and that would make any kind of return on  
5 capital calculation challenging due to the inability to  
6 properly account for this. I think that is as far as  
7 I go. I do not try to present an alternative for the  
8 accountants. I think they have plenty of work to do on  
9 their -- (overspeaking) --

10 Q. The accountants battled out over that. So beyond the  
11 accounting evidence, really this is again just a matter  
12 of the measure of Apple's value, is it not, the economic  
13 value?

14 A. So intangible assets are an input that generate the  
15 value, so I guess I can agree with that connection, but  
16 the way you framed it, what I do want to say is that  
17 I believe there exists significant intangible assets  
18 that are not simply capitalised monopoly rents, that  
19 came up I think in the hot-tub as well, and that --  
20 you know and you can look to the kinds of innovations  
21 that we have talked about and just sort of the general  
22 understanding of Apple's position in the market to  
23 recognise that they seem to have significant intangible  
24 assets that are not simply the ability to earn monopoly  
25 rents but a real return on some value that they create

1           for consumers.

2       MR WARD:   Sir, would that be a convenient moment to have  
3           a break?

4       THE CHAIRMAN:   Yes.   Just before you do, I might just ask  
5           Professor Hitt about --

6       DR BISHOP:   I have a question as well.

7       THE CHAIRMAN:   Do you want to go first?

8       DR BISHOP:   As the discussion has gone on, it has occurred  
9           to me that we have not had any submissions in any of the  
10          papers here on what is a very large literature in  
11          economics on when you do and do not get share contracts  
12          and things related to that.

13               The discussion of economic value seems to me to --  
14          I am not going to say confuse, but to include a number  
15          of things which can be thought of as distinct.  One of  
16          it is when should there be a share contract at all, and  
17          second, if so, what the split should be?

18       A.   Right.

19       DR BISHOP:   Or should it be a complicated two-part tariff  
20          which (inaudible) levels.  Some of your responses to the  
21          economic value questions seem to be -- seem to be --  
22          would be consistent with the kind of discussion and  
23          findings of the literature.  You seem to be suggesting  
24          a share contract was appropriate here, as between Apple  
25          on the one hand and the developer on the other hand.

1           The second literature that might be relevant is when  
2           there are -- it is an associated point -- when there are  
3           and are not joint ventures, because another way of  
4           looking at this is that any developer who wants to put  
5           an app out there on a platform is effectively saying  
6           "I want to use this", and Apple is entitled to say  
7           "Look, that is effectively -- this has to be a joint  
8           venture between us."

9           The third possibility, again associated with the two  
10          I have mentioned, and one could probably go on to about  
11          half a dozen others, is when it is that an input  
12          supplier with some unique asset gets a percentage.  
13          Famous case, Sir Alec Guinness agreed to play  
14          Obi-Wan Kenobi in Star Wars and got 2%, 2.25%, and of  
15          course these things are not uncommon.

16          Are you -- when we are discussing economic value and  
17          the reasonableness of the rate, the commission, are you  
18          in effect making one or more of the arguments that would  
19          draw on analyses of this sort, that it is reasonable to  
20          have a joint venture, that it is natural to have a  
21          sharing contract, or that it is -- that there is  
22          a unique input that Apple is supplying that no one else  
23          is supplying and therefore it should have a share of the  
24          upside? Can you give your observations on that.

25          A. I can give you -- so I can give you observations. So

1           you have opened up a wide range of issues.

2       DR BISHOP: A wide range -- on which we have had no  
3       submissions, I should say.

4       A. Yes, so I will tell you -- let me address sort of why at  
5       least -- so I am very fond of contract theory and  
6       I happen to particularly enjoy thinking about those  
7       issues.

8           I think the reason that we -- I did not go down that  
9       path is because, if you look at the convention in the  
10      market it is share contracts, so you look out and see  
11      what have people been doing. There is very few, for  
12      example, fixed price. You know, you pay a certain  
13      amount and then that is all in this environment. So  
14      that is probably why I did not consider it.

15           But you are correct, you picked up on a couple of  
16      places. So one of the ways in which you -- again this  
17      is not in my reports but it is something I have been  
18      thinking about, is one of the ways in which you deal  
19      with a circumstance where you do not know what the  
20      outcome is going to be, share contracts are a good way  
21      of dividing the surplus when there is a lot of  
22      uncertainty. I think this is consistent with that.  
23      I have not thought that to the end, but this would not  
24      be inconsistent with that.

25           I think it is also -- I think your joint venture



1 point is -- that is very -- I have not thought about it  
2 in the context of the JV literature, which is very -- it  
3 has some interesting additional things about bilateral  
4 negotiation and things like that, but the idea that this  
5 is joint production I think is right, and the allocation  
6 of joint production is not a bad way to think about it,  
7 and you have a surplus dividing contract in an  
8 environment where you have joint production, it seems to  
9 make some amount of sense in that environment.

10 I think the -- let us -- also the -- again, the  
11 input suppliers, I think the other reason -- the other  
12 way you could rationalise, in addition to the  
13 uncertainty point, the use of percentage based contracts  
14 is you want strong incentives for the developers to  
15 create the best app possible and you want strong  
16 incentives, for example, to Apple to create the best  
17 platform for distribution, and those kind of incentives  
18 tend to be maximised if they share in the upside, so  
19 I think it is consistent with that.

20 But my -- yes, but my -- I have been sort of staying  
21 in the relatively simpler thoughts on this, simply that  
22 that seems to be the convention, number 1, and number 2,  
23 the observation that it goes up --

24 DR BISHOP: Maybe I should not raise it in the fifth week,  
25 the seventh week, but it swam into my head as you

1           were -- (overspeaking) --

2           A. No, I think it is an interesting --

3           DR BISHOP: -- seeks to clarify when you see it and when you  
4           do not, and here one of the complaints can be understood  
5           as there should not be share contracting, there should  
6           be costs of platform, and it is inappropriate in this  
7           context. Anyway ...

8           THE CHAIRMAN: Can I ask you just -- I am sorry to take you  
9           back to intangible assets, but I am not completely sure  
10          I understand what your position was in the last answer  
11          to Mr Ward and I just wanted to check.

12          I think you are saying that through the intangible  
13          assets, Apple is creating value, so that is part of what  
14          it is bringing to the party in this calculation of who  
15          is getting what.

16          A. Right.

17          THE CHAIRMAN: What I was not clear about was whether you  
18          were simply saying, effectively directing the  
19          accountants, they should not forget about it when they  
20          go with the exercise of trying to calculate the exercise  
21          of, if you like, the proper return on the investment, or  
22          whether you were saying actually that it was not  
23          something you could calculate, there was no way you  
24          could do it, compared with, for example, the research  
25          and development that went into the making of

1           a particular version of the device, or maybe it is  
2           something else. Have I -- have I sort of captured the  
3           distinction?

4       A. Let me see if I can briefly capture that. So yes,  
5           I would suggest that there is intangible -- the brand,  
6           the design, those are all intangibles.

7       THE CHAIRMAN: I understand that.

8       A. Point 1 on that is that may not be fully captured by,  
9           for example, capitalising R&D. You could get -- yes,  
10          I could come up with a design, come up with it in my  
11          head and create a billion dollars of value, and I spent  
12          15 minutes thinking it up. That is not going to happen  
13          to me, but somebody could do that. So it may not be  
14          aligned with the amount of R&D expenditure, and  
15          I understand the accountants have addressed that.

16                The -- so -- and then the third thing is if you are  
17                going to try and make comparisons and say the return on  
18                capital is way out of whack, it is hundreds of percent  
19                when it should be 15, you have to think about that  
20                intangible is something that is contributing, is part of  
21                the capital base, it is notoriously difficult to  
22                quantify.

23                So I can agree that the accountants may choose to  
24                follow accounting conventions where you can do reliable  
25                portions of it, but when you do that you are leaving off

1 a bunch of stuff that causes the number to be very, very  
2 large, that if you were trying to make a comparison,  
3 say, against a 15% return you really would want to  
4 include.

5 So I am not against the idea of trying to use  
6 accounting conventions to chip away at that, but it is  
7 notoriously difficult to actually figure out the  
8 totality of those intangibles, especially when the  
9 connection between the cost and the output is not  
10 necessarily direct.

11 THE CHAIRMAN: Yes, so it is a caution. So you are  
12 advancing it as a caution for wherever the accountants,  
13 or wherever we end up with the debate between the  
14 accountants, you are advancing a caution as to whether  
15 that has fully captured the intangible aspects.

16 A. Yes, and I think if you are thinking "Wow 130%", or  
17 whatever that number is, "that is just too big", you  
18 have to realise there is some stuff in there that would  
19 lower that number if you could quantify it. Whether you  
20 could feasibly do so is doubtful, but it is certainly  
21 not within the scope of simply following a set of  
22 accounting rules.

23 THE CHAIRMAN: Could that be -- would you support the  
24 suggestion that that factor might be one of the reasons  
25 why you end up with a pretty significant return at 15%

1           and a pretty significant return at 30%, in other words,  
2           the difference between them -- is that part of your  
3           thinking about those two numbers?

4       A. Yes, I think that is a first order reason why that is  
5       the case, is that why you get -- you know, even after  
6       accounting for the counterfactual, it is still  
7       excessive. It is just a big blob of intangible assets  
8       sitting out there that is generating these returns, we  
9       are not accounting for it, so you are always going to  
10      wind up in a result where that number just seems too  
11      big, because there is this big -- and even perhaps much  
12      of the relevant capital is simply unobservable.

13     THE CHAIRMAN: Yes, okay. That is really helpful. Thank  
14      you.

15           We will take ten minutes and come back at 5 past,  
16      thank you.

17     (2.56 pm)

18                               (Short Break)

19     (3.05 pm)

20     THE CHAIRMAN: Yes, Mr Ward.

21     MR WARD: Thank you, sir.

22           Can we now please turn to your second report again,  
23      page 214, so that is {C3/4/214}, paragraph 380. That is  
24      it, thank you. You say:

25           "... in the counterfactual world (where Apple can no

1 longer charge a 30% commission rate, and its commission  
2 rate is capped, for example, at 15%) Apple could and  
3 would have incentives to alter its monetisation strategy  
4 by charging ... for transactions [it] currently does not  
5 charge for ... eg free downloads) or by charging  
6 separate fees for the services it does not charge ...  
7 for."

8 Just to remind you, in the hot-tub you accepted you  
9 did not know what kind of charges these might be or what  
10 level they might have.

11 A. Yes.

12 Q. You are nodding. I will tell the transcript you are  
13 nodding.

14 A. Yes, sorry, yes. I did not realise there was a  
15 question, but yes, I agree with that.

16 Q. It is right, is it not, there is no evidence before the  
17 Tribunal from Apple either telling us that they would do  
18 this at all, never mind what kind of charges they would  
19 do? I mean that is --

20 A. I do not think there is anything directly originating  
21 from Apple. I think we do have some examples -- again,  
22 this was not part of my report -- of some of the charges  
23 that have been proposed and some documents that have  
24 considered these things, but I do not think we know  
25 exactly what they would do in this specific

1           counterfactual, I am simply pointing out that that is  
2           something we could potentially do. I think we had an  
3           exchange with the Tribunal on whether or not the idea of  
4           doing that would be, you know, believed to be  
5           anti-competitive, and I do not -- you know, the idea of  
6           charging for intellectual property, or pricing --  
7           setting a non-zero price by itself cannot be -- that by  
8           itself cannot be evidence of exercise of monopoly power.

9       Q. No, but indeed it is stating the obvious that if there  
10       were any charges, they would have to comply with  
11       competition law?

12      A. Absolutely. Whatever charges would be, you would want  
13       them to be appropriate for a competitive rate.

14      Q. Now, if we just go on to look at what else you say, in  
15       the next -- in paragraph 382 -- you talk about the DMA,  
16       but at 382 at the bottom of the page you say it may not  
17       be a relevant benchmark for the likely market outcome,  
18       noting it is a complex set of regulatory requirements.

19           Then you say, but Apple might react with various  
20       different options, including for its tools and  
21       technology, and of course I am sure you appreciate that  
22       Apple already charge -- makes an annual charge for the  
23       tools and technology, the developer program fee?

24      A. Well, I would not characterise it as that. It is  
25       a charge for the developer program, and we have had some

1 discussion before, you know, I think Apple stated that  
2 the idea was to try to break even on the developer  
3 program, and if you compare it, for example, to the  
4 prices of developer tools, I think it compares very  
5 favourably for just that, so ...

6 Q. I will not debate with you what the meaning of Apple's  
7 contractual terms are, obviously that is a matter of  
8 legal submission.

9 But you appreciate as well that Apple allows  
10 developers access to its tools and technology even where  
11 they incur no other charging in the form of commission  
12 so that would be free apps or physical services, yes?

13 A. Yes, that is the case. They do -- they facilitate free  
14 apps solely for participating in the developer program.

15 Q. It does that because it obviously helps drives the sales  
16 of its devices and other services, do they not?

17 A. I would certainly agree that is one consideration, yes.

18 Q. You would also accept that on Mr Holt's analysis, at 15%  
19 the App Store would still be immensely profitable, would  
20 it not?

21 A. Again I think we had an exchange -- I think he used  
22 a different word this time -- we had an exchange -- I do  
23 not know if I would say immensely profitable when you  
24 consider again the true rate -- that is the discussion  
25 we just had about the true rate of return on capital.



1 I have no reason to believe they could not earn a profit  
2 at that rate. What that rate should be, whether it is  
3 immense or not, is a separate issue.

4 Q. Okay. But it is pure speculation, is it not, as to what  
5 charge they might impose or at what level?

6 A. Yes, I do not know what charges they would impose. I am  
7 merely pointing out the fact that they could potentially  
8 do so, and again they have configured their charges in  
9 one way and, you know, it is a normal economic way of  
10 thinking about things that if you -- you have an actual  
11 world that is configured in a certain way, you make  
12 a change in circumstances, participants will reoptimise,  
13 and that reoptimise may involve making some choices that  
14 they previously had not made.

15 MR WARD: Thank you. Mr Armitage is now going to ask you  
16 some questions focusing on comparators.

17 Cross-examination by MR ARMITAGE

18 MR ARMITAGE: Good afternoon, Professor Hitt.

19 A. Good afternoon.

20 Q. You have obviously had some discussion this morning with  
21 Mr Hoskins about comparators generally. I am not going  
22 to go back over points you discussed with him. Instead  
23 I would like to go directly to some of the specific  
24 points you make in response to the comparators that  
25 Mr Holt relies on from the PC app distribution markets.

1           Okay?

2           Now, I assume you saw or at least read the  
3           transcript of Mr Holt's cross-examination on these  
4           matters, is that right?

5       A.   Quickly, yes, because I was teaching during that period,  
6           but we can review it if I cannot recall.

7       Q.   Just to give you the roadmap, I am going to cover the  
8           Microsoft Store, the Epic Games Store, itch.io and then  
9           Steam, in that order.

10      A.   Okay.

11      Q.   Just to start with what I hope is a very obvious and  
12           non-controversial point, famous last words, all of those  
13           examples are platforms for distributing applications  
14           produced by developers to end consumers, yes?

15      A.   What were the four?  It was itch.io --

16      Q.   Microsoft Store, Epic Games Store, itch and Steam.

17      A.   Yes, I agree it is that within the PC market.

18      Q.   Within the PC market, and they are all app stores in  
19           short, yes?

20      A.   That terminology -- the App Store terminology really  
21           does kind of date back to the mobile platforms, but  
22           I will agree in the current parlance you could call them  
23           that.

24      Q.   That is fine.  So let us start with the Microsoft Store,  
25           please.  Could we turn up paragraph 411(b) of your

1 second report {C3/4/229}. So yes, if we start at (b).

2 I am going to come to the Epic Games Store afterwards.

3 Do you have that?

4 A. So I am in C3/4/229, the Microsoft Store?

5 Q. 411(b).

6 A. Yes.

7 Q. You see there you say:

8 "The Microsoft Store has historically charged a 30%  
9 headline rate for games and only recently lowered its  
10 headline rate to 12%."

11 Just to be clear, that was in August 2021 I think so  
12 it is three and a half years ago, is it not?

13 A. Yes, that is correct, yes, this -- yes.

14 Q. It had already been charging 15% for non-gaming apps for  
15 at least a number of years before that, yes?

16 A. Yes, they bounced around on non-game apps a bit. I have  
17 the exact dates for all that but yes they have  
18 experimented with some different --

19 Q. Yes, I think we have the exact dates.

20 A. -- charges and in particular reductions in non-game  
21 apps.

22 Q. Thank you. Then you say in the second sentence that:

23 "The Microsoft Store has been criticised for the  
24 prevalence of fake apps, the lack of useful apps in  
25 general, and its slow speed ..."

1           Yes? So you identify three issues there: fake apps,  
2           lack of useful apps, slow speed, yes?

3       A. Yes, those are things that had been identified in the  
4           public press as critiques of the Microsoft Store.

5       Q. Yes, so I would like to ask about some of the press.  
6           You rely on your footnote 650. Could we have that on  
7           the screen, footnote 650. You rely there on three  
8           articles and the most recent of them is from  
9           October 2021. Were those drawn to your attention by  
10          Apple's solicitors?

11      A. No, my research team identified these. We looked for  
12          information about the characteristics of the Microsoft  
13          Store and this is things that they identified.

14      Q. Did your team seek to do a comprehensive review of the  
15          press reporting on quality issues relating to the  
16          Microsoft Store?

17      A. Yes, that was the objective.

18      Q. Have you looked at any more recent articles about the  
19          quality of the Microsoft Store?

20      A. I believe there were some things put into the trial pack  
21          that I did review as well.

22      Q. Let us look briefly then at the articles that you  
23          enumerate in your footnote. I am going to focus on the  
24          ones in this footnote. There are a couple of ones  
25          earlier in your report but I do not think we are going

1 to go to those.

2 The first one is by an organisation called Par  
3 Tremplin Numerique:

4 "... 'Even in Windows 11, the Microsoft Store is  
5 full of scams', 21 October 2021 ..."

6 You have obviously read the article?

7 A. Yes. I mean not recently but yes.

8 Q. Can I ask you who or what is Par Tremplin Numerique?

9 A. I think it is an online news source generally.

10 Q. What do you know about that organisation or their  
11 qualifications to comment on these quality issues?

12 A. Nothing more than they are an online -- a source of  
13 online information.

14 Q. So nothing?

15 A. So I reviewed the article and it seems to have  
16 a reasonable argument, and again to the extent that  
17 I was looking for, you know, what are the perceptions in  
18 the space, that reflects perception.

19 Q. You are relying on this article as providing evidence  
20 that there is an issue with the Microsoft Store and fake  
21 apps and inviting the Tribunal to draw conclusions on  
22 the relative quality of the Microsoft Store and the  
23 App Store, yes?

24 A. I think it contributes to my opinion, yes.

25 Q. So in relation to fake apps, you know that Microsoft

1 does check apps for quality and policy compliance before  
2 allowing them to be published on the Microsoft Store,  
3 yes?

4 A. Yes. Again, how successful that is of course has varied  
5 over time. But yes, I understand that there is some  
6 assessment of apps on the store.

7 Q. In your report you say:

8 "By reference to this article ..."

9 We just saw this in your subparagraph (b), that the  
10 Microsoft Store had an issue with fake apps. You do not  
11 comment on whether this is also an issue that the  
12 App Store has experienced, do you?

13 A. So no, I think my understanding is that the App Store  
14 review is fairly comprehensive and tries to weed that  
15 out, but certainly you cannot get 100% -- you know,  
16 people who want to engage in various kinds of fraud are  
17 very crafty, but I think you can try to limit it.

18 Q. You can try to limit it. You know that Mr Holt cited  
19 evidence that the App Store is itself teaming with  
20 scams, yes?

21 A. Setting aside the phraseology, I would not be surprised  
22 that when you have over a million apps that some of them  
23 are not as they are purported, but I understand that  
24 Apple is particularly aggressive at trying to solve  
25 those problems.

1 Q. Okay, well, let us look at the article that Mr Holt  
2 relies on. It is {D1/1127}. It is an article from the  
3 Washington Post, 6 June 2021.

4 A. Okay.

5 Q. Have you seen this before?

6 A. Yes, I believe so.

7 Q. You I think possibly took issue with my phraseology, but  
8 can you see in the headline:

9 "Apple's tightly controlled App Store is teeming  
10 with scams."

11 Then underneath that:

12 "Nearly 2% of Apple's top grossing apps on one day  
13 were scams - and they have cost people \$48 million."

14 Yes? I am just asking at the moment if you see --  
15 (overspeaking) --

16 A. That is what it says. I want to go down the article if  
17 you want any further comment on it, but that is what it  
18 says in the headline, sure.

19 Q. Yes. It is quite a long article. If we could just look  
20 at the third paragraph, that sets out the basis of the  
21 reporting. You see:

22 "Of the 1,000 highest grossing apps on the  
23 App Store, nearly 2% are scams, according to an analysis  
24 by the Washington Post. And those apps have bilked  
25 consumers out of an estimated \$48 million during the

1           time they have been on the App Store, according to  
2           market research firm app figures. The scale of the  
3           problem has never before been reported. What is more,  
4           Apple profits from these apps because it takes a cut of  
5           up to 30% of all revenue generated through the  
6           App Store."

7           It goes on to give some further detail about  
8           something called "fleeceware".

9           So just on its face -- I am not particularly asking  
10          you to comment on the underlying facts -- this is  
11          evidence from the Washington Post that the App Store has  
12          the same problem that you identify in relation to the  
13          Microsoft Store, is it not?

14        A. So it is what it is, which is it says that there are  
15        fake apps on there, and I think that Apple strives to  
16        make that as little as possible, but certainly you  
17        cannot get all of them through, and then some of the  
18        connections -- you know, the implication, for example,  
19        in this paragraph, that they have an incentive to allow  
20        fake apps in there I think is not correct, but the idea  
21        that they are there, yes, sure, that is going to happen  
22        in any platform that has millions of apps.

23        Q. But we saw in your paragraph 4.11(b), you mentioned the  
24        position in relation to the Microsoft Store, but you do  
25        not do any kind of comparison with the App Store there,



1 do you?

2 A. No, I did not do a comparison, I agree.

3 Q. So back to your footnote -- do you still have that open?

4 A. Yes.

5 Q. Yes, and we can get it on screen again, thank you. So  
6 the next article is by somebody called Preston Gralla:

7 "It's time for Microsoft to kill the Microsoft  
8 Store - or else fix it."

9 That is from a publication called Computerworld and  
10 it is dated 5 June 2019, so well over five years ago,  
11 yes?

12 A. Yes.

13 Q. The complaint which you highlight in your footnote from  
14 the article -- I will just read out the quote, so  
15 beginning third line from the end of the page:

16 "Which of these four things is different from the  
17 others: the iOS App Store, Android's Google Play, the  
18 Chrome browser's Chrome Web Store and the Microsoft  
19 Store built into Windows 10? If you answered the  
20 Microsoft Store, you are right. While the other three  
21 download stores host many thousands of useful apps of  
22 every type and description, and have a thriving, engaged  
23 audience, the Microsoft Store offers very few truly  
24 useful downloads ..."

25 You see that?

1 A. Yes.

2 Q. So that was the second of the two points you  
3 highlighted. We have done fake apps. We are now on  
4 this issue about useful downloads.

5 Then the third and final article is by somebody  
6 called Zac Bowden:

7 "... we need to talk about the Microsoft Store on  
8 Windows 10."

9 So Windows 10 again. That one is dated 5 June 2020,  
10 so that is over four and a half years ago, yes?

11 A. Yes.

12 Q. That is for a publication called Windows Central. That  
13 is presumably a specialist publication that covers  
14 issues to do with Microsoft's Windows operating system,  
15 does that sound right?

16 A. Yes, that is correct. If you search for Microsoft  
17 related things that is a good -- a high likelihood of  
18 getting a hit there.

19 Q. You presumably regard this article as being probative  
20 and informative on these issues, yes?

21 A. I think it is reflective of some online commentary.  
22 Just by itself it is, but I think it -- it reflects the  
23 point that I made in the paragraph.

24 Q. Now, as with the previous article in the footnote, you  
25 see from the quotation that this article refers to:

1           "The Microsoft Store having several issues, the main  
2           one being a lack of apps. This is not helped by the  
3           fact that even Microsoft doesn't put all its apps in the  
4           store."

5           Then there is an example of Microsoft Teams, so that  
6           is the same issue identified in the previous one by  
7           Mr Gralla.

8           Then there is a reference to another issue which is  
9           that the Microsoft Store app is slow:

10          "Clicking on an app takes several seconds to load  
11          ..."

12          So there are two issues there, lack of apps and slow  
13          speed. Again, you refer to those in your -- in the  
14          sub-paragraph in the report, yes?

15       A. Yes.

16       Q. Now, we have seen those articles are quite old. Did you  
17       investigate whether there were any subsequent reports  
18       about these two issues? Because you said you had asked  
19       your team to a comprehensive review.

20       A. I do not recall the last time we did the full scan on  
21       these kinds of things, so it might have been a little  
22       while ago, so ...

23       Q. Okay. Can we look please at {D1/1862.1}. So this is an  
24       article from 17 October 2024 from Windows Central. Can  
25       you see that?

1 A. Yes.

2 Q. So that is the same publication as the one that put out  
3 the Zac Bowden article that you rely on, yes? It may be  
4 you cannot see ...

5 A. I do not think it says that, but I will take your word  
6 for it.

7 Q. I am sorry, I think it is somewhere a bit later in the  
8 article, but I can assure you it is the same  
9 publication, but it is four years more recent, is it  
10 not, than the article to which you refer in your report?

11 A. Yes.

12 Q. On page 2, can we go over the page, now you remember  
13 that the two articles from which you quote -- the second  
14 and third of the three articles you quote -- referred to  
15 an issue on Windows 10. Can you see the heading about  
16 two-thirds of the way down the page, "Fixing the  
17 Microsoft Store on Windows 11", yes?

18 A. Yes.

19 Q. Then underneath the picture there is a reference to the  
20 Microsoft Store receiving a lot of hate over the years,  
21 much of which was justified.

22 "The store shipped with a lacklustre app selection,  
23 poor developer support, and struggled to convert people  
24 to thinking the Microsoft Store was the default way to  
25 install and update applications."

1           The next paragraph, there is a reference to the  
2 gaming experience being even worse than the app  
3 experience at launch and a reference to apparently  
4 another article by their managing editor. You see they  
5 say:

6           "That was back in 2018 and during the days of  
7 Windows 10. Microsoft has made several improvements  
8 since then for both apps and games."

9           Then lower down, just below the blank space:

10          "The Microsoft Store is much faster than it used to  
11 be. It is also more reliable when it comes to  
12 downloading and updating content. Most importantly, the  
13 Microsoft Store is now full of apps and games."

14          Then a contrast is drawn with the early days of the  
15 Microsoft Store.

16          Then if we skim the final paragraph, there is  
17 reference to it being a shame that many ignore the  
18 Microsoft Store, it earned a poor reputation, and:

19          "... I know many people who have never given it a  
20 second chance. But Windows 11 is used by hundreds of  
21 millions of people, so I'm sure there's a fair number  
22 who will use and appreciate the updated Microsoft  
23 Store."

24          But just in terms of the two issues that you  
25 identify that were covered in the earlier article from

1           this same publication, so lack of available apps and  
2           slow speeds, I mean according to this article from the  
3           same publication four years later, both of those issues  
4           have been addressed, have they not?

5       A. I am sure they have tried to make improvements in here,  
6       but I think, you know, just looking at this article you  
7       see a couple of other things. First of all, it  
8       reinforces my earlier point that it was a mess before,  
9       so I think that is true. Second is I think there is  
10      some informativeness in that last paragraph about  
11      quality issues. You know, as soon as you have  
12      a reputation for poor quality, that reputation can carry  
13      on for many years, and so again I think that is -- even  
14      if it is just a perception, that is a concern, and that  
15      would affect the ability of consumers or the likelihood  
16      of consumers to use the store.

17     Q. So just focusing though on the two quality issues that  
18     you identified in your report, you are the one who  
19     relied on this publication. As I say, those issues have  
20     been addressed, steps have been taken to address them,  
21     have they not?

22     A. I certainly would agree that they have tried to improve  
23     the Microsoft Store. That is the case. Have the issues  
24     gone away and have consumers perceived that to be a high  
25     quality platform and comparable to Steam? I have no

1 reason to believe that is the case. But certainly they  
2 have made improvements, Microsoft is known to be  
3 continually innovating, and I am not surprised that they  
4 have tried to address these issues.

5 MR FRAZER: Mr Armitage, just before you go on from that,  
6 I did notice in this article it says "Advertisement" at  
7 the top of each page. Do we need to take that into  
8 account when assessing the weight to be given to that?

9 MR ARMITAGE: I am not sure I had spotted that.

10 MR FRAZER: Is this a paid article, do you think?

11 MR ARMITAGE: It is an article from a publication --

12 MR FRAZER: But if it is a funded article --

13 MR ARMITAGE: -- that Professor Hitt relies on.

14 MR FRAZER: Yes. He has not relied on this one. But if  
15 this is a paid article, then it might actually be  
16 something which has been placed by Microsoft. That is  
17 all I am wondering.

18 MR ARMITAGE: I had not considered it, but I am told it may  
19 just be in-article advertising. We can have a look at  
20 it, if that would be helpful.

21 MR FRAZER: Thanks.

22 MR ARMITAGE: It is not my understanding but of course we  
23 can check.

24 Just going to paragraph 378, please, of your second  
25 report {C3/4/213}.

1 A. Okay.

2 Q. You are talking about the practices of other app  
3 transaction platforms:

4 " ... while the App Store and other app transaction  
5 platforms have all chosen to charge commissions on app  
6 transactions, they also vary in the services and  
7 features they provide in return and in what other fees  
8 they charge."

9 Then see at the end of the paragraph, you say:

10 "Microsoft charges individuals £12 and companies £65  
11 one-time fees to transact PC apps on the Microsoft Store  
12 but then charges separately for some developer tools  
13 such as Visual Studio Enterprise or Video Studio  
14 Professional."

15 A. Yes.

16 Q. I think that should be "or" Video Studio Professional,  
17 yes?

18 A. Yes, you are right. You interpret it correctly.

19 Q. Thank you, I am glad.

20 So in relation to the first point you make about  
21 Microsoft's charges, so the £12 and the £65, those are  
22 in Microsoft's case one-time fees that allow developers  
23 to transact apps on the Microsoft Store, yes?

24 A. Yes.

25 Q. They are broadly equivalent to the one-off fee that --



1           sorry, to the annual fee that Apple charges via the  
2           Developer Program Fee?

3       A. I think that is fair. I have not done the detailed deep  
4           dive on exactly what you get, but it is in the same  
5           frame.

6       Q. So in relation to that, you are not drawing  
7           a distinction with the App Store's approach, are you?  
8           That is not the point you are making here, you are just  
9           pointing out that this is a fee that Microsoft charges?

10      A. Yes, there are fees that various platforms charge.

11      Q. Thank you. But then in relation to Visual Studio, now  
12           that I believe is not a product that is limited to  
13           making Windows apps, it can be used to build apps and  
14           things like web pages for Android and iOS as well.

15      A. Yes, it is --

16      Q. Also for Macs I think, yes?

17      A. Yes, it is part of -- it is one of Microsoft's primary  
18           development tools, I think it targets many different  
19           platforms, but one of the most common uses is for  
20           targeting the Windows platform.

21      Q. So it is -- I am always on shaky ground with this. It  
22           is a piece of software. It is not a API, is the point  
23           I wanted to --

24      A. It is an integrated -- it would be referred to as an  
25           integrated development environment.

1 Q. Yes, I have seen that, IDE?

2 A. Yes.

3 Q. So "software" is not quite right?

4 A. It is a specific kind of software. Software is right,

5 but it is referred to as an integrated development

6 environment, so that would be what a commercial software

7 firm would licence --

8 Q. That is fine.

9 A. -- to give to their developers to produce code.

10 Q. You know that Microsoft also offers a free version of

11 Visual Studio called Visual Studio Community, yes?

12 A. Yes.

13 Q. It is mentioned by Mr Holt. In relation to the two

14 versions of Visual Studio that you do mention, so

15 Enterprise and Professional, as you have clarified, you

16 have not presented any evidence on what Microsoft

17 actually charges for those products, have you?

18 A. No. I have been a licensee of these things and it is

19 not trivial for some of the higher end ones.

20 Q. It is not a royalty based charge, as far as I know, is

21 it?

22 A. No, it is not, it is a fixed fee, but it is -- again

23 I am doing this from memory, but it would be perceived

24 licensing, so you could rack up quite substantial

25 charges, you know \$500 (inaudible).

1 Q. Okay, and there may be volume licensing arrangements and  
2 so on?

3 A. Sorry?

4 Q. Volume licensing arrangements and so on?

5 A. Almost certainly, yes, at least my experience with  
6 Microsoft. Again, I have not investigated this one  
7 specifically, but that would be consistent with their  
8 normal business practices.

9 Q. Okay, thank you.

10 Let us go on to the Epic Games Store, please. So  
11 this is a platform for distributing games that was  
12 launched in 2018, yes?

13 A. Yes.

14 Q. Towards the end of --

15 A. Late 2018.

16 Q. Late 2018?

17 A. It was launched in 2018 at the end of the year.

18 Q. It covers both Windows and macOS games, yes?

19 A. Yes.

20 Q. I think you accepted earlier that it had expressed an  
21 interest in entering the iOS market. In fact I think it  
22 has done that in the EU. There is an Epic Games mobile  
23 app now, I believe.

24 A. I have not investigated that but I will -- I think --  
25 I believe that to be the case.

1 Q. Its charging structure is pretty straightforward as  
2 regards the distribution of games. It charges a 12%  
3 commission on gross revenues, yes?

4 A. That is the commission charge. They do a variety of  
5 other things, but that is the commission charge. They  
6 are also involved in heavily subsidising developers, but  
7 that is the fee.

8 Q. In relation to the functionality of distributing apps it  
9 is the 12% commission?

10 A. Again it is all integrated together. So they for  
11 a number of years were spending significant amounts of  
12 money to get exclusives and things like that, but the  
13 distribution -- the headline rate for them is 12%.

14 Q. No, we will come to the exclusives for sure.

15 Just another factual point. If developers -- sorry,  
16 I will take a step back. Epic allows in-app purchases  
17 on applications transacted through the Epic Games Store,  
18 yes?

19 A. Yes, I believe that is true.

20 Q. If developers use their own payment solution for in-app  
21 purchases, they do not pay any commission to Epic, do  
22 they?

23 A. I think that is currently true. That may have been  
24 a change at some point but I believe that is currently  
25 true.

1 Q. Currently true. So Mr Holt -- you may be able to take  
2 these figures from me. Mr Holt gave evidence that Epic  
3 Games Store had 31.3 million daily active users in 2020.  
4 That is a figure he gives in his --

5 A. I would not disagree. How many was it? 31.5 million  
6 daily active users?

7 Q. 31.3 million daily active users. That was in 2020.  
8 That is the figure Mr Holt cited.

9 A. That would be fine. If you are going to draw inferences  
10 about that, keep in mind that a lot of Epic -- the Epic  
11 Games Store's first party distribution of Epic Games,  
12 that represents a very large fraction of their activity.  
13 I do not know what fraction of the 31.5 million that is,  
14 but in 2022 it is about 60 or 70% of their revenue. So  
15 be careful about how you interpret that, but --  
16 (overspeaking) --

17 Q. I will be extremely careful. I was not actually trying  
18 to draw any inferences at this stage, thankfully. Will  
19 you take from me that that number had grown to a peak of  
20 36.1 million daily active users by 2023? There is  
21 a document in the bundle, Ms Demetriou took Mr Holt to  
22 it, I think. I could turn it up, but are you happy to  
23 take that from me?

24 A. I will take your word for it. That seems plausible.

25 Q. Thank you. Could we look at paragraph 402 of your --

1 still in your second report. In the second sentence --  
2 sorry, in the -- I will give you the full paragraph. So  
3 you say:

4 "... lower commissions charged by Microsoft and Epic  
5 may only reflect the value offered by these  
6 platforms - not the value offered by the App Store, or  
7 iOS, and therefore cannot be used as a competitive  
8 benchmark. In fact, there are important differences  
9 between Mr Holt's alleged comparators and the  
10 App Store ..."

11 You give some examples.

12 Then footnote 629 you say -- can you see you say:

13 "Indeed, as noted above, there are reports that the  
14 Epic Games Store is 'not a good storefront' and does not  
15 offer enough value to consumers."

16 Yes?

17 A. Yes, at various times that was a reported statement  
18 about the Epic Games Store.

19 Q. A reported statement, yes. Just to chase down the  
20 cross-reference, if we go to paragraph 75(a) of your  
21 second report at {C3/4/41} -- sorry, I think I have  
22 given the right paragraph but the wrong page number  
23 {C3/4/50}. Do you have that, paragraph 75(a)?

24 A. Yes.

25 Q. So you say:

1           "The Epic Games Store has charged a headline  
2           commission rate of 12% since it launched in  
3           December 2018."

4           As you say at the end of 2018:

5           "However, there is no current evidence to suggest  
6           that the Epic Games Store is profitable ..."

7           We are going to come to that point about  
8           profitability in a moment, but then you see at footnote  
9           67 you say you understand that to be:

10          "... in part because there are quality issues with  
11          the Epic Games Store and it does not offer value  
12          compared to Steam."

13          Then the citation is an article by somebody called  
14          Paul Tassi for Forbes, yes?

15       A. Yes.

16       Q. That is the article that contains the "Not a good  
17       storefront" quotation, and it was discussed with  
18       Dr Singer and Ms Demetriou I think last week. I do not  
19       need to turn up the article with you now. I think that  
20       is the only report in relation to the quality of the  
21       Epic Games Store that you mention here. I am not saying  
22       it is the only report that exists. Was that again  
23       identified by someone on your team?

24       A. Yes.

25       Q. Again, did you ask somebody to carry out a comprehensive

1 review of press reporting about the Epic Games Store in  
2 relation to quality matters?

3 A. At one point we did, yes.

4 Q. But in this footnote, again you are inviting the  
5 Tribunal to draw conclusions about the quality of the  
6 Epic Games Store in comparison to the App Store on the  
7 basis of really a single article, yes?

8 A. So I think that -- so I am identifying this as one of  
9 the potential criticisms that has been raised about the  
10 Epic Games Store and I think this article encapsulates  
11 that. It is being used for exactly what it is being  
12 used.

13 Q. Thank you.

14 A. That is in the paragraph.

15 Q. Thank you. So you mention -- just in passing, you  
16 mentioned quality adjusted pricing a number of times  
17 this morning with Mr Hoskins. You returned to that  
18 theme with Mr Ward.

19 A. Yes.

20 Q. Just to be clear, though, you have not attempted to  
21 produce a quality adjusted price for Epic or any of the  
22 other comparators Mr Holt relies on, have you?

23 A. No.

24 Q. In your report in fact you cross-refer to what  
25 Professor Sweeting says on that topic, that is right, is



1           it not?

2           A. So, no, I have not attempted to do so. Given there are  
3           a handful of app stores, and many of them have the same  
4           rates, that would be kind of hard to do empirically.  
5           But, yes, the idea that consumers may make choices based  
6           on both the sticker price and quality is certainly  
7           relevant here.

8           Q. Okay. We have seen evidence in this case -- it was  
9           discussed, for example, with Mr Schiller -- that  
10          developers have expressed some frustration about aspects  
11          of the App Store's functionality, are you aware of that?

12          A. Yes.

13          Q. You may recall the issue -- some of those issues as  
14          discussed in the *Epic v Apple* judgment in the  
15          United States in which I think you were instructed by  
16          Apple, yes?

17          A. Yes, I am aware of the *Epic* judgment because I was  
18          there.

19          Q. Can I just show you the passage that I am referring to.  
20          It is at {AB5/7/102}. Perhaps you could just skim-read  
21          to yourself the paragraph beginning "Notably" and then  
22          the bullet points.

23                 (Pause)

24                 Just tell me when you have reminded yourself of  
25          that.

1 A. Okay, yes. This is familiar.

2 Q. So you see the US court there is referring to evidence  
3 in relation to developer dissatisfaction with aspects of  
4 the App Store, yes?

5 A. I think that there do exist developer complaints,  
6 I agree with that. Some of these things are straight  
7 developer complaints, and said yes, we wish it was  
8 better, and some of these may be situations where there  
9 is some conflict between Apple's platform choices and  
10 developers' preferences.

11 Q. Would it be fair to say, though, in your reports, you  
12 point out issues in reporting in relation to Mr Holt's  
13 comparators, but you do not seek to consider the same  
14 issues in relation to the App Store really, do you?

15 A. No, I have considered these, I have certainly considered  
16 these, and certainly there will be developers that  
17 have -- that have concerns. I will note that developers  
18 have routinely made a choice to serve the Apple iOS  
19 platform and that they do so recognising -- one of the  
20 reasons they do so is they monetise at rates vastly  
21 greater than some of the alternatives, and I think that  
22 is a first order effect, but yes, there certainly are  
23 developer complaints.

24 Again, as I said, some of these things are things  
25 that they could potentially remedy, and some of these

1 things are platform decisions where they said "Look,  
2 this is an issue here". For example, discoverability is  
3 an interesting point, right. Developers would prefer  
4 fewer alternatives, consumers would prefer more. So  
5 being on a platform with millions of apps, it is not  
6 surprising that some developers may be upset that their  
7 app is lost in the other 50 apps that do similar things,  
8 but that is not necessarily something they want to  
9 remedy. They might want to try to improve and make  
10 discoverability easier, but it is very easy to see why  
11 developers might be concerned about things like that.

12 Q. I am just going to suggest to you, Professor Hitt, you  
13 are quick to point out issues with the comparators  
14 Mr Holt relies on and you do not present the comparative  
15 picture in your report, do you?

16 A. So I did not try to do -- so it was not something  
17 I tried to do, which is to go through point by point and  
18 say "Has this been raised here?" I have a general  
19 understanding of the App Store as viewed as a high  
20 quality transaction platform that has been preferred by  
21 developers and I have chosen to use this. But yes,  
22 there are going to be problems with every platform,  
23 I agree.

24 Q. Thank you. Now, I think you said you had at least  
25 quickly read Ms Demetriou's cross-examination of

1           Mr Holt?

2       A. Yes, very -- again, I was teaching for a big chunk of

3           that so it was very quickly --

4       Q. I am not going to ask you exam questions about it,

5           I assure you. But one of the things she did was to show

6           him an article from a magazine called PC Gamer which

7           I think I remember from my childhood. It was from

8           January 2024. It was not very complementary about the

9           Epic Games Store. Do you know the article I am

10          referring to?

11       A. It would probably be good for you to show it to me.

12       Q. Okay. I will just show you briefly the one that

13          Ms Demetriou took Mr Holt to. It is at {D1/1671}. It

14          is reviewing PC Gaming's many "launchers", which I think

15          means the platforms. The heading says "... Steam still

16          puts the rest to shame". You see that is January 30th

17          2024, somebody called Robin Valentine?

18       A. Yes.

19       Q. Have you seen this before?

20       A. Yes, I believe so, but again I think I read it recently

21          but relatively quickly, so --

22       Q. It is not a particular criticism, but this is not an

23          article you refer to in your report, I do not think?

24       A. No, it is not. I am pretty sure it is not.

25       Q. Thank you. Again, I appreciate you read the transcript

1           quickly. I do not know if you spotted that Ms Demetriou  
2           put it to Mr Holt that the Epic Games Store was  
3           "absolutely dreadful", to use her words?

4       A. I think I -- yes, I recall that generally but --

5       Q. Okay, thank you. Can I show you a different article.  
6           It is {D1/1584}. This is from a different specialist  
7           publication called PC Mag. Do you see that at the top?

8       A. Yes, another thing from our childhood.

9       Q. Yes, sorry, I should just -- you see at the top it has  
10          a reference to selecting and reviewing products  
11          independently.

12                Mr Frazer, I am told, on your query about the  
13          previous article, it was not a paid for advertisement.  
14          I appreciate that is just me telling you that, but those  
15          are my instructions.

16       MR FRAZER: Thank you.

17       MR ARMITAGE: That was not the reason it said "Advertising"  
18          on it.

19                So this article -- you see the title is "The best  
20          places to buy and rent PC games online in 2024", and  
21          yes, could we go to page 14 within the article. It says  
22          "Epic Games Store", and can you see it is given a score  
23          of 3 and the review is "Good". Yes?

24       A. Yes.

25       Q. Then below what I think should be an image, "Why we

1       picked it", you see there is some description of the  
2       Epic Games Store, striving to rival Steam and becoming  
3       the first place you go to:

4               "It is not quite there yet but the platform's  
5       selection of timed exclusives has made it a major part  
6       of the conversation."

7               Then under "Who It's For", there is a reference to  
8       missing some games and basic --

9               "... too many games and basic features for us to  
10      wholeheartedly recommend it, but it does have worthwhile  
11      aspects."

12              Then some of those worthwhile aspects are enumerated  
13      there.

14              I am just making a very limited point to you,  
15      Professor Hitt. This specialist publication does not  
16      share the view that was put to Mr Holt by Ms Demetriou  
17      about the Epic Games Store, does it?

18      A. So again I will not comment on the specific language.  
19      It certainly is not as highly rated as Steam, so I think  
20      that is one point. I think the "Who It's For" underlies  
21      another point that I had, which is they may be very  
22      successful in distributing first-party titles, but the  
23      question is the extent to which they are effective in  
24      third-party I think is a little less certain, but again  
25      I think that is consistent with my general view on that.

1 Q. Okay. I mean at the end of the day, this really  
2 illustrates the problem with relying on selected  
3 articles containing subjective views from particular  
4 authors, does it not, because you have one reviewer  
5 taking one view, you have another reviewer taking  
6 a different view; you agree with that?

7 A. Yes. I think that you will find a variety of opinions,  
8 but I think in aggregating them you can get a general  
9 sense for what is being said. But keep in mind what the  
10 use of this is. So the comparison of my numbers versus  
11 Mr Holt's, one of the things I am saying is you do have  
12 to consider quality differentials. He has omitted that  
13 from his comparison and, as a result of that, I think  
14 that that gives you a potentially incorrect conclusion.

15 Now, how to account for that; that is going to be  
16 challenging. But I think what this indicates is that  
17 there definitely is some sense of quality variation and  
18 that quality is important and that that needs to be  
19 accounted for, and he has not done so.

20 Q. Well, you talked about aggregating these sorts of bits  
21 of evidence and that becoming more probative. I mean,  
22 you have not done that in your report in relation to the  
23 Epic Games Store, have you?

24 A. I have described the reasons why I think there may be  
25 quality issues on some of these platforms, and I do --

1           and I think it is important to do these things on  
2           a quality adjusted basis, and that the failure to do so  
3           may give you a misleading impression of the difference  
4           between 30 and 12, at least in the Microsoft Store case,  
5           and then there is a separate set of issues that may be  
6           related to Epic regarding subsidies, lack of  
7           profitability and things like that, that might make that  
8           comparison not apples to apples, as they say.

9           Q. Or Apple's to Epic's. I will certainly ask you about  
10          profitability in a moment, but just briefly on the  
11          subject of itch.io, which is related in a way to Epic,  
12          because again Ms Demetriou cross-examined Mr Holt about  
13          Epic allowing stores within a store -- I think actually  
14          that is a phrase you use in your report. So she  
15          referred, you may have seen, to some evidence about  
16          itch.io being available through Epic and then having  
17          some somewhat unsavoury apps available on its  
18          storefront, did you see that?

19          A. Yes, I -- yes, I understand that is an issue, that while  
20          Epic has a review process on there that they also  
21          allowed itch.io on there, and itch I do not believe has  
22          a review process, and so that led to some interesting  
23          games or things winding up on the Epic Games Store.

24          Q. itch.io is another of the comparators considered by  
25          Mr Holt. Just on the factual point, it has a default



1           commission of 10%, albeit that it has flexibility in  
2           allowing developers to effectively choose the revenue  
3           split with the platform, is that right?

4       A.   That may not be all of the story, but I think that is  
5           part of the story.

6       Q.   Okay. It is enough of a story for my purposes for now.

7       A.   Yes, well, there may be some other issues. If you are  
8           going to draw the comparison between 30 and 10, there  
9           are some other issues I would want to look in my reports  
10          to get some recollection on -- (overspeaking) --

11      Q.   I am just focusing on -- I am sorry, I did not mean to  
12          talk over you.

13      A.   If you are just making a statement that that is  
14          something Mr Holt has identified, I think that is fine.

15      Q.   Yes, it is in relation to this specific point concerning  
16          the Epic store.

17                So Professor, have you done any investigation into  
18                whether there have been any similar reports or issues in  
19                relation to children being exposed to inappropriate apps  
20                on the App Store?

21      A.   So I am aware -- so I have not done any detailed  
22           investigation into that. I am aware that that has been  
23           an issue from time to time. But in general, Apple under  
24           its policies restricts adult content which is not  
25           uniformly true for other platforms.

1 Q. But there is no analysis of that issue or certainly not  
2 comparative analysis in your report, is there,  
3 Professor Hitt?

4 A. No. I think that -- you know, given this context and  
5 the way my report is written, that would probably fall  
6 more on the technical experts who would be looking at  
7 the specific policies in greater detail --

8 Q. Okay.

9 A. -- but I did not do it, no.

10 Q. Thank you. Can we turn up {D1/1152.1}. Can you see  
11 there is a document there from an institution called the  
12 "Tech Transparency Project", dated 25 August 2021?

13 A. Okay.

14 Q. You see the heading "Apple's App Store loopholes put  
15 children at risk", yes?

16 A. That is what it says.

17 Q. I am just going to show you a few things that it says.  
18 So underneath the picture you see there is a reference:  
19 "Apple just announced new steps to flag child sex  
20 abuse images on iPhones. But a TTP investigation shows  
21 that Apple's App Store is rife with child safety  
22 problems."

23 Then over the page there is a reference to -- second  
24 paragraph:

25 "... a new investigation by the technical

1 transparency project ... shows that Apple is failing to  
2 take even the most basic steps to protect children in  
3 one of its core profit engines: the App Store."

4 Reference to:

5 "The investigation reveals major holes in the App  
6 Store's child safety measures, showing how easy it is  
7 for young teens to access adult apps that offer dating,  
8 random chats, casual sex, and gambling, even when Apple  
9 knows the user is a minor."

10 Then two paragraphs on:

11 "Using an Apple ID for a simulated 14-year old, TTP  
12 examined nearly 80 apps in the App Store that are  
13 limited to people 17 and older - and found that the  
14 underage user could easily evade age restrictions in the  
15 vast majority of cases."

16 Then there is a reference to some troubling  
17 findings: a dating app opening directly to pornography,  
18 adult chat apps with explicit images that never asked  
19 the user's age, and reference to a gambling app that let  
20 the minor account deposit and withdraw money.

21 Then can we go over the page. Can you see just  
22 above the picture:

23 "TTP's test showed a 14-year old had easy access to  
24 these and other apps ..."

25 UberHoney, Eros, Hahanono - Chat and Get Naughty,

1 Cash Clash Games: Win Money, Anonymous Chat for Two, and  
2 so on.

3 It is quite a long document, I should say, and I am  
4 not obviously asking you to comment on the factual  
5 points in this report, but I am going to suggest to you  
6 it again illustrates a problem with your approach. So  
7 you identified one article criticising the Epic Games  
8 Store. I have already shown you a different article  
9 suggesting a different view about the quality of the  
10 store. Apple makes a point about itch.io coming through  
11 the door and exposing children to inappropriate apps,  
12 and I have shown you something expressing serious  
13 concerns about the App Store in that regard.

14 I am just going to suggest to you, you probably do  
15 not agree, you do not have a good evidential basis for  
16 saying that the Epic Games Store is systematically worse  
17 in quality terms than the App Store, do you?

18 A. So again, quality is -- you have to evaluate, but there  
19 is both vertical and horizontal issues related to that.  
20 So strictly no, but the idea that you do need to  
21 consider quality issues I think is an issue.

22 Just regarding this contrast here, this particular  
23 point is not the point I was making. The point I was  
24 making is that Epic Games Store has permitted at  
25 least -- again, things can change, but Epic Games Store

1 has permitted things like itch.io that have no app  
2 review whatsoever, and that raises these kinds of risks.  
3 Certainly in a platform that has potentially millions of  
4 games you are going to have certain issues, and there  
5 may be app developers that have incentives to try to  
6 evade these various kinds of rules in various ways.  
7 That is not something I was heavily studying.

8 My point on itch.io is a very simple one, which is  
9 that while Epic Games Store does have the ability to do  
10 App Review, they have also created the opportunity for  
11 problems by allowing the store within a store, and that  
12 is the focus of my discussion on that point.

13 Q. I am of course not going to debate the technical issues  
14 about App Review and how that might look in the  
15 counterfactual with you.

16 Could we talk about Epic's Unreal Engine which you  
17 mention in your report. So that is a -- again I am on  
18 very unsteady ground -- a games engine that you actually  
19 use for making computer games, is that right?

20 A. Sort of. The Epic -- so it is a games engine that the  
21 actual -- the code runs on the platform that runs the  
22 game. There is also, I suspect wrapped in that is also  
23 the development process. So it is a piece of software  
24 that facilitates the running of the game as well as  
25 development. Again, I don't know how Epic divides that

1           exactly, but the Unreal Engine is a game engine. It is  
2           the underlying technology infrastructure that the game  
3           runs on.

4       Q.   Some extremely well-known games have used it, like Call  
5           of Duty, I think. Does that sound right?

6       A.   I do not know about Call of Duty, but I have played  
7           a number of games on Unreal Engine so --

8       Q.   Okay, I learned the other day via the well-known  
9           resource for teenage boys, the Guinness Book of Records,  
10          that it is the most successful video game engine ever,  
11          apparently.

12      A.   It is quite good. I will agree that Unreal Engine is  
13          quite good.

14      Q.   Thank you. It can be used to make games for PCs, but  
15          also for Macs, Android and I think even iOS, yes, for  
16          different versions?

17      A.   Again I do not recall all the platforms that Unreal  
18          Engine targets, but yes, it is a -- there exist game  
19          engines like Unreal Engines, and there are others like  
20          Infinity that enable developers to write code and run it  
21          on many platforms, although there may be some  
22          adjustments needed for every individual platform to get  
23          the kinds of performance you want, but that is the idea.

24      Q.   Okay, but it is -- again, it is a games engine and not  
25          an API, is it not? It is a different kind of thing.

1       A. It kind of blurs the difference, right, because what  
2       these game engines do is they expose functionality that  
3       enables programmers to write games, so there is -- I do  
4       not think it is -- I do not think you would technically  
5       call it API, but it does many of the same things. It  
6       gives you facilities that game developers can call on to  
7       make their games work.

8       Q. Okay. Could we go to paragraph 405 of your report  
9       {C3/4/224}, paragraph 405. You see you say there:

10       "... while Apple provides royalty free access to all  
11       of its developer tools, such as its metal API, other  
12       platforms charge developers a royalty for accessing  
13       their intellectual property ..."

14       Then Epic Games' Unreal Engine is the example that  
15       you give, and you say it charges a 5% royalty on  
16       revenues owned by developers who use the Unreal Engine,  
17       yes?

18       A. Yes.

19       Q. It is right, is it not, that it only -- in fact you say  
20       here it only charges the 5% royalty when developers use  
21       Unreal Engine but then choose not to distribute their  
22       game via the Epic Games Store, yes?

23       A. Yes, so there is also a minimum revenue cap.

24       Q. Yes, quite right, yes. I think the point you are  
25       getting at here is that in a counterfactual in which iOS

1 App developers are distributing apps not via the  
2 App Store, Apple may have an incentive to charge  
3 separately for its famous tools and technologies, yes?

4 A. Yes, that is the point, that this represents tools and  
5 technologies. This is an example of a familiar  
6 developer charging for their tools and technologies and  
7 that is the point being made.

8 Q. So in terms of the general proposition about what Apple  
9 would do in the counterfactual, you discussed that with  
10 Mr Ward and I am not going to go back over that, but  
11 I do just want to explore the Unreal Engine comparison  
12 a bit. So suppose you have a developer who uses the  
13 Unreal Engine to build a new PC game.

14 A. Okay.

15 Q. So if it -- let me check I have got this right. If it  
16 chooses to distribute -- sorry, if it chooses to  
17 distribute the game via a platform other than the Epic  
18 Games Store, so it could be Steam, it could be  
19 Microsoft, it could be even its own website, in those  
20 circumstances it will pay a 5% royalty to Epic once its  
21 sales hit a certain level, yes?

22 A. That is my understanding, yes.

23 Q. But in that situation, absent the 5% royalty, Epic would  
24 get no compensation, no benefit at all out of the  
25 developer's use of its software, would it?



1       A. That is not obvious. So it depends on what you are  
2       thinking, but, for example, you know, many developers  
3       make these kinds of tools available for free to build up  
4       the community of developers who are capable of coding in  
5       these engines. Also just the -- you know, if you are --  
6       if you have watched, they also -- the splash screen uses  
7       Unreal Engine, it is typically there as well, so it is  
8       promotional benefit as well.

9               So they may get some benefit. I will agree it is  
10       not a direct revenue contribution, but certainly the  
11       idea that they want these tools to be in widespread use  
12       is certainly of potential benefit to them.

13       Q. Then think instead of the position of a developer making  
14       a game on iOS. Now suppose first of all you are in  
15       a counterfactual which is the same as the actual world,  
16       so the App Store is the only way of distributing iOS  
17       apps in this counterfactual. The only difference is  
18       that Apple charges a 15% headline rate instead of a 30%  
19       headline rate, okay?

20       A. Okay.

21       Q. So we are in that world. In that counterfactual Apple  
22       still gets the 15% commission on all paid downloads and  
23       all in-app purchases of apps, yes?

24       A. That is what you have hypothesised so --

25       Q. Yes, exactly, in that hypothesised counterfactual. I am

1 not arguing with you about the amounts, what the  
2 commission is for, but you accept that that is the case  
3 in this -- in that hypothesised counterfactual, yes?

4 A. That is your example, yes.

5 Q. Thank you. Now if we tweak the counterfactual a bit, we  
6 do now have some rival iOS App stores in the market. In  
7 that counterfactual developers are likely to place their  
8 apps on both the App Store and other rival app stores,  
9 are they not?

10 A. I would not venture "likely", but some could choose to  
11 do so. Some may choose not to do so.

12 Q. Some may choose not to do so. So Dr Singer gave  
13 evidence in his report that he would expect most if not  
14 all iOS apps to seek to have a presence on the App Store  
15 in the counterfactual. Do you have a particular reason  
16 to disagree with that or you just --

17 A. So again -- I mean I have access to some of the  
18 information that Dr Singer has from some of his other  
19 activities, but my sense is that in environments where  
20 there are multiple platforms, that not every developer  
21 lists on every one, and I disagree with his principal  
22 argument there that simply having a lower price would  
23 attract, because it has to be done on a quality adjusted  
24 basis, and developers might have other reasons why they  
25 might prefer to stay on the App Store or some other

1 platform.

2 Q. Let me put it to you like this: at least a reasonable  
3 proportion of developers would have an incentive to be  
4 present on multiple app stores in any counterfactual,  
5 yes?

6 A. An incentive. Whether they choose -- whether that is an  
7 incentive that is sufficient to cause action, I cannot  
8 say.

9 Q. Okay. In that world, Apple will obviously still get  
10 a commission on all the sales that are made through the  
11 App Store, yes?

12 A. Yes, in that world.

13 Q. It is only if the developer chooses not to distribute  
14 through the App Store at all that Apple does not get the  
15 commission, yes?

16 A. Yes, again in your hypothetical I think I understand  
17 that would be the case.

18 Q. Thank you. But even in that counterfactual, the app is  
19 still going to be on iOS Devices, yes?

20 A. Again I think you -- you have assumed that, so yes.

21 Q. Okay, thank you. It is not going out of the iOS  
22 ecosystem altogether, is it?

23 A. No.

24 Q. On my assumed counterfactual?

25 A. No.

1 Q. So suppose this app is a bit of a hit, like the  
2 Candy Crush example which I think lots of people seem to  
3 like, Apple benefits from popular apps like that being  
4 available on its ecosystem and on its devices even if it  
5 does not get a commission, does it not?

6 A. Yes, but keep in mind -- you know, again in your  
7 counterfactual that is true, but Apple has configured  
8 their existing ecosystem with a certain set of charges  
9 for various things. That is also present there as well  
10 and they have, despite that benefit, decided that -- at  
11 least for the purposes of their platform, they are going  
12 to charge that fee. So I will agree that yes they get  
13 a benefit from it, but again in the real-world they have  
14 chosen to charge for that service, despite the fact that  
15 maybe they might have even more of that benefit but that  
16 is a decision that they have made at the platform level.

17 Q. Okay, thank you. So let us move on to profitability.  
18 So you make the point that the Epic Games Store is not  
19 currently profitable, for example you say that -- we saw  
20 that in an earlier part of your report.

21 A. Yes.

22 Q. Is it your evidence that comparators need to be  
23 profitable in order to be informative?

24 A. So I do not think I would use that as a hard rule.

25 I would say every comparator should be evaluated based

1           on its own merits and if you are -- if you are doing --  
2           one of your comparators is an entity that is clearly  
3           engaged in trying to build their market, you do not  
4           necessarily want to treat their headline commission rate  
5           as if it was the competitive equilibrium market price.  
6           I think that is the fallacy. Again I think you have to  
7           evaluate each one of these things on its own basis, but  
8           the fact that Epic is willing to operate at a loss says  
9           something about whether or not 12% is a counterfactual  
10          market price.

11       Q.   Okay, so is your evidence that a 12% commission would  
12           not be profitable for the App Store?

13       A.   I have not done that comparison. I would suspect  
14           that -- again, it depends on what profitability means  
15           and what entity you are talking about.

16       Q.   Okay, fine.

17       A.   So again that would be delving into the --

18       Q.   Fine, you are leaving that to others.

19       A.   -- accounting world.

20       Q.   Okay, that is fair. You are leaving that to others. So  
21           you agree, would you, that Epic's strategy for  
22           competitive entry in this market was to spend lots of  
23           money on minimum guarantees to entice developers to  
24           distribute their games exclusively through the Epic  
25           Games Store, yes?

- 1 A. I think that was part of their strategy, yes.
- 2 Q. There is evidence that it spent I think \$444 million in  
3 minimum guarantees in 2020 alone. We do not need to  
4 turn it up, but that is from an article you cite in your  
5 report at footnote 649?
- 6 A. Yes, I was trying to remember where that figure comes  
7 from and whether I can use that but -- (overspeaking) --
- 8 Q. It is in the *Epic* judgment in the US as well.
- 9 A. Okay.
- 10 Q. I think therefore not confidential. So its competitive  
11 strategy then has been to incur an upfront loss with  
12 a view to establishing a foothold in this market, yes?
- 13 A. I think that is part of their thinking. I think -- that  
14 they are engaged in penetration pricing, number 1, and  
15 they have a strong incentive because they have the  
16 ability to use the platform for first party  
17 distribution, and so I think that is two special things  
18 about Epic.
- 19 Q. It considers the 12% commission to be a viable part of  
20 that competitive strategy, yes?
- 21 A. I think that they have a strategy to try to bring people  
22 over to Epic Games by a combination of subsidies and  
23 that price and some -- you know, the marketing efforts  
24 they have done, and the incentives to do so, because  
25 they think it will be profitable for them, not

1 necessarily profitable for them as a stand-alone  
2 third-party app store but certainly profitable for them  
3 in terms of their overall business.

4 Q. Okay, and it has maintained that 12% rate now for over  
5 six years, yes?

6 A. Yes, as far as I know, yes.

7 Q. We know that Microsoft in 2021 reduced its commission to  
8 12% on gaming apps, so to bring it to the same level as  
9 the Epic Games Store, yes?

10 A. Yes.

11 Q. Having previously been charging 30%?

12 A. Yes, and a bunch of different things but not for very  
13 long, but yes, you can think of Microsoft as having --  
14 for at least games going from 30 to 12.

15 Q. I did not understand the reference to a bunch of  
16 difference things there, sorry. Can you explain that?

17 A. So Microsoft is odd because they experimented with  
18 a whole bunch of commission structures that did not stay  
19 for very long. If you actually look at my report, there  
20 is like five or six rows in the Microsoft thing because  
21 they experimented with things and then they went back,  
22 but their current rate is 12% for games.

23 Q. Okay, I understand I think. Yes. Yes, okay, sorry,  
24 that is the position with Microsoft coming down to that  
25 level from 30%. Now, Dr Singer made the point when he

1           was being cross-examined that he considers 12% to be  
2           more than sufficient to cover the marginal cost of  
3           distributing apps via the Epic Games Store, and you do  
4           not dispute that, do you?

5       A. I think that Epic has suggested that the -- that is  
6           above marginal cost. It is not something  
7           I investigated. Again that goes into the accounting  
8           world.

9       Q. But you do not dispute it?

10      A. I do not dispute it. I do not know if that is the --  
11           again I do not believe this is a world where you expect  
12           price to be driven down to marginal cost, so -- but  
13           I have no -- nothing to suggest that 12% is not above  
14           the marginal cost.

15      Q. Thank you. The minimum guarantees that Epic is  
16           providing to developers are valuable to developers, are  
17           they not?

18      A. Yes.

19      Q. You have not analysed or factored any of that in when  
20           considering the value provided by the Epic Games Store,  
21           have you?

22      A. So I have not done -- I note that that is one of the  
23           reasons why Epic -- Epic may be different for three  
24           reasons, one is they are trying to build share, one is  
25           that they are willing to engage in these kinds of



1           exclusivity agreements, and the third is that they can  
2           cross-subsidise first party sales. I think that is what  
3           I considered. I am not trying to adjust the 12% for  
4           each of those things, I am just saying that the  
5           comparison between 12 and 30, given the circumstances,  
6           I do not think is reasonable.

7       Q. You appreciate that Mr Holt's view and the CR's view is  
8       that it is reasonable, yes, but you disagree with that?

9       A. That they said that they thought it is a reasonable  
10      thing to do? I think that is part of their approach.  
11      So I would -- yes, I would say that they say that that  
12      is something you can do and I think I do not think that  
13      is correct.

14     Q. Okay. Let us -- sorry, there is a point I forgot to  
15     mention in relation to Microsoft. It is right, is it  
16     not, that Microsoft -- although it charges 12% for PC  
17     games, it charges 30% for games distributed via the Xbox  
18     Store, does it not?

19     A. That is correct, yes.

20     Q. In relation to the Xbox Store, I think you agreed with  
21     this, this morning with Mr Hoskins, the Xbox Store is  
22     the only platform for the digital distribution of Xbox  
23     games, is it not?

24     A. Yes, I believe that is the case, and I am not aware of  
25     any significant quality issues. I think it is -- but

1           yes, it is the sole distributor of Microsoft games that  
2           go through digital distribution. You can also buy codes  
3           and you can also by discs, but that is the digital  
4           platform for the Xbox.

5       Q. You have not done a detailed quality or other analysis  
6       of competition in that market, have you?

7       A. No. I simply note that that is a -- that that market  
8       has included headline rates of 30%. I think that is  
9       discussed in my reports. I did not try to do a --  
10      you know, any kind of quality adjustment there. I am  
11      not aware of anything that would suggest that people  
12      view the Xbox platform, for instance, as having poor  
13      quality, but that is not a detailed investigation I did.

14     Q. Okay. Now let us --

15     A. Sorry, when I mean Xbox platform, Xbox platform for the  
16     Xbox. I think they have renamed -- at various times  
17     they have called their PC distribution Xbox Live or  
18     various things like that.

19     Q. Yes, that confused me -- yes, exactly. Talking about  
20     the Xbox console, yes.

21           Could we turn to the last of the comparators and  
22           then there may be a few discrete topics at the end:

23           Steam. Now, Steam is a -- in fact the major player  
24           in the PC game distribution market, is it not?

25     A. Yes.

1 Q. I think you cite a figure of worldwide sales of  
2 \$8.8 billion in 2023?

3 A. Sorry, could you give me the reference?

4 Q. It is paragraph 411(c) of your second report. Do you  
5 want to look at it?

6 A. Let me just take a moment to catch up. {C3/4/230}.

7 Yes -- yes, let me see what the reference is.

8 Q. First sentence.

9 A. Based on that data source, 8.8 billion.

10 Q. Now, the factual position is that Steam had been  
11 charging 30% I think for possibly even decades until  
12 November 2018 and then it introduced the new charging  
13 structure around the time of Epic's entry, and what  
14 happened was that it went down from 30% to 25% for  
15 developer revenues between 10 and \$50 million per game,  
16 yes?

17 A. Yes, that is correct.

18 Q. It went down to 20% for developer revenues above  
19 \$50 million per game, yes?

20 A. That is also correct, yes.

21 Q. You understand that Mr Holt is relying on Steam's  
22 headline rate for large developers of 20% as his upper  
23 bound for the counterfactual commission. He actually  
24 says the likely commission would be lower at 15%, the  
25 most likely counterfactual commission. That is just

1           his -- that is his case. I am not asking you to agree  
2           with it. You understand that is his case, yes?

3       A. Yes, I understand that is correct.

4       Q. There was some discussion this morning with Mr Hoskins  
5           about suggestions that Steam itself may have market  
6           power. Do you remember talking about that earlier?

7       A. Yes, there have been allegations to that effect, yes.

8       Q. Yes. In fact I think there is a case proceeding in this  
9           tribunal at the moment which makes allegations of that  
10          kind. I think it is still at the pre-certification  
11          stage. You probably do not know about that but --

12      A. I was not aware about that, but I am aware of the US  
13          class action.

14      Q. You said this morning you did not know if Steam had  
15          market power, it was something you just have not done  
16          a competitive analysis of, is that right?

17      A. That is not something I have done I have not done an  
18          independent evaluation of Steam. I know those  
19          contentions are floating around there. In fact, I think  
20          literally every game platform has had some -- almost  
21          every game platform has had those kinds of allegations  
22          at various times.

23      Q. Console game platform.

24      A. Console, console, yes. Console, Steam, Apple, Google,  
25          so ...

1 Q. Okay. So you have not done a competitive analysis, but  
2 insofar as Steam does have at least some market power,  
3 would you accept that is something that is likely to  
4 enable it to maintain higher commission rates than other  
5 PC distribution platforms?

6 A. So if they had market power that certainly would --

7 Q. If they had market power.

8 A. If they had market power that certainly would contribute  
9 to it. I will note that that Steam 30% commission has  
10 been around for a very, very long time and so that has  
11 been basically the rate that they have charged for  
12 a very long time, I think up until 2018  
13 (overspeaking) --

14 Q. Until Epic entered the market, yes.

15 A. Well, you are attributing -- as long as you are not  
16 attributing causality to that connection. I think there  
17 are many -- I think the reason they chose to lower it  
18 has many factors in it and we do not quite know what the  
19 causal connection is, but certainly the timing is --  
20 your timing is accurate.

21 Q. Right. I thought you accepted this morning it was at  
22 least partially down to competition.

23 A. I think it could -- yes, I think part -- I think that  
24 might have been one consideration. I think there are  
25 some other considerations as well and it was not related

1 to Epic but related to the general ability to engage in  
2 first party distribution.

3 Q. Fine, but you -- as you said this morning, you have not  
4 done a detailed competitive analysis of Steam and its  
5 prices, yes?

6 A. That is correct. I have reviewed materials on Steam,  
7 I have read some of the reports in the US Class Action  
8 that has some additional information about Steam, but  
9 I have not done my own competitive analysis for Steam.

10 Q. Okay. Could we look at paragraph 200(d) of your second  
11 report at {C3/8/106}. It is probably a wrong reference  
12 again, sorry. Yes, sorry, it is a dud reference. Bear  
13 with me a moment please, Professor Hitt.

14 (Pause)

15 We are doing well for time, so please bear with me  
16 while I find the correct reference.

17 (Pause)

18 Maybe you can help me, Professor Hitt. There is  
19 a part of your report where you refer to a survey in  
20 relation to Steam's commission rates. That is the  
21 elusive paragraph I am looking for.

22 I am sorry, we are in your third report, that is  
23 why. So I actually had everything right and I just  
24 cannot read my own notes {C3/8/106}. Do you have that,  
25 Professor Hitt?

1 A. Let me just get caught up. That looks right, yes.

2 Okay, I am there.

3 Q. So yes, paragraph -- in fact it is paragraph 200(a) --  
4 let us start on the preceding page there {C3/8/105}. I  
5 will just give you the context, so 200(a). So you are  
6 talking about Mr Holt's reliance on developer surveys in  
7 relation to the quality of the App Store, yes?

8 A. Yes.

9 Q. Then if we go over the page to page 106 {C3/8/106}, the  
10 one that I could not find, you say:

11 "... Mr Holt ignores findings from other surveys  
12 indicating that developers have similar complaints about  
13 other platforms, including those identified as  
14 reasonable comparators to the App Store by Mr Holt. For  
15 example, Mr Holt cites to Steam's 20 percent commission  
16 rate for its largest games as a competitive rate."

17 Sorry, then you say:

18 "However, survey evidence suggests that only 27% of  
19 developers view 20% as a justifiable commission rate for  
20 Steam, even if it were applied to all games on the  
21 platform (which it is not)."

22 Then at footnote 375 you cite a survey by something  
23 called the "GDC State of the Industry Survey", covering  
24 nearly 4,000 developers, and then you give some details  
25 there.

1           Then coming back up to the text you say:

2           "Ultimately, the developer survey responses Mr Holt  
3           relies on simply suggest that developers would prefer  
4           paying lower commission rates. It sheds no light  
5           whatsoever on whether the commission rates they pay are  
6           commensurate with the value they obtain from the  
7           App Store."

8           Now, in relation to the Steam survey, whose findings  
9           you cite, did you look at any other surveys by the same  
10          organisation; do you remember?

11         A. I may have. I think this -- this is clearly the one  
12          that I used here.

13         Q. Yes.

14         A. I may have seen that organisation before.

15         Q. Okay. You are saying that some weight can be attached  
16          to this survey, are you?

17         A. So I think it is -- again, for the uses I am making of  
18          it, which is to say, you know, if you look at and you  
19          ask developers "Do you think you are getting a fair  
20          rate?", you are going to get people who say "I would  
21          prefer lower prices to higher prices" and the point  
22          being that that is not surprising in any way.

23         Q. Okay. Can we look at just one other survey by the same  
24          organisation but from 2021. It is at {D2/879.1}. Do  
25          you see there "State of the Game Industry 2021"?



1 A. Okay.

2 Q. Can you see there is a reference to it being  
3 a "tumultuous year", reference to the pandemic, then in  
4 the second paragraph:

5 "With that backdrop, we asked over 3,000 game  
6 developers about their work."

7 Then there are some summaries of the findings. Can  
8 we just go on to page 26 within the document please,  
9 {D2/879.1/26}. Can you see the heading:

10 "Only 3% of those polled think the 30/70 revenue  
11 share on digital store fronts is justified."

12 Then there is a reference in the first paragraph to  
13 various store fronts, including the App Store, and then  
14 can you see the heading of the sort of horizontal  
15 bar chart: "What do you think is a justifiable amount of  
16 your game's revenue for digital store fronts, (eg Steam,  
17 Epic Games Store, App Store) to take?"

18 Do you see that?

19 A. Yes.

20 Q. So developers -- the 3,000 developers we saw at the  
21 start were being asked what they think is a justifiable  
22 revenue split, yes?

23 A. That is what the question -- that is what the question  
24 says: "What do you think is a justifiable amount of your  
25 game's revenue for digital store fronts ..."

1 Q. They are not being asked "How much would you like to pay  
2 in an ideal world", are they?

3 A. Well, that is -- what they are asking is what do they  
4 think in their opinion is justified to pay and again it  
5 is not surprising that they may believe they should pay  
6 less.

7 Q. Pay less. They do not all say zero, do they?

8 A. No, they do not all say zero, but they systematically  
9 say numbers that are less than the prevailing rates  
10 generally.

11 Q. The most common response is 10%, followed by 15%.  
12 Cumulatively those responses are 46% of the total, yes?

13 A. Yes, I think that is correct.

14 Q. You see only 3% say that more than 30% is justifiable,  
15 yes?

16 A. Yes, that is what they -- yes.

17 Q. I do not think anyone is suggesting surveys like this  
18 are dispositive. It certainly provides some support for  
19 Mr Holt's view as to the competitive counterfactual rate  
20 being around 10 to 15%, does it not?

21 A. So just setting aside -- I find this, as an economist,  
22 to be kind of nails on a chalkboard kind of moment,  
23 which is if you ask people what are they willing to pay  
24 in a survey like this where it may actually be consumed  
25 by the outside world, it is not surprising that they may

1 report relatively low numbers. This is not anchored in  
2 anything. There is no cost to expressing a lower rather  
3 than a higher number, so I think, you know, it is simply  
4 pointing out the fact that if -- what I point out in my  
5 report is if you ask people this question, you are going  
6 to get this answer, but then taking and saying "Well,  
7 you know, since developers think 15% is justified that  
8 should be the equilibrium market price", that might be  
9 an interesting input to a marketing calculation, but in  
10 this kind of environment where we are thinking about,  
11 you know, all the things that go into antitrust  
12 investigation related to prices, I do not think this is  
13 particularly informative.

14 Q. Okay, well, there is a range of responses. Some people  
15 even think 30% is justifiable but they cluster around  
16 10-15% just on the face of the document, yes?

17 A. That is what the document says.

18 Q. Okay, thank you. Now could we go to paragraph 404 of  
19 your second report {C3/4/223}. Paragraph 404?

20 A. Okay, I am there.

21 Q. So you say:

22 "The differences in platforms' business practices  
23 and economics can lead to different responses to  
24 changing marketplace conditions."

25 Then you refer to the Valve software, so that is

1 Steam, is it not? You refer to the alterations to their  
2 charging structure that they introduced in 2018 which we  
3 were discussing earlier. Then you draw a contrast with  
4 Apple which in 2021:

5 "... lowered commission rates to the smaller  
6 developers ..."

7 Then over the page:

8 "... (through the SBP) on the App Store."

9 So we have heard a lot about the small business  
10 program in this trial, of course. You say:

11 "... almost all App Store developers (98%) earned  
12 less than \$1 million in CY 2019 and would thus be  
13 eligible for the SBP, suggesting that Apple's reduced  
14 rates benefit a far greater number of developers than  
15 Steam's."

16 Do you see that?

17 A. Yes, and that is accurate.

18 Q. Could we go to Holt 3 -- Mr Holt's third report,  
19 paragraph 64 {C2/11/25}. There might be some  
20 confidential material here so please do not read  
21 anything out.

22 Do you have that, Professor Hitt? Paragraph 64 of  
23 Mr Holt's third report --

24 THE CHAIRMAN: It is the fourth report I think.

25 MR ARMITAGE: Fourth report, I am so sorry. His reply

1 report.

2 A. Okay.

3 Q. So without reading out the confidential numbers, you see  
4 that a -- I think the first one may not be confidential  
5 because it was not redacted -- well, I will not read it  
6 out anyway. You see a proportion of iOS App developers:

7 "... may be eligible for the reduced commission  
8 rates ... these developers account for only ..."

9 Then there is a number in pink "of the App Store's  
10 revenue", and then:

11 "In contrast, the [X%] largest iOS App developers on  
12 the App Store account for [X%] of App Store revenues."

13 So you see the figures there and you do not have any  
14 basis for disagreeing with those, do you?

15 A. So I disagree with this. "This ignores" is the relevant  
16 comparison here but otherwise, yes, the figures are  
17 correct. The small business program represents  
18 a relatively small portion of revenue because these tend  
19 to be smaller developers. It does represent a very  
20 large number of all the developers out there.

21 Q. Your report focuses on the position of developers, yes?  
22 But all other things being equal, a program which gives  
23 discounted commissions for developers who earn higher  
24 revenues is going to benefit more consumers, yes?

25 A. Well, not under the analysis that I have done, since

1 I believe the incidence is zero. It will develop -- it  
2 will benefit large developers and it will affect  
3 a larger fraction of revenue. I would not draw the  
4 additional conclusion it would benefit more consumers.

5 Q. Fine. I think we are going to get on to incidence  
6 tomorrow. It is a fair stipulation. One we do not  
7 agree with of course.

8 A. Understood.

9 Q. Now could we look at paragraph 205(c) of your third  
10 report {C3/8/111}.

11 A. Okay.

12 Q. You see you are talking about the Steam charging  
13 structure. In the third sentence you say:

14 "Mr Holt only focuses on the 20% commission rate  
15 Steam offers to the largest developers ... because he  
16 claims, without any evidence, that that is where Steam  
17 faces the most competitive pressure. In reality, the  
18 majority of app developers on the Steam store pay a 30%  
19 commission rate."

20 Then you say:

21 "In fact, based on the worldwide aggregated data,  
22 were Apple to adopt Steam's commission structure of  
23 different tiers ... the effective commission rate on the  
24 App Store would be between 22.2 and 27.7% ..."

25 Yes?

1       A. Yes.

2       Q. For the purposes of that analysis, you are just looking  
3       at the Steam headline rates, yes?

4       A. Yes, I am applying the Steam headline rates to the  
5       App Store data.

6       Q. To Apple. So you are hypothesising about what Apple's  
7       effective commission rate would look like if it adopted  
8       Steam's headline commission rates, yes?

9       A. Well, the schedule. So, yes, to the extent -- the 10 --  
10      20, 25, 30, if you adopted that, this is what you would  
11      get.

12      Q. You are not looking here at Steam's effective commission  
13      rate, are you?

14      A. No, I am not doing that computation because that data --  
15      those data are not available here.

16      Q. Yes. You also, I do not think, are suggesting this is  
17      what Apple would do in the counterfactual, are you?

18      A. No. I am simply pointing out that if you applied  
19      Steam's schedule, you would wind up with commission  
20      rates that are north of what Mr Holt's competitive rate  
21      is.

22      Q. Okay. Now, on the subject of -- sorry, I am conscious  
23      of the time.

24             I probably have a bit too much to finish today.

25             I do not have very much left.

1 THE CHAIRMAN: I do not think we want to go too long. It  
2 has been quite a long afternoon.

3 MR ARMITAGE: I think that is a convenient point, and  
4 I think --

5 THE CHAIRMAN: Just in terms of how you are doing, what is  
6 your current view? I appreciate you still have a bit to  
7 go, but what is your sense of --

8 MR WARD: We still have a long way to go. Mr Armitage has  
9 a little bit more to ask on unfair pricing, and then we  
10 have the topic of incidence. Where we are, if I may, is  
11 we have recouped the 30 minutes at lunchtime, for which  
12 thank you, which we lost on Tuesday morning.

13 THE CHAIRMAN: Which you lost on Tuesday.

14 MR WARD: You have proposed, sir, this morning, that you  
15 would sit until 1.30 and then we would break until  
16 quarter to 3, so there would be, if you like, a loss of  
17 15 minutes there. I feel embarrassed being so --

18 THE CHAIRMAN: I am sure we can find 15 minutes.

19 MR WARD: Well, quite. I think frankly that we are fine,  
20 that is my headline, and if we are going to start at  
21 10.30 tomorrow I am not going to seek to -- I am trying  
22 to work out what is more unpopular, starting early or  
23 finishing late on the Friday of week 5.

24 THE CHAIRMAN: Valentine's Day as well.

25 MR WARD: Hopefully neither, is the short answer.



1           Of course, Ms Demetriou wants time for  
2           re-examination.

3       THE CHAIRMAN: Of course, so I mean I -- the first thing is  
4           I am sure we can find an extra 15 minutes to put things  
5           back as they should be. The second thing is that, as  
6           there should be, always assume there will be some proper  
7           time for re-examination.

8       MR WARD: Of course. I do not think we need to ask to sit  
9           earlier than 10.30, that is what I am saying.

10      THE CHAIRMAN: I would be reluctant to do that if we are  
11           going through to 1.30pm. It would be pretty hard on the  
12           witness and indeed everybody else. What I suggest is  
13           that -- this is probably the most unpopular option of  
14           all -- but I suggest that if we get to 4.30 and need  
15           some extra time, we can certainly sit a bit later. We  
16           will be capped out on that certainly at 5 o'clock and  
17           I think we would rather stop at 4.45.

18           So the 15 minutes is there but on the understanding  
19           that that is not -- at that stage it is not your  
20           15 minutes, it is whatever Ms Demetriou needs to come  
21           back on.

22      MR WARD: Sir, given the progress we have made, which saved  
23           us some time on some issues actually, I think we --  
24           I feel comfortable, 10.30 start tomorrow, that I will  
25           not be inflicting pain at 4.45 on esoteric aspects of

1 incidence. That is my confident expectation rather than  
2 guarantee.

3 THE CHAIRMAN: That is our fervent hope as well, probably.

4 Good, are you happy with that, Ms Demetriou? That  
5 sounds fine.

6 In that case we will start at 10.30 tomorrow, and we  
7 have the slightly odd adjustment that we will run  
8 through until 1.30 and take the break then.

9 Professor Hitt, you know of course the rules are not  
10 to discuss your evidence with anybody overnight. Thank  
11 you very much. See you in the morning.

12 10.30, thank you.

13 (4.31 pm)

14 (The hearing adjourned until 10.30 am on Friday,

15 14 February 2025)

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