## UNITED STATES DISTRICT COURT

 FOR THE DISTRICT OF COLUMBIA```
UNITED STATES OF AMERICA,
    Plaintiff, . CA No. 22-2791 (ACR)
    v.
ASSA ABLOY AB, et al., . Monday, May 1, 2023
    Defendants.
DAY 6
TRANSCRIPT OF BENCH TRIAL BEFORE THE HONORABLE ANA C. REYES UNITED STATES DISTRICT JUDGE
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P R O C E E D I N G S
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THE COURT: All right.
MR. HUPPERT: Your Honor, I'm sorry. Before we get back into Dr. Waehrer's testimony, I just had one point of clarification I wanted to make from the record in the first session if that's okay.

THE COURT: Yeah, I had a feeling you would. Go ahead.
MR. HUPPERT: There was a colloquy that you had with Mr. Donaldson about the analysis that Dr. Waehrer performed relating to concentration. And $I$ just wanted to clarify for the Court that the government's position, the United States' position in this case is that the presumption does apply at step one of the Baker Hughes analysis as to the original Assa-Spectrum merger --

THE COURT: Correct.
MR. HUPPERT: -- not taking into account the divestiture. So insofar as Your Honor's analyzing under the Baker Hughes and insofar as your questions related to legal presumptions under that framework, I just wanted to clarify the United States' position.

THE COURT: Sure. I appreciate that. But I guess my question is, let's assume I agree with you and we analyze step one without the divestiture, and then I take into account the HHI analysis, obviously. And that would seem, and I think defendants have agreed, that that would get the government
over step one if we don't take the divestiture into account in step one.

My question was more focused on if we're at step two, my understanding is that if there's a high HHI analysis number, that that means that there is a concentration, which gives me a presumption that there's an anticompetitive effect that the defendants have to overcome.

If I take the divestiture into account, then I think, according to Dr. Waehrer, and certainly according to Dr. Bailey, the HHI analysis then tells me, because there's no overlap, that there's not a concentration. And this would be different from the case we had with Judge Mehta where he found that even with the divestiture there was still a high HHI concentration, or number, and so therefore presumptive concentration. So I just -- my understanding is that in the current case -- scratch that.

My understanding is that there could be a case and there have been cases where at step one, not taking the divestiture into account, there's a high HHI number, which shows a concentration, which leads to presumptive anticompetitive effect. You go to step two, we put into place -- we take into account the divestiture. At that point there could be, in the Judge Mehta case, still a high HHI number even if you take the divestiture into account. But that here, because there's no overlap at all, that you would then have not a high -- not an

HHI number that would lead to a presumption of concentration. And my understanding is that's the world we're in.

MR. HUPPERT: Yes, Your Honor. And I think you're referring to the Sysco case.

THE COURT: Yes. Thank you.
MR. HUPPERT: Judge Mehta's decision in Sysco. Yeah. I think the more analogous case factually here on this issue is Aetna, Judge Bates's opinion in Aetna. In that case at step one he looked at the un-remedied merger for purposes of step one and evaluating the concentration levels, and he held that the government was entitled to a presumption based on those facts. And then at step two he evaluated the divestiture.

THE COURT: Right. Yes. Let's go into step two right now.

MR. HUPPERT: Okay.
THE COURT: We're in step two.
MR. HUPPERT: Understood.
THE COURT: In step two, on the facts of this case as I understood them, as I understand them to no longer be disputed, is that there is no overlap after you take the divestiture into account; therefore, no high HHI number, therefore no presumption of concentration. And now what I'm looking at is whether or not the divestiture will actually be successful.

MR. HUPPERT: Maybe I'm getting hung up on the word "presumption."

THE COURT: Yeah. Because my understanding is that once we take the divestiture into account in this case, Dr. Bailey and Dr. Waehrer both agree -- Dr. Waehrer as I understand it doesn't think we should take HHI into account, but he agrees with Dr. Bailey that if we do take it into account, it does not show increased concentration, those numbers do not show increased concentration, therefore, there is no presumption anymore, once we take the divestiture into account in step two, of a lessening of competition.

MR. HUPPERT: I think the way that I would frame it and the way that again Judge Bates framed it in the Aetna case is that there is a presumption, and the question is whether the defendants can produce sufficient evidence of a divestiture that would restore competition sufficient to rebut the presumption in step two.

THE COURT: So I guess what you're saying is to the extent that the presumption -- okay, I think I understand. So you're saying there is a presumption in step two. In order to rebut the presumption, they have to do more than show that there is not a high HHI number; they have to show that once you take -- taking the divestiture into account would actually lead to the competition that it leads to on paper.

MR. HUPPERT: Yes. I think the standard is, as we've
discussed before, the standard would be whether there's enough evidence to show that the divestiture would restore competition, preserve competitive intensity, however you want to phrase it, but that's the question -- yes. That would be the question in step two.

THE COURT: But they no longer have to show that -- if the divestiture worked, they would no longer have to show there's no concentration. Everybody agrees if the divestiture works, there's no concentration and therefore no presumption of a competitive effect.

MR. HUPPERT: I think it's fair to say concentration is not an issue at step two. The issue at step two would be, to put it very shortly, the sufficiency of the divestiture in terms of its assets and intensity of competition and so forth. THE COURT: Okay. Got it. Mr Bernick. MR. BERNICK: Pardon me, Your Honor. I didn't know we would have argument on this today, but I just have one quick point to make.

THE COURT: I think that you should assume that any given day we will have an argument on Baker Hughes.

MR. BERNICK: So I guess what I would say, whether we're at step one, step two -THE COURT: You win. MR. BERNICK: No, well, a different point. A slightly different point. If their case is based on statistics from a
transaction that's not going to happen, then all we have to do to rebut that statistical case is show those statistics are no longer valid, which is what Ms. Bailey did. That's the quibble I think I have with what Mr. Huppert said, is he suggested that we can present a statistical case based on a combination that's not going to occur. Then the defendants have the burden to come forward with all this evidence about the divestiture unrelated to just rebutting the statistics.

And this is angels dancing on the head of a pin -THE COURT: No, I get it.

MR. BERNICK: But I actually think it's meaningful that they can't prove their case with statistics that are completely rebutted by our statistical case and force us to come forward with new evidence. That's the only nuance.

THE COURT: I mean, at the end of the day, I have to find that the divestiture to Fortune will actually work.

MR. BERNICK: We agree with that, Your Honor.
THE COURT: And really what we're fighting about now, who has that presumption that it will work, you all or the government. And at the end of the day, that's sort of the legal question that $I$ have to answer.

MR. BERNICK: And it's a rugby match.
THE COURT: Yeah. But to me, at the end of the day, whoever has the presumption, the presumption is 51 percent, right, because it's more likely than not. So unless I find
that the parties are in pure equilibrium at 50 percent on the evidence, it doesn't really matter who has the presumption, as a practical matter.

MR. BERNICK: As a practical matter.
THE COURT: Mr. Huppert, do you agree with that?
MR. HUPPERT: I would say I think the presumption does matter for purposes of -- I mean, I guess to your point that it's a rugby match, perhaps the presumption matters less, because I think as a practical matter, to Mr. Bernick's point, our case is not just based on statistics, it's based on a bunch of other evidence that Dr. Waehrer has analyzed and we presented in our case-in-chief regarding the intensity of competition, and the degree of head-to-head competition between the defendants.

And so, taking all that evidence into account, you know, I think the presumption is meaningful, I think it's part of the Baker Hughes framework for a reason, but at the end of the day if Your Honor analyzes it this way, you know, yes, the standard at the end of the day is more likely than not on substantial lessening of competition. But we do think the presumption is meaningful because it puts the burden on the defendants to come forth with evidence of a sufficient divestiture.

THE COURT: Look, I agree with you on paper, but in this actual courtroom, it's not like they're just sitting
there not coming forward with evidence, right? So they're going to come forward with evidence. If that's the point, that they have to come forward with evidence, they're doing that, or they're going to do that, because there's a bunch of lawyers over there, and they're not just going to sit there. MR. HUPPERT: Of course.

THE COURT: Okay. All right.
KEITH WAEHRER, WITNESS FOR THE GOVERNMENT,

## DIRECT EXAMINATION CONTINUED

BY MR. DONALDSON:
Q. Dr. Waehrer, before the break we were discussing the incentives of a divestiture seller. I would ask you to consider a hypothetical divestiture seller who has a choice between two buyers. Assume that both buyers are qualified enough to be approved by the FTC or the DOJ, but one would be a vigorous competitor to the seller in the future and the other would be minimally effective as a competitor.

Which buyer in your opinion would the seller be incentivized to choose, all else equal?
A. So, your hypothetical sets up a situation $I$ think where either would be approved by the Department of Justice or court or whoever the regulatory agency was.
Q. Correct.
A. And in that hypothetical the incentive would be to pick the buyer that was not the vigorous competitor.
Q. Why?

THE COURT: I'm sorry. I missed your question, and my realtime is not set up so I can't go back --

MR. DONALDSON: Sure.
(Discussion off the record.)
THE COURT: Okay. Go ahead.
BY MR. DONALDSON:
Q. Dr. Waehrer, the ultimate question there was which buyer in your opinion would the divestiture seller be incentivized to choose, all else equal?
A. So as I understand your question, either buyer would be approved by the DOJ and -- or whoever the regulatory agency was. And in that case the seller would obviously prefer not to compete as vigorously and so would select the buyer that would be less competitive.
Q. And Dr. Waehrer, you testified earlier about the relevance of market shares and HHIs in your divestiture analysis. Does Yale's share today predict their competitive significance under Fortune?
A. So my testimony with respect to the HHIs that Dr. Bailey produced was really about step one in my analysis of the divestiture and not about step two. I think as we go through and we discuss what's going to -- what we think might happen or is likely to happen, you would see perhaps a share decrease by the Yale assets, the Yale assets become less competitive,
lose share, and then the HHIs would change. But even the change in HHI in that situation doesn't really tell us much about the direction of competition. So HHIs are just not the right metric there.

But I think your question is about whether or not the share calculations and HHI calculations of Dr. Bailey really take into account what's happening and what our predictions are in step two of the analysis, and they do not.
Q. Okay. Thank you. I want to switch gears a little bit. You cite in your report and discuss the FTC divestiture studies as supporting your conclusion with respect to the proposed divestiture. Can you please share your analysis regarding these studies with the Court?
A. Yes. So I've got a few slides on the FTC studies, and I know Your Honor has questions about these. So I'll step through these and hopefully get to your questions.

I think the first step is to put the studies into some context about what is the -- what's the sample of divestitures that we're looking at. And it's important to note that each of these divestitures was a remedy that was subject to a detailed fact-specific review and eventually accepted by the FTC.

And in that first box I pulled a quote out of the 2017 study that says: "The goal of any remedy is to preserve fully the existing competition in the relevant markets at issue."

So these were reviews and the FTC thought that these divestitures would work. And after a very -- after a detailed case-by-case, fact-specific review, as we will see when we get to the results, it's a bit surprising that so many of the divestitures involving selected assets did not fully restore competition within two to three years.

And I think -- you know, as an economist I have to think to myself, well, why, what is going on with those selected assets versus the divestiture of a complete business. And, you know, when you have a divestiture of an already ongoing business, you know you have the set of assets that are going to be needed for the company to operate fully. When you're looking at a set of selected assets, we don't have evidence in the market previously of these assets really being able to operate independently and being effective.

And the high failure rate that the FTC found I think is indicative of the fact that we antitrust economists and antitrust lawyers are perhaps not so good at deciding whether or not a certain set of selected assets are going to be effective in the market or not. And I think that suggests something about our ability to make a decision, or to find the right set of assets, especially when we're talking about a set of -- a divestiture involving selected assets.

I think ultimately what is important then when judging the FTC study and its context for what the meaning is for our
case here, you have to think about how does the sample of -the FTC sample compare to this present deal. And I think there's a number of items that suggest that this deal may be worse than the set of assets, the set of selected assets that were the subject of the FTC study.

So what do we know? We know that the supply agreements are weaker than required by the FTC. It's something I'll review in more detail later. The FTC and the EC found that divestitures of $A$-side assets -- so if the assets that are being divested are by the acquiring company, as they are here, they tend to have worse outcomes than if they're from the Bside company.

And then here, unlike what would usually be the case in a divestiture, we have the risk of mutual forbearance. And so that is something that's different than we would normally face. And then not listed here but $I$ think is also important is the risk of closing on the Vietnam facility and the delay just doesn't seem to me at least, through my experience, to be something that the FTC would have found acceptable.
Q. Thank you, Dr. Waehrer.

Dr. Bailey raised some questions about the methodology used in the FTC studies. Have you considered those critiques? A. Yes. Yes, I did. It's the subject of the next slide. So Dr. Bailey claims that the FTC studies are methodologically flawed and suggests that this is -- it's a
commonly known issue. And when I looked -- when I personally looked for methodological criticisms of the FTC studies, the only criticism I could find was a New York Times op-ed piece where a law professor was suggesting that the FTC was perhaps suggesting that there were too many successes.

And the one paper that Dr. Bailey cites here in this section of her report really is not about the FTC study, but it's about econometric studies similar to the one that the paper itself did, and the quotes that she pulls out of that paper are simply saying that these econometric studies are quite different.

Now, an econometric study of an individual remedy is very different from a case study like the FTC pursued where the FTC is taking a sample of divestitures and trying to evaluate how many succeeded, how many didn't succeed, and what are the characteristics of those succeeded and didn't succeed.

And I think for our purposes when we look at these kinds of samples or case studies of a case -- in fact, the FTC study looked at the universe of all divestitures that the FTC approved during the time period of the study, and it was unlike what -- or contrary to what Dr. Bailey suggested, that somehow the sample was biased because of voluntary participation. What in fact happened was every divestiture, every remedy was in the sample, and that for each remedy my understanding is that there were multiple interviews done for
each of the divestitures. And to the extent that there were certain participants that didn't participate, it was simply that one divestiture may not have had a full set of respondents answering questions for the FTC.

So I don't see any basis for the sample of the FTC study to really be biased one way or another, and the evidence that Dr. Bailey cites for this is just not there.

I think it's also notable that when you look at what the FTC concluded, the FTC was relying on these studies to guide its own divestiture policy. And so it was actually putting the results of the study to some use.
Q. Thank you, Dr. Waehrer.

The FTC studies analyzed divestitures of selected assets. That's a term that they use. Have you studied how that relates to the divestiture here?
A. Yes, I did. So, in my opinion, the divestiture here fits squarely into the category of selected assets. The slide is not up yet, but I'm assuming you have the paper deck in front of you.

There are a number of reasons for this. It's pretty clear from the evidence, and the evidence that I'll be presenting in a few slides, that nexTouch and interconnect are an important part of the product portfolio of the business, of the residential smart business for Yale in the United States, and those are not included in the divestiture.

Second, the deal requires the separation of production, joint production. So in Vietnam currently, not just U.S. smart locks are being produced, but smart locks for all over the world are being produced, and so there's joint production that would need to be split.

So the fact that they were jointly producing it suggests that we're selecting the assets out of that factory to operate or to produce the U.S. smart locks from the rest of the world.

And then additionally, this deal would need to separate the U.S. R\&D efforts from Assa's global shared R\&D resources. And then there's also evidence that there's shared procurement of certain inputs, and that would need to be separated.

And in my opinion all of these would obviously suggest that this is a set of selected assets and not the assets of an ongoing business.
Q. Dr. Waehrer, the FTC studies break results into different categories. One of those categories is a qualified success. Have you considered the FTC's definition of what constitutes a qualified success?
A. I have. So a qualified success to the FTC could have two meanings. One is that it took longer than two to three years for the assets to really be fully competitive in the market, or the assets might have been operating fine initially but then failed to sustain that, the successful operation. And the assessment of the FTC was that the original owner of the
assets would have fared better under the changing conditions than the divestiture buyer.

Either of these situations $I$ think does not suggest a success as we should judge it. Two to three years is a long time in the antitrust -- at least antitrust analysis, and during that period consumers would be suffering from the reduced competition.
Q. Thank you. Dr. Waehrer, the 2017 FTC study presents a table that summarizes its outcomes. Have you analyzed that table?
A. Yes. So I'd just like to walk through it with you. So at the bottom row I think is the place to start this table, and that's the entire sample of divestitures. And you can see there that depending on how you're counting the divestitures, that the success rate is 75 percent or 74 percent, not too much of a difference, which means that 25 percent or 26 percent were not fully successful divestitures.

However, as I discussed earlier -- well, before I go on to that, you can see that the success rate for an ongoing business is quite good, at a hundred percent. However, the success rate for a set of selected assets, as I've suggested we're talking about here, is what $I$ would call quite poor and starkly different from the success rate of an ongoing business.

You can see that the failure rate, if you go one minus
the success rate listed in the middle row of the first column there, is 40 percent or above, which I know when I first saw this result years ago, I thought was shockingly high. And I think this is indicative of what $I$ described earlier, that if you're selling an ongoing business, we already have evidence that this can be a successful business with the assets. It was an ongoing business, it was operating independently before, and there's really not much of a question about the assets.

However, with a set of selected assets, that means that we antitrust economists and lawyers are trying to make a judgment about what are the right set of assets that could allow this company to be successful. Plus, when you have a set of selected assets, you're going to usually have ongoing entanglements between the seller and the buyer that could cause additional problems. And so it creates a stark difference between the two outcomes.
Q. Thank you, Dr. Waehrer.

Moving on to the next step in your divestiture analysis --

THE COURT: Can I ask you, so what do these numbers tell us, if anything, about what the odds are that a particular selected assets divestiture will be successful?

THE WITNESS: So if we are looking at a sample of divestitures that are like the FTC sample, I would -- and
we're talking about a set of selected assets, I would say the success rate just from reading the table is 56 or 60 percent.

However, I think what we're talking about here is something that is different. And as I discussed on an earlier slide, I think that this transaction is actually worse than what the sample suggested. You know, it is a deal that has not yet been accepted, it has a number of characteristics that I think suggest it is worse than what's in the sample here. And so it doesn't require -- I'm sorry.

THE COURT: No, go ahead.
THE WITNESS: When you think about aggregating probabilities, $I$ think really behind your question is are we up to 51 percent.

THE COURT: Really what's behind my question is does this really tell me anything? These numbers, do they tell me anything?

THE WITNESS: I would say a couple things on that topic. These were all subject to very careful review, and lawyers and economists thought these would work. So where are we then -- you know, if you come to the conclusion that this is a set of assets -- that the current divestiture is a set of assets that will work, I'm not sure we're in much of a different boat than the probabilities here, except that maybe we're in a worse situation because of the enforcement of the supply agreements and the other issues that I discussed
earlier.
Now, I'm steeped in, you know, the math of probabilities, and it doesn't take much of an additional risk to move from a 40 percent failure rate to a 50 percent failure rate.

THE COURT: I guess my question is more -- what I really need to be looking at is this particular divestiture and how it compares to divestitures that have succeeded in the past or have not succeeded in the past. But these numbers, whether they're a hundred percent or 2 percent, are really meaningless to that assessment.

THE WITNESS: Well, we have the data that we have, and the data that we have splits out a set of selected assets from ongoing businesses. So we know that we can at least -- I think we know, or at least I believe we're in a category of selected assets. I don't think, or the FTC study doesn't provide us additional information about the sample and how it compares to our current -- the current situation. But perhaps others will bring information that I'm not seeing in the FTC study. And I think for the reasons that we discussed earlier, that the sample is worse.

I'm not sure what -- I mean, the data, as I said, the data is as the data is. And I think -- you know, when we look at how do we evaluate divestitures, this is the best data that we have about past divestitures, but it doesn't provide -- it doesn't provide a roadmap to try to identify, well, which of
these selected assets are particularly close to our current deal, and what's the success or failure rate of those. We don't have that.

And then also if we started to slice this even further, we'd be in the realm of smaller sample sizes that we may not be happy with the results of.

THE COURT: Okay.
BY MR. DONALDSON:
Q. Dr. Waehrer, on slide 42 you compare this current divestiture to the scenario of previous FTC divestitures and you list some of the differences. Are there any additional differences that you can point to with respect to this transaction and the other ones studied by the FTC?
A. Well, as I think I mentioned, there's the three here that I've listed, plus this deal is -- these were all approved deals, and this transaction has not yet been approved. So that would be one other difference between the two that I think I've already mentioned.

So if we were to think about how do we fit this into a larger sample, we would want to know, well, what's the sample of perhaps all of the divestitures that had been proposed, and some of them would be approved, some of them wouldn't be approved, and how would those outcomes be -- it's hard to make an assessment there because we're talking about data that doesn't exist.
Q. Thank you. One last question on the table on slide 45. Does the FTC study suggest that for selected assets that the highest success we could reasonably expect is about 60 percent?
A. So as I indicated earlier, yes. So this is -- remember, these are deals that have gone through very careful analysis. In each of these cases it would be common, the usual practice for the FTC to ask the buyer and seller for assurances that these are assets that are going to be successful in the market.

And it would have been the case that buyer and seller assured the FTC economists and lawyers that in fact these assets were -- would be successful, and yet we have what I would consider a pretty poor track record for the set of selected assets.

THE COURT: Can you remind me what the sample size was for the selected assets? How many were studied?

THE WITNESS: So if you look at the numbers in the parentheses in the table that's on the screen, those are the -- there's two ways that the sample is measured, the number of orders or the number of buyers. So for the set of selected assets, there were 18 orders and 25 buyers in total. THE COURT: So if we just look at the 18, there's a 56 percent success rate. THE WITNESS: Yes. THE COURT: Okay. So that was, what, $9-1 / 2,10$ were
successful? 10, 11?
THE WITNESS: Yes. Something like that.
THE COURT: Okay. But you could switch that to 13, 14, and the percentages would go up pretty dramatically. Or switch it down one or two and the percentages would go down. I mean, it seems a pretty small sample size.

THE WITNESS: So if we were to do a confidence
interval, you know, the success rate or the failure rate could be higher or lower. I agree. This is the point estimate, and so it's the best point estimate -- it's the best estimate to use, I think, in this situation.

THE COURT: Has anyone done a confidence interval assessment for this?

THE WITNESS: Not that $I$ know of.
THE COURT: My guess is it would be much larger than . 05 .
THE WITNESS: Well, when you say --
THE COURT: There would be a large confidence interval, wouldn't it?

THE WITNESS: So for these kinds of statistics, sometimes you can be surprised that even with low sample size, the confidence interval isn't that large. Perhaps when I come back on rebuttal, I can bring you that number.

THE COURT: Okay.
MR. DONALDSON: Okay. Ready to move on unless Your Honor has more questions on the divestiture studies.

THE COURT: No.
BY MR. DONALDSON:
Q. Dr. Waehrer, the next step in your divestiture analysis, you state that the proposed divestiture will result in a loss of economies of scope and scale. Can you please explain your analysis of the loss of scope and scale?
A. So I think the DOJ's other experts deal with this topic in more detail than I do, but I did review the evidence here from documents and deposition testimony, and it seemed to me that there were three categories where the divested assets with Fortune would enjoy fewer scope and scale economies than they do currently with Assa.

First would be procurement. And under that bullet there's a quote out of a document, that Jason Williams document where he expresses some concern over dyssynergies relating to the procurement of electronic components for smart locks, suggesting that the critical suppliers in this area are managed at a global level by Assa Abloy.

The second category that I believe Your Honor has already heard some testimony, it relates to $R \& D$ expenditures and joint efforts, and here there's just two bullets that discuss some of the evidence along those lines.

And then the joint production in Vietnam, I believe, is something that hasn't yet been discussed very much, but there's evidence that labor in that factory moves across
production lines. So when one production line is slow and the U.S. production line is slow, labor can move to the, say, the European production line if these are in fact different production lines.

But I think the idea is that when you have multiple production lines or you're producing smart locks for multiple regions, you can perhaps operate the factory at a lower level of fewer workers and therefore fewer costs.

And then of course, there's a -- in deposition, Nico Delvaux, the CEO of Assa Abloy, indicated that he thought that there must be some cost advantage -- operational and cost advantages to operating and producing smart locks for all three geographic divisions within the Vietnam facility. Q. Thank you, Dr. Waehrer. You state that the proposed divestiture does not include critical assets. Can you please explain your analysis on that point?
A. Yes. So this is just the intro slide, and I will be talking in a little bit more detail about each of these. But the first area which is discussed in my reply report Section V.B.1 is that the proposed divestiture doesn't include nexTouch and interconnect, which has been the subject of quite a bit of discussion in court so far.

It also involves delayed closing of the Vietnam facility or risk of delayed closing. That's discussed in my reply report Section V.B.3. And then the enforcement and other
terms within the transition services agreement and the supply agreement do not provide adequate protection for Fortune going forward.
Q. With respect to the first of these, the divestiture package lacking important assets such as the nexTouch and interconnect, can you please share your analysis of those products?
A. So I think there's been some contradictory testimony on exactly how these -- how some of these locks, the nexTouch and interconnect locks, what they are and where they're used. The evidence that I've seen suggests that the nexTouch lock is -- tends to be used on the entrances to common areas within apartment buildings. But also I think we heard from Mr. Haldeman of SmartRent that at least for his business most of those locks go on the front doors of apartment residences.

The interconnect lock, as I think I've already mentioned, is used on the front doors of apartment -- of the apartments. I don't mean the buildings but the apartment units. And my understanding is that those are not used for common areas but rather only used for apartment entrances.

The manufacturing rights, as has been discussed, have not been included in the transaction, but these are very important products for a large number of customers. We heard from -you heard from Mr. Haldeman of SmartRent, he and other customers that buy interconnect and smart locks and/or smart
locks from Yale account for a very large percentage of U.S. Yale smart lock sales. If you look at the printed copy of the slides, you'll see the number in the bottom bullet.

And I'd just like to say that there was discussion that Mr. Haldeman's company, SmartRent, was the Yale U.S. largest purchaser of smart locks in the U.S. SmartRent represents well over half of that percentage. So it's quite sizeable purchase. And even if as a result of perhaps not having access to nexTouch or interconnect or delays in the -- or degradation of the quality, delays in delivery, that could have a -- even a small percentage of -- a smallish percentage of these sales disappearing for Yale would represent a significant loss of revenue and profitability for Yale. Q. Dr. Waehrer, are nexTouch and interconnect locks commercial or residential products?
A. So they are clearly -- exactly how the company defines or people in the business define these as residential locks or commercial locks, I think -- I mean, I don't know -- that seems less relevant than the fact that -- to my analysis, than the fact that these are locks that are really part of the residential portfolio. They're part of the portfolio of products of Jason Williams' division within Assa Abloy.

And as an example of that, I have some screenshots that I put together of the Yale residential website. And on the Yale residential website, there's a page that is Multifamily

Solutions. And if you go to Multifamily Solutions, you will see only three products on that website discussed. The three products are the nexTouch, the Assure interconnect lock, and the Assure Lock deadbolts, the three ones that are listed here.
Q. Dr. Waehrer, was there any particular evidence that you found particularly informative on the role of the nexTouch and interconnect locks with respect to the potential divestiture?
A. So the evidence that I looked at were documents and deposition testimony, but I think there's also been already testimony in court about the importance of the interconnect and nexTouch locks to the Yale U.S. business.

We've heard from not just the SmartRent CEO, Mr. Haldeman, but also the Fortune witnesses seem to think that they did want to have access to nexTouch and interconnect for their business going forward.

I also looked at the deposition testimony and documents that are listed in the next few slides here. Here in the first slide on slide 51, Jason Williams is quoted as saying that the nexTouch product portfolio is critical to his success in the B2B space.

On the slide following, there's a segment from Jason Williams' deposition testimony where he says: "We have gone to market for smart residential products and the nexTouch commercial products and bundled them."

So he's selling them together, and he thinks that it's an important -- I'm reading this as an important part of his portfolio and that having these together is a competitive advantage for them.

And then on the next slide, he indicates that the analysis is pretty much the same for the interconnect lock as for the nexTouch lock.

There was also deposition testimony, not listed here, but I would just point out from Jason Williams that he testified that he has responsibility for the interconnect product, and he is the one that is most often taking that to market, despite the fact that production seems to be owned by the commercial business.
Q. Dr. Waehrer, you mentioned the testimony of Mr. Haldeman.

Is there any other third-party evidence that you found particularly informative with respect to the importance of nexTouch and interconnect with respect to the potential divestiture here?
A. So on the next slide, slide 54, there's a excerpt from Joshua Stamps's deposition. Joshua Stamps is the CEO of GoKeyless, who is also an important customer of Yale, not quite as important as Mr. Haldeman and SmartRent, but still quite sizeable.

And here I have a quote where he is essentially echoing the sentiments of Mr. Haldeman in terms of the fact that
customers like to have a single brand or a solution that all works together, and there's some value in being able to offer all the different types of locks, the nexTouch, interconnect, and the standard locks for particular owners.
Q. Dr. Waehrer, as an economist, how do you think about the relationship between market definition and the appropriate scope of a divestiture?
A. So this is something that we've discussed already a bit and I'm not -- I'll just echo what I said before, that there are these two parts to the analysis of the divestiture: Is the divestiture undoing the concentrating effects of the merger, that's step one. And step two, does the divestiture provide the buyer with the assets necessary to successfully compete.

Market definition plays an important role in step one, because you're using it to do the share analysis and concentrating analysis. But in terms of deciding whether or not the buyer is going to be successful, market definition plays a minor role. Most businesses sell more than one product in more than one market, and so to have really a successful ongoing business, it would not be at all surprising if that business needed to sell products in more than one market.

And I just -- at the very bottom of the slide I pulled a quote from the FTC divestiture study that essentially says
that the Commission will only accept divestiture packages it deems sufficient and that the sufficiency of the divestiture package can very well go beyond the products within a relevant market.

THE COURT: Let me just ask you this, because I understand that, I think, that there's a -- maybe two-year supply agreement for interconnect and nexTouch, that there's a transitory supply agreement. And as I understood it, the FTC, at least the 2016 study, did say and find that supply agreements were important and helpful.

So what exactly is it about the supply agreement or the divestiture as it's currently framed that gives you concern that Yale isn't going to get the interconnect or nexTouch?

THE WITNESS: So there's a few things, and that's actually coming up on perhaps --

THE COURT: Oh, sorry. Maybe I should stop talking then.

THE WITNESS: We can jump to that now, which starts on slide 57. So just in terms of the FTC study about the supply agreement's being important, I think when you're talking about a divestiture of selected assets, often you are going to have a supply agreement that's needed, and for those deals where the divestiture was successful, yes, the supply agreement was going to be important for those to be successful because they just wouldn't have been successful without the supply
agreement.
I think with the supply agreement, if you have a supply agreement, it's indicative of the fact that you are dealing with a set of selected assets rather than an ongoing business. If you had an ongoing business that would be divested, then you wouldn't need a supply agreement.

I think there are a few things that are important in my mind about the supply agreement, and here I include the TSA, because the TSA is the agreement that governs the operation of the Vietnam plant.

THE COURT: Okay. But let's just keep them separate because they're two separate issues. Just tell me specifically what you find problematic with the interconnect agreement.

THE WITNESS: So there's a -- enforcement of that agreement seems particularly weak to me. It was something that jumped out at me when I first read the agreement, the specific performance requirements. And then reading the FTC studies, the FTC studies seemed to -- did suggest that the FTC, because of the incentive issues with the supply agreement, requires substantial damages, damages for profits and lost sales.

So that is one aspect of it. The other aspect of it is that supply agreements with competitors are simply risky. It's often going to be hard to figure out exactly all the
circumstances that you're going to need to put into a supply agreement. And so you want the supply agreement to be as short as possible. And I think there's two issues here relating to that.

One is what's the timing -- what's the real timing for Fortune to be able to produce its own nexTouch and interconnect?

We heard some evidence from Mr. Haldeman on what he was told by some of the major suppliers of locks in the U.S. about how long it would take them to develop a lock for him. It was in closed session so $I$ won't say exactly what he said, but I'm sure you recall his testimony.

It seems difficult for me to believe that Fortune would be able to do that faster than those established lock companies. So that creates a concern in terms of the two-year time agreement.

There are other issues with supply agreements that I think are important to recognize. We're talking about, when you have a supply -- when you're getting supplies from a -- inputs from a supplier, you want that supplier to be a partner with you because you want to be able to go to that supplier and say, hey, I got a customer, needs a big order, needs it fast, can we increase output and try to satisfy this?

And if the input supplier is a partner with you, that input supplier has an incentive to make sure you're happy. If that
supplier is a competitor of yours, that means that you are probably that competitor's worst customer, because the cost -the prices that you're getting for that customer are not very high, you're not making a profit, prices are at cost, and so there's unlikely to be the same kind of cooperation that you would have.

THE COURT: But let me -- how does that work? Because, as I understand it -- and maybe I misunderstand it. As I understand it, the factory that creates this interconnect and will send it to Fortune is not where the combined Assa Abloy-Spectrum will get its interconnect stuff from. They will get it from someplace else.

THE WITNESS: So my -- what I've heard from the testimony and what I understand from the facts is that there's a factory in Guadalajara. And the way that things will work is that there's an electronic piece that gets produced in Vietnam that will be produced by Fortune. Fortune will send that to Assa Abloy's -- to Guadalajara. Guadalajara will put that together and produce the interconnect lock, and then ship it to Fortune. Is that what you were asking?

THE COURT: Yeah, but where in that does the Guadalajara factory become a competitor of Fortune?

THE WITNESS: Guadalajara factory is owned by Assa Abloy, who is a competitor of Fortune, hopefully. That's the goal.

THE COURT: Well, is it? Because the -- yes, Assa Abloy-Spectrum I assume are going to have their own interconnect locks. But do we know whether the -- do we know whether the mechanics, the electronics, the putting together of it is going to happen in the same factory? And if not, do we know whether the factory that currently has the interconnect locks has its own profit and loss statements?

THE WITNESS: So I don't know whether they have their own profit and loss statements. That is -- you know, for antitrust economists, for $I O$ economists, we wouldn't necessarily look at exactly what are the divisions within a company and assume that each division is operating kind of independent of the interests of the other divisions.

And I would assume that if Fortune is competing Yale lock on a big -- say there's a big customer for multifamily, in the scenario I was describing. And that big customer, it's a large order, needs to be delivered quickly. Assa Abloy wants that.

At the same time -- or I'm sorry. Fortune would like to -at the same time, perhaps the Yale -- the Kwikset now owned by Assa Abloy is talking to that same customer, and both Fortune and the Assa Abloy multifamily go to the Guadalajara factory and say hey, we've got this big customer --

THE COURT: But that's the key assumption, that they're both going to the same factory. Do we know that they're both
going to the same factory?
THE WITNESS: I don't know. I'm assuming that they would be.

THE COURT: Okay.
THE WITNESS: But even if they weren't, an antitrust economist, without -- unless there were really good evidence to the contrary, would assume that the factory in Guadalajara is going to look after the interests of the overall company and not just the $P \& L$ of the particular division.

THE COURT: Okay. And that's antitrust economists versus a regular economist because I think a regular economist would look at what the incentives were for the factory. Right?

THE WITNESS: I think that all economists would assume that the company is trying to maximize the profits of the company, rather than each division trying to maximize the profits of each division.

THE COURT: Okay.
THE WITNESS: I think that's universal across not just antitrust economists but economists overall.

THE COURT: Okay.
BY MR. DONALDSON:
Q. Dr. Waehrer, have you seen evidence that Assa Abloy tries to maximize profits at the corporate level, not the division level?
A. Yes, I have. There's a document that I cite in my initial report. I'm not sure I'm going to be able to find it quickly. But it's an email exchange between Nico Delvaux, the CEO of Assa Abloy, and the -- now I'm forgetting the name of the Assa Abloy witness that was here first. What was...

Anyway, it was an email exchange between them, and Nico Delvaux was in a discussion with him about the pricing in North America. And they were looking together at a P\&L statement for the global residential smart lock group and not just the North American smart lock group.

So it's not -- it's not that -- only that pricing is being determined at a local level based on local P\&Ls, but here was an example of the CEO of the company discussing pricing with this executive.
Q. I think we've located that document. We'll pull it up momentarily. Dr. Waehrer, is this the --
A. Yeah. This is the document I was referring to. It was Martin Huddart who was here testifying. And in this email exchange Mr. Delvaux is discussing a number of things with Mr. Huddart about the North American business, including pricing decisions. And if you scroll -- is this the last page or the first page? If you scroll down...
Q. This is PX 13 for the record.
A. If you keep going down, there should be a P\&L statement listed there. Right there.

So this is the $P \& L$ statement for the global residential smart lock group, not the North American smart lock group. So they're discussing pricing in the context of this P\&L statement.
Q. Okay. Dr. Waehrer, is there anything else on this document that you...
A. No.
Q. Dr. Waehrer, with respect to the TSA and the supply agreement --

THE COURT: Are you moving on from interconnect?
MR. DONALDSON: I was going to move on from this document. I was going to stay with the TSA and the supply agreement unless Your Honor has questions for Dr. Waehrer. THE COURT: At some point $I$ guess at the end of the day my question is you've identified these issues with the supply agreement. Is there a supply agreement that if it were amended you would be comfortable with?

So, for example, stronger enforcement mechanisms, the damages you discussed, a dispute resolution clause, longer than two years, and, you know, some way to ensure that Fortune would get what it needed from the company? Or in your view does it not matter, you can't tinker on the edges, it just doesn't work?

THE WITNESS: So I think you said longer than two years, and that made the hairs on my neck stand up a little
bit, because I think the whole idea is to create an independent competitor that is not dependent on the supply of an important input from a competitor.

THE COURT: Right. But the only reason I mentioned longer than two years was because you were concerned that it might take more than two years.

THE WITNESS: And that creates a risk --
THE COURT: What if we just had a length of time that it went as long as it took for Fortune to become independent on this issue, with a strong enforcement mechanism?

THE WITNESS: So I would find that to be -- if we thought it was going to take longer than two years, and we extended it, I would find that to be problematic because I don't think we want to have Fortune being supplied by a competitor for longer than two years. There are just risks associated with can you really write a contract that anticipates issues that will come up over the course of a longer period of time.

THE COURT: Okay. So in your -- let me ask it this way: Is it your opinion that there are changes that could be made to the supply agreement on interconnect that would make you comfortable with it, the divestiture, or in your view is it, it doesn't matter what you do with the supply agreement, I just disagree that this will work? THE WITNESS: So I think there's a couple moving parts
here, and there's one other aspect of the supply agreement that I haven't touched on yet that I'd like to get to. But I think --

THE COURT: With respect to interconnect or Vietnam? THE WITNESS: With respect to interconnect and nexTouch.

THE COURT: Okay. So what's the other issue? I'm sorry.

THE WITNESS: So the other issue just is the pricing. The pricing, in order for Fortune to be competitive, the pricing in the supply agreement should be close to or at marginal cost or average variable cost. And right now it includes, I believe, fixed cost, and it may also include some corporate overhead, which means that Fortune would be operating -- so all of those then, the price would be Fortune's -- Fortune's marginal costs would essentially include these fixed costs and corporate overhead, whereas for Assa Abloy, the company, their marginal costs would not include those, so it would be at a competitive disadvantage because of that cost difference.

THE COURT: So taking all that into account, in your opinion, is it possible to make changes to the supply agreement that would get you comfortable with it as part of the divestiture, or is it just your view, can't make changes to it because it's just fundamentally flawed from the get-go?

THE WITNESS: So I understand your question, and I think it interacts with at what point will Fortune be able to operate independently of the supply agreement. I mean, how long do we think that's going to be. If there was evidence in the record that it's going to take six months, it's going to take a year, something relatively short and we were pretty confident of that, then, you know, perhaps the supply agreement isn't that bad, although, you know, even with that, we're still in the world of looking at a deal of selected assets and all the potential problems that that creates and the risks that seem to be indicated by the FTC studies.

I do think it's difficult to craft a supply agreement that's really bulletproof, but if it's just for a short period of time, maybe it's something that could be lived with.

THE COURT: Okay.
BY MR. DONALDSON:
Q. Dr. Waehrer, when competitors supply each other with products, are there information-sharing concerns that could arise?
A. I'm sorry. Could you say --
Q. When competitors supply each other with products, are there information-sharing concerns that can arise?
A. So, yeah. So in a supply agreement, there are
information issues. I mean, obviously, if Fortune goes to the Guadalajara plant and says, hey, I've got an important
multifamily customer with a big order, can you produce this for me quickly, the question is will that information get passed on to the competing business at Assa Abloy.

There are some confidentiality provisions in the supply agreement, but those seem to be pretty toothless, especially given the enforcement terms of the supply agreement of specific performance.

And just being able to detect the violations of those kinds of information-sharing issues becomes somewhat difficult also. And these just create -- to me it means that whenever you are talking about supply of a competitor, you don't necessarily want to have it go for very long.

And I think -- I mean, just to add one more thing to this, I think -- you know, these supply agreements, there's some significant failures in the past of these.

I mean, one notable failure is the Sprint/T-Mobile merger where that merger was let through with a remedy that involved a contract between T-Mobile and Dish, the divestiture buyer, where $T$-Mobile would provide network services for dish for a period of time until Dish was able to put up its own network. And that was meant to extend -- it's now been going for more than three years. But disputes between $T$-Mobile and Dish at a certain point caused that to somewhat unravel, and then Dish decided to go and negotiate for network services with AT\&T.

That suggests a problem. You know, that supply agreement
for Dish was supposed to be at preferential prices, it was supposed to allow them to compete as an independent supplier, as if they were a network operator themselves.

And if you look at subscriber numbers for Dish versus the other cell phone services, all the three big ones, AT\&T, Verizon, and T-Mobile, have been growing their subscriber numbers, and since the divestiture, Dish has been shrinking. BY MR. DONALDSON:
Q. Thank you, Dr. Waehrer. We jumped over the Vietnam divestiture. I just want to loop back to that for a moment.

In your reply report you discuss the Vietnam facility. Since that time, we received a Vietnamese -- new Vietnam facility lease and implementation letter. Could you please share with the Court your thoughts about those two documents. A. Sure. So just to remind Your Honor, the Vietnam facility is an important production facility, right? It's the place where all the non-interconnect and nexTouch locks for the Yale residential smart business are produced. And right now -- or at the time of the original signing there was no timeline for when there was supposed to be closure, and the agreement required good-faith efforts to occur, which seem to me to be a problem because --

THE COURT: We're past that now, right? There's a
lease. Why don't we get to the lease. THE WITNESS: So there's a lease, and there's another
agreement. So my reading of the lease was that there's not much of a commitment there. You know, the rent, I don't know whether that's a confidential amount, but the rent is not very high on a per-month basis, and they can, you know, get out of the lease if they would like to. So --

THE COURT: Assa Abloy can?
THE WITNESS: Yes.
THE COURT: At that point they would have moved out of the Vietnam facility.

THE WITNESS: So the question is, you know, how much of a commitment does the lease create? What does it indicate to us about the timing of the deal or the timing of the move? And I'm suggesting at least to me it doesn't seem to indicate very much.

There was also the implementation letter that was issued. I think what's notable about the implementation letter is what's not in the implementation letter, and that is some kind of timeline for when the closing would happen, and/or penalties for missing that timeline. So just the fact that that's not present suggests to me that there's still significant uncertainty about when exactly that is going to close.

And then the other thing about the implementation letter is they've changed how the plant is going to be operated in the interim to the extent the closing is delayed. It was going to
be operated by Fortune with seconded employees. And now it's going to be operated by Assa Abloy supposedly for the benefit of Fortune. It's not exactly clear how a competitor operates a factory for their competitor at the benefit of Fortune. Seems quite unusual to me.

And of course the TSA, that seems to be the contract under which all of this is happening, and that has its own enforcement issues that are not unlike the supply agreement enforcement issues.

BY MR. DONALDSON:
Q. Dr. Waehrer, you said the TSA had some enforcement issues, I believe. Could you please share with the Court what those issues would include?
A. So they're similar issues to the supply agreement. The consequential damages are completely ruled out and the only resource is -- here's -- I think that's a quote from the supply agreement. But it's essentially the same. Consequential damages ruled out. Specific performance is the only enforcement provision.

And I think it's in the TSA itself that indicates that the buyer really has no recourse at law, which at least as an economist, that struck me as a very strange term to put into a contract, but perhaps it's something that's standard. Q. Dr. Waehrer, switching gears, you state that the proposed divestiture increases the risk of coordination. Can you
please explain your analysis of the risk of coordination? A. Sure. So we skipped over the coordinated effects section of the competitive effects of the un-remedied deal, which I think would have introduced to Your Honor kind of the concept of coordinated effects.
Q. We can go back if you'd like.

THE COURT: I know. I understand the concept.
THE WITNESS: Okay. So the analysis is generally -goes by a -- you ask a couple questions. So the starting point is do we have a market that is vulnerable to coordination? And then does the transaction increase that vulnerability?

And in my original report, in my initial report, I concluded that both these markets were vulnerable to coordination. Both markets were concentrated. There was evidence that there was tracking of pricing and that the companies followed the pricing of each other. And all of those things suggest an ability to detect deviations from a tacit arrangement to raise price, and to respond to that, and that allows for the tacit arrangement to develop and be enforced.

So then the question is, what about the divestiture that makes coordination more likely? In this case there's a couple things. Probably most important is the fact that these ongoing entanglements involving the TSA and the SA mean that

Fortune is in some sense dependent on Assa's goodwill, and if you are at the mercy of a company's goodwill, you may decide to pull your competitive punches. And so that creates a problem.

So even if everything was going fine with the supply agreement and the TSA, the fact that Fortune may believe that at some point Assa would try to make some difficulty for them, that would probably lead Fortune -- that would likely lead Fortune to perhaps pull its competitive punches and not compete as aggressively.

The other issue relates to the fact that we're talking about now Fortune, the leadership of both Emtek -- I'm sorry. Yes, Emtek at Fortune and the smart lock business at Fortune knows the executives at Assa. Assa knows the executives of those businesses. The fact that they have deep knowledge of each other and have discussed how to respond to competitive pricing initiatives suggests to me that an agreement would be easier to come to.

And then Assa, of course, knows key competitive information about costs, supply chain, key customers, discounts, margins, those kinds of things. All of these suggest that there's an increased likelihood of coordination.

And then Professor Collis's mutual forbearance theory, that is in my view supported by the IO literature. He comes to that theory bringing to the table corporate strategy to
explain why the kind of asymmetry that is kind of necessary, is necessary for mutual forbearance to develop, would develop, and I think that creates a significant additional risk relating to coordinated effects, independent of the arguments that I've just made that were in my reply report.

THE COURT: Do you cite that literature in your reply report?

THE WITNESS: The mutual forbearance literature?
THE COURT: Yes, the industrial organization literature that supports it?

THE WITNESS: I do not, but Professor Collis does, and the key paper there is by Professors Bernheim and Whinston. I believe it's 1990 RAND Journal of Economics. But it could be 1999.

THE COURT: Nothing more recent?
THE WITNESS: I think there is some more recent literature but the basic theory that developed it is from that paper, and then there are some empirical papers that developed.

So when I was evaluating Professor Collis's theory, I was looking at that paper because that's really kind of the IO, you know, the initial paper that kind of talked about that theory.

THE COURT: Okay. So in your bullet point here on industrial organization literature, you're referring to that

Bernstein and Whinston article?
THE WITNESS: Correct.
THE COURT: Okay.
All right.
MR. DONALDSON: It's Bernheim and Whinston?
THE WITNESS: Bernheim and Whinston, yes.
MR. DONALDSON: Thank you.
BY MR. DONALDSON:
Q. Dr. Waehrer, have you analyzed potential smart lock entry with respect to the proposed divestiture?
A. I did. So this slide, Your Honor, was really an attempt to answer some of the questions that you had posed in one of your hearings.

THE COURT: Yeah. I have another one, actually. I have another one. In yesterday's New York Times crossword puzzle there was a clue that said barrier to entry which was I think five letters long. And I thought, I'll bet the government's expert will be able to tell me what that is, because I couldn't get it.

I did get -- there was another clue which was what it's called in hockey when you're in the penalty box? But that's because my partner's son plays hockey so I just asked him. And it's sin bin. It's a great name.

THE WITNESS: I'm sorry, what was it?
THE COURT: It's called sin, S-I-N, bin. Sin bin.

THE WITNESS: Sin bin, okay.
THE COURT: The penalty box. Then I thought, now I've got you and you'll solve it for me and I'll be done. THE WITNESS: So unfortunately you have an economist who is terrible at word games. Barrier to entry, five letters.

THE COURT: It might be six. Five or six, but I think it's five. All right. Well, everyone think on that. If anyone did the crossword puzzle yesterday, let me know.

Okay. Go ahead. Sorry.
THE WITNESS: As I was saying, Your Honor, this slide that is mostly blacked out on the monitor, but you could look at the printout, was mostly an attempt to answer questions that you had teed up about entry. I know that there's been some testimony in court about online entry and whether online entry is really sufficient. And I'm happy to walk through this if you still have those questions.

THE COURT: No. I got it. I got the points. THE WITNESS: Okay.

MR. DONALDSON: Your Honor, this might be a good breaking point.

THE COURT: Perfect. Okay. So why don't we come back at 2:40. So 18 minutes.
(Recess from 2:22 p.m. to 2:41 p.m.)
THE COURT: All right.

BY MR. DONALDSON:
Q. Dr. Waehrer, what is a deadweight loss?
A. A deadweight loss relates to a welfare calculation, and when there is a circumstance that leads to a decrease in welfare -- well, whenever you have in economics, say, a regulation that influence or some policy that changes welfare, there can be a number of factors. And if it decreases welfare, can have a few different things that happen.

There could be one party could be better off, one party could be worse off, but if there's an inefficiency then it creates what is called a deadweight loss. So that is just defined as what's the loss in welfare in the calculation. Q. Dr. Waehrer, what do you understand will be happening with the Yale brand for commercial products in the U.S. if this transaction goes forward?
A. So my understanding is that the Yale brand for commercial in the U.S. will essentially be abandoned. So this is a brand that presumably has some value in commercial in the U.S., and it will no longer be used. And that I would describe as a deadweight loss.

I think one can think of it in the following kind of simple example. You buy a used car and -- maybe you don't buy used cars, but suppose you did buy a used car and the seller says I'm going to sell you this used car but without the spare
tire, and he takes the spare tire out of the car and throws it into the dumpster. That's an example of a deadweight loss where there's something of value that is being taken out of the exchange.

And the fact that the commercial -- Yale commercial brand is not part of the sale when I think Fortune indicated some interest in it suggests something about how Assa Abloy was really defining the boundary of the divestiture very carefully to only include items in the relevant market and very carefully trying to exclude aspects that might be related to the commercial business.
Q. Dr. Waehrer, what's your understanding with respect to what will happen with the residential, the Yale residential mechanical business if this transaction goes forward?
A. So, similar to the Yale commercial brand, my understanding is that the mechanical business will also disappear. That might be similar to taking -- also taking the bike rack off the car and throwing that away in this kind of transaction. So that Yale commercial business -- I mean, sorry, the Yale mechanical business seemed to be something that Fortune had some interest in, at least according to an email that involved Mr. Partington and his testimony the other day. And yet it's not part of the transaction and not going to Fortune.
Q. Dr. Waehrer, does Assa Abloy have other commercial lock
brands beyond Yale?
A. Yes. So, in the U.S., my understanding is that they have a large -- somewhat of a large business in commercial locks with a number of brands, including Sargent and others and Yale is a part of that or at least another brand. So they have commercial locks other than the Yale brand that they sell in the U.S.
Q. Can you think of a company that's well positioned to quickly develop interconnect and nexTouch replacement products?
A. So because of the commercial business, the Yale's commercial business that they would retain, $I$ would think that they would be able to develop replacement interconnect and nexTouch much quicker than Fortune would be able to without those businesses. So Fortune wouldn't have any commercial business, the Assa Abloy would continue to retain significant commercial brands and would be in a much better position to develop nexTouch and interconnect than Fortune would.
Q. Dr. Waehrer, have you given thought to what a sufficient divestiture might look like here?

MR. BERNICK: I'll object, Your Honor. I believe it's outside the scope of his report. As was the stuff about deadweight loss. I'm trying to let this go but it's way beyond the scope of the report. THE COURT: Yeah. I would say that deadweight loss was
nowhere in his reports. And this is -- I don't remember him giving an opinion as to what a sufficient divestiture would look like. Can you point me to somewhere in his report where it says that?

MR. DAHLQUIST: Your Honor, we understood we would have some leeway with our experts in order to put on responsive items to Dr. Bailey, Mr. Galante's surreply reports. This is part of that. So we agree it's not in the initial report and we request that it be heard really to respond to some of the items that we've heard.

THE COURT: But what is it responding to -- I don't understand why he couldn't have testified to this in his reply report. What was new in Dr. Bailey's last report that would only now have him come up with this issue of what a sufficient divestiture would look like?

MR. DAHLQUIST: I think it goes to that core question, Your Honor, as to what would be a sufficient divestiture.

THE COURT: No, I understand. But that was raised by Dr. Bailey's first report. Why wasn't this in his initial reply report?

MR. DAHLQUIST: Your Honor, we understand that it's tied together with the surreply report. I don't want to speak for Dr. Waehrer, but that's what we would offer it for, Your Honor.

THE COURT: Okay. Well, what part of the surreply
report?
MR. DAHLQUIST: I'd have to grab it, Your Honor.
Your Honor, I apologize. I don't have it. I can get it at a break.

MR. DONALDSON: I can move on.
THE COURT: Well, no, no. Why don't we do this. Why don't we get the testimony in the record. Mr. Bernick, we'll assess at some future date whether I strike the testimony as being outside of his report. But I do take Mr. Dahlquist's point that I did say I would give a lot of leeway given all how all of this has shaken out.

So I'm going to hold your objection. Let's hear the testimony. If I can't -- if I don't get from you all where in the surreply it comes from, then I will strike it.

MR. DAHLQUIST: Understood, Your Honor. And I guess the final point I'd add is a lot of this is also responsive to Your Honor's questions as well. These are questions that you had asked specifically: I want your experts to be prepared to tell me what would a sufficient divestiture look like.

THE COURT: I did ask for that, Mr. Bernick. I did. Now that he's reminding me.

MR. BERNICK: You did, Your Honor.
THE COURT: I know, I hear you.
MR. BERNICK: I want to make sure that if there's flexibility afforded to the government's experts, that we
similarly have some flexibility. But I understand the issue. We just reserve our objection.

THE COURT: Understood. So I'm going to overrule the objection based on that point. Good job to the associate who remembered that and handed you the note. And we'll go forward.

But of course, Mr. Bernick, I'm going to allow your experts to respond.

MR. BERNICK: Thank you, Your Honor.
MR. DAHLQUIST: Thank you, Your Honor.
MR. DONALDSON: Thank you, Your Honor. This also relates to the FTC study where they looked at the asset package of an ongoing business.

BY MR. DONALDSON:
Q. I guess the question is, Dr. Waehrer, are there any guiding principles, whether from the FTC study or otherwise, that you would look to with respect to crafting a sufficient divestiture here?
A. So in response to your question, which was -- I could have passed the note too, but I couldn't.

THE COURT: I'm apparently the only person who forgot that I was the one who asked the question, so...

THE WITNESS: So I would -- the guiding principle that I would suggest that Your Honor follow would be to try to craft a divestiture that looks as close as possible to an
ongoing business. I think the divestiture as it stands now, for reasons that I've already testified to, does not fit that description. And so then the question is, obviously, what would, and what would it need to include? We would need to resolve the Vietnam uncertainty for the factory.

There's certain global economies of scope and scale that are not central to my analysis; they're more central to some of the other experts, so I'm just going to put those aside and focus on the things that I've really focused on. And so besides the Vietnam facility, then we have nexTouch and interconnect. And I think to really have a divestiture of an ongoing business there needs to be some sort of production of nexTouch and interconnect.

And then the question is exactly what's the boundaries of that divestiture that would include the production of nexTouch and interconnect. And I don't have good insight into the structure of Yale's commercial side of the U.S. business. The focus of DOJ's investigation was during the HSR period and even during the litigation has been on the residential side. There's limited -- somewhat limited discovery on the commercial side.

And it could be that the nexTouch and interconnect locks depend quite a bit on being integrated with other parts of the commercial business. And so it could be that it would just simply be, the right choice would be to divest the Yale
commercial in the U.S. to Fortune, something that they were interested in acquiring to begin with, it seemed as if.

And if that caused some problems because it was actually creating a separation between assets within Assa Abloy, I think Assa Abloy, because of its other commercial businesses, would be in a better position to heal that wound, you might say, than Fortune would be filling the gaps.

And so I can't -- I don't -- just to summarize, I don't know what the right carving-out of the commercial business exactly. It does seem to me that, based on the evidence, that nexTouch and interconnect are important, Fortune should be getting some sort of manufacturing facilities for those in order to have really an ongoing -- divestiture of an ongoing business. But how you detach that from the rest of Assa Abloy, I don't have the information to provide you with.

MR. BERNICK: Your Honor, I move to reject the testimony on other grounds, that it's not supported by sufficient facts or data. He just testified he doesn't know about the commercial business but said it needed to be divested anyway. So I'm making an alternative objection, Your Honor.

THE COURT: I'm going to overrule the objection, but Mr. Bernick, as you know, and as I've asked both of the experts to tie any opinions to evidence. So I will be looking closely at all opinions and if they're tied to actual
evidence.
MR. BERNICK: Yes, Your Honor.
BY MR. DONALDSON:
Q. Just one followup question on that. The Yale commercial business in the U.S. and the residential mechanical business, those were the brands that were being abandoned, I think you testified to previously. Is that right?
A. The Yale commercial trademark was being abandoned.

It's not clear that the Yale business was being abandoned just simply because they could be producing the same locks but just relabeling them Kwikset. But then I believe that the production and sales of the Yale branded mechanical locks would be discontinued.
Q. Okay. Thank you for the correction.

MR. DONALDSON: Your Honor, unless the Court has additional questions, I have no further questions at this time.

THE COURT: Thank you, Mr. Donaldson.
Mr. Bernick?
CROSS-EXAMINATION
BY MR. BERNICK:
Q. Dr. Waehrer, it's good to see you again. We met at your deposition. How are you today, sir?
A. I'm good. How are you?
Q. I'm doing well.

I'm going to go back and talk about a few things that you discussed with counsel for the government earlier today. First of all, you talked about interconnected smart locks during your direct examination. Is that right?
A. Yes.
Q. Is a Yale 400 series an example of a non-interconnected residential smart lock?
A. I would have to go back and look at the models. I don't know.
Q. How about an Assure Lock?
A. I believe Assure Lock has a version that's interconnected and a version that's not.
Q. Okay. I'm just trying to establish some baseline terminology. I'll refer to an interconnected smart lock and a non-interconnected residential smart lock. Do you know what I mean by those two things?
A. Yes.
Q. Okay. A non-interconnected residential smart lock and an interconnected residential smart lock are not reasonably interchangeable substitutes from the perspective of consumers. Isn't that right, sir?
A. I believe that to be true. Correct.
Q. If building codes require an interconnected lock, then consumers could not substitute a non-interconnected residential smart lock. Is that right?
A. If you mean essentially install a non-interconnected lock in a building where the code requires interconnected lock. I would agree with you, yes.
Q. You're familiar with the Horizontal Merger Guidelines; is that right, sir?
A. I am.
Q. Those guidelines describe the agency's approach to product market definition; is that right?
A. They do.

THE COURT: These are the 2010 ones?
MR. BERNICK: That's correct, Your Honor.
BY MR. BERNICK:
Q. And you generally try to follow those merger guidelines.

Is that right, sir?
A. They're generally a good guide to follow, yes.
Q. And those merger guidelines state, "Market definition focuses solely on demand substitution factors." Is that right?
A. I believe they do, yes.
Q. The guidelines also define markets based on "customer's ability and willingness to substitute away from one product to another in response to a price increase." Right?
A. I believe they do. Yes.
Q. The hypothetical monopolist test is used in the guidelines to define relevant product markets. Correct?
A. It's one of the ways in which markets are defined. Correct.
Q. What is the hypothetical monopolist test, sir?
A. So you have a candidate set of products and the hypothetical monopolist test says at -- well, for a horizontal merger, you'd do it as follows:

You'd take current prices, and you'd say, if you had a horizontal monopolist -- or you had a monopolist over those products, would a monopolist find it profitable to increase price by a small but significant nontransitory price increase, usually referred to as a SSNIP, and that's usually taken in most cases to be 5 percent, but it can be other sizes of price effects depending on the industry.
Q. In this case you did not perform an analysis to determine whether a market limited to residential smart locks but excluding interconnected smart locks would satisfy the hypothetical monopolist test, did you?
A. I did not.
Q. And interconnected smart locks are at least 5 percent more expensive than non-interconnected residential smart locks. Correct?
A. That would be correct. Yes.
Q. And if there was, to use your phrase, a SSNIP, a small but significant nontransitory increase in price, if there was a SSNIP on interconnected locks, customers would not
substitute to non-interconnected residential smart locks. Correct?
A. I'm sorry. I'm just trying to parse your question because it doesn't quite -- is not quite consistent with the hypothetical monopolist test. But yes, I believe that's correct.
Q. And if there was a SSNIP on non-interconnected residential smart locks, customers would not substitute to interconnected smart locks. Right?
A. Unlikely that very many people would switch.
Q. There is no market for interconnected smart locks alleged in the complaint, is there, sir?
A. There is not.
Q. Instead, the alleged market here is for residential smart locks. Correct?
A. There is.
Q. And you did not define a separate market for interconnected locks in your report. Right?
A. I did not.
Q. And you did not evaluate harm to competition in a separate market for interconnected locks. Isn't that right?
A. Not specifically, no.
Q. Not specifically or generally. Right, sir?
A. I am trying to determine whether or not if there is a --
if Fortune has a problem with the supply of smart locks,
whether what I've analyzed would suggest, if there was a market for interconnected locks, a problem with that market, and I think that what $I$ have in the report would suggest that there might be a problem in that market, yes.
Q. You were never even asked to evaluate harm to competition in a separate market for interconnected locks. Right?
A. No. That was not part of my task.
Q. If Fortune Brands were to develop a new interconnected lock, you agree that there would be no reduction in the number of companies selling interconnected locks as a result of the transaction. Right?
A. I believe that's accurate, yes.
Q. Switching to nexTouch, a nexTouch is a commercial grade mortise lock. Right?
A. That's what has been suggested in the evidence, yes, in court.
Q. For multifamily customers that we're talking about today, a 400 series or Assure residential smart lock is not a substitute for a nexTouch smart lock. Correct?
A. So I believe that Mr. Haldeman did suggest that there was some competition with a mortise-style lock. I believe the company was Latch that was installing mortise-style locks on doors, retrofitting doors, suggesting that that company was competing with them for mortise-style locks.
Q. So I'll ask the question again. I would just like a yes
or no answer to the question. For multifamily customers, a 400 series Assure residential smart lock is not a substitute for a nexTouch smart lock. Correct? Yes or no, sir?
A. Well, the evidence --

THE COURT: It's a yes or no, or I don't know.
That's what he's asked for.
THE WITNESS: So I don't know, then.
THE COURT: Okay.
MR. BERNICK: Okay.
BY MR. BERNICK:
Q. In your deposition you knew. Right?
A. That was before Mr. Haldeman's testimony on this.
Q. If you could flip with me -- did you give a deposition in this case, Your Honor? I'm sorry.

THE COURT: I did not.
(Laughter.)
MR. BERNICK: Dr. Waehrer.
THE COURT: I stay far away from you people.
THE WITNESS: I did. I did give a deposition.
BY MR. BERNICK:
Q. Did you tell the truth in this matter, in the deposition?
A. I was doing my best, yes.
Q. Could you flip in tab 3 -THE COURT: I don't think we have binders. MR. BERNICK: We're passing out some binders now.

It'll be at tab 3.
BY MR. BERNICK:
Q. Does tab 3 appear to be your deposition, sir?
A. Yes.
Q. If you could flip with me to page 71, row 6. I'm going to read from your deposition:
"So for those downstream customers, apartment buildings,
a Yale Assure Lock is not a substitute for a nexTouch lock. Right?"

Your answer at line 11: "I don't think they are. No." Did I read that correctly, sir?
A. You did.
Q. From the perspective of a multifamily integrator like SmartRent, a nexTouch lock is not a substitute for a 400 series or an Assure Lock. Right?
A. I believe that's consistent with Mr. Haldeman's testimony. Yes.
Q. And you did not conduct a hypothetical monopolist test to determine if commercial smart locks should be included or excluded from the relevant market. Correct?
A. I did not.
Q. If there was a SSNIP on commercial smart locks, customers would not switch to residential smart locks. Correct?
A. So I think that I need to answer I don't know again simply because of Mr. Haldeman's testimony on this and the
fact that there was a supplier of mortise locks that seemed to be retrofitting doors that would otherwise not take a mortise lock. So if you're talking about the Latch mortise lock as being part of commercial mortise locks, then it seemed like they were being treated as substitutes with non-mortise locks.
Q. So is your answer "I don't know"?
A. I would say no -- I don't know. And I'm sorry, I should have just said "I don't know." I apologize.
Q. But at the time of your deposition, your opinion was that they were not substitutable?
A. I believe you could probably point me to the place in my deposition where I said that, yes.
Q. If there was a SSNIP on residential smart locks, customers would not switch to a commercial smart lock. Correct?
A. Again, I'd have to say I don't know.
Q. But at the time of your deposition, you said they would not switch. Right?
A. Correct.
Q. You did not include commercial smart locks in your market share calculations. Correct?
A. That's correct.
Q. And you were not asked to evaluate whether there's harm to competition in a product market for commercial smart locks. Correct?
A. Correct.
Q. And you don't know whether Spectrum sells commercial smart locks. Correct?
A. I don't believe they do, but I don't know for sure.
Q. And if Spectrum does not sell commercial smart locks, you agree that the transaction will not reduce the number of commercial smart lock sellers in the market today. Correct? A. With the provision of "today," then I would agree with you, yes.
Q. Your theory of harm, as I understand it, both from your deposition and your testimony today, with respect to the supply agreement, is that if Fortune loses the ability to sell nexTouch and interconnected locks, Fortune will lose not only sales of nexTouch and interconnected locks, but also residential smart locks like the 400 or Assure series. That's your opinion, sir, right?
A. Yes.
Q. And this theory is based on the fact that multifamily integrators like SmartRent would substitute their entire portfolio of products away from Yale if they cannot get a nexTouch or interconnect lock. Correct?
A. Not exactly.
Q. That's not your testimony?
A. So my current view is informed by the testimony of Mr. Haldeman on this point.
Q. Well, let me ask the question again. I just want a yes or no answer. Your theory is based on the fact that multifamily integrators like SmartRent would substitute their entire portfolio of products away from Yale if they cannot get nexTouch and interconnected locks. Correct?
A. No.
Q. That's not your opinion?
A. It's -- that's one mechanism, but not the only mechanism that would lead to my conclusion.
Q. It is true, is it not, that no customer has testified that they're going to cease purchasing Yale Assure locks if they cannot also get nexTouch and interconnected locks. Correct? Not a single one.
A. I have not heard testimony on that.
Q. In your presentation you quoted -THE COURT: And, sir, have you been here for all of the testimony?

THE WITNESS: I've tried to keep up with the transcripts when I have not been in court.

THE COURT: Okay. So you know all of the testimony and your answer to him is not that you've seen?

THE WITNESS: So what I have heard --
THE COURT: No, no. I just want to clarify, because he asked you, there's been no testimony. And all I want to do is clarify that you've heard or read the testimony so far.

THE WITNESS: Yes.
THE COURT: Okay.
BY MR. BERNICK:
Q. In your presentation today you quote testimony from Jason Williams to support the theory regarding nexTouch and interconnect locks. Correct?
A. Yes.
Q. But you chose to exclude language from his deposition
that was inconsistent with your opinion. Correct?
A. No.
Q. If you flip with me at tab 9, it's a copy of Mr. Williams' deposition. I'm starting at page 276, line 17. If you can follow along, the question is -THE COURT: Hold on, Mr. Bernick. Sir, are you there?

THE WITNESS: I am here.
BY MR. BERNICK:
Q. So line 276 -- page 276, line 17, the question: "Would you be at a competitive disadvantage if you could not provide both residential smart locks and nexTouch lock sets to a customer that desired both?"

And then there's some objections.
The answer picks back up at 25: "If we could not have -if we could not provide both things, there would be some competitive advantage that, you know, maybe we lose. But
let's say it was nexTouch. We wouldn't lose the smart residential business. Right? We'd lose the nexTouch business if we didn't have it. I don't think there's anything -- well, I'll keep it at that."

Did I read that correctly, sir?
A. Just give me a minute here.

MR. DONALDSON: Objection. Your Honor, I believe tab 9
is Professor Collis's transcript? I don't know if the binder
is the same as mine, but my No. 9 is Mr. Collis's transcript. THE COURT: Mine is Mr. Williams's transcript. Hold on. Let's make sure they have the right binder. THE WITNESS: So you were asking me if that was an accurate reading of the testimony, and I'd say yes. BY MR. BERNICK:
Q. You previously admitted you cannot identify a company other than Assa and maybe Allegion that sells a complete portfolio in the multifamily channel. Correct?
A. I believe that's accurate. Yes.
Q. Spectrum also does not have a portfolio of products today. Correct?
A. Not today. No.
Q. But companies that do not offer a complete portfolio still sell to multifamily integrators like SmartRent. Correct?
A. Yes.
Q. And companies without a portfolio can sell to multifamily integrators because the type of lock that is required depends on the type of job at issue. Correct?
A. I believe the answer to that is yes if I'm remembering your question correctly. They can sell? Is that what the question was?
Q. Yes.
A. Yes. Then yes.
Q. Customers are not required to buy residential smart locks, interconnects and nexTouch locks from the same supplier. Correct?
A. No, they're not required to.
Q. And in fact, customers can purchase those types of products separately. Correct?
A. Yes.
Q. And you're not aware of any discount a customer would get from purchasing the products together in a bundle. Right?
A. No.
Q. And you don't know --

THE COURT: I'm sorry. No, he's not right or yes, he's right?

THE WITNESS: I'm not aware. I thought that was the question.

THE COURT: Okay. So he's right you're not aware. THE WITNESS: I'm sorry.

THE COURT: No, this is always hard.
BY MR. BERNICK:
Q. And you do not know if a multifamily integrator can use its own software to make locks from different suppliers work together, do you?
A. Well, with Mr. Haldeman's testimony, I do have some awareness of that now.
Q. And in fact, it's true, an integrator can use software to make products work together from different suppliers. Correct?
A. I believe that was Mr. Haldeman's testimony.
Q. You testified that losing the ability to sell
interconnect and nexTouch locks would put Yale's sales at risk. Correct?
A. Yes.
Q. But you haven't quantified how many sales would be lost?
A. The quantification $I$ have is what $I$ testified to in my direct testimony.
Q. I didn't see a quantification in your direct testimony. Did you quantify how many sales would be lost to Yale if it lost the ability to sell interconnect and nexTouch locks?
A. Is that a yes-or-no question? THE COURT: It's a yes or no. THE WITNESS: Okay. THE COURT: That's a yes, no, or $I$ don't know.

THE WITNESS: Well, it depends on what you mean by "quantify," I guess.

BY MR. BERNICK:
Q. Did you quantify the number of lost sales that Yale would have if it lost the ability to sell interconnect and nexTouch locks?

THE COURT: Do you not understand what he means by "quantify"?

THE WITNESS: I'm sorry. I would say no, I did not quantify that.

BY MR. BERNICK:
Q. And this might be what you're referring to. On slide 49 of your presentation, if we can pull that up, the last bullet, you wrote, "Purchasers of nexTouch or interconnect who bought at least one of these types of locks in all years from 2019 to 2022 account for" --

THE COURT: Account for blah.
BY MR. BERNICK:
Q. Blah, blah, blah of all Yale U.S. smart lock sales in this period. I apologize. Got ahead of myself.

THE COURT: It's your competitive information. So I think what you should be saying is "thank you."
(Laughter.)
MR. BERNICK: Saving me from myself.

BY MR. BERNICK:
Q. The question, Dr. Waehrer, first of all, did I read that correctly, minus the omission?
A. I'm afraid I lost track with the bleep.
Q. Well, anyway, you see the last bullet, it's on the slide.
A. I do.
Q. And you state here that you used data from 2019 to 2022 to calculate the redacted percentage. Correct?
A. Correct.
Q. And you're aware that 2018 data was available in the backup data and work papers that you provided. Correct?
A. Correct.
Q. But you did not use 2018 data here, did you?
A. No.
Q. Would it surprise you to know that this percent in your bullet is cut by more than half if you include the 2018 data?
A. It would not surprise me at all.
Q. And Dr. Waehrer, in this bullet here you write, "At least one of these types of locks." Correct?
A. Yes.
Q. And that means you count all of that customer's residential smart lock sales in this percentage -- again that's redacted -- if the customer purchased at least one nexTouch or interconnect locks in each of those four years. Correct?
A. That was the calculation.
Q. So if a Yale smart lock customer bought just one or two nexTouch locks in 2019, that would be enough for you to count all of that customer's Yale U.S. smart lock sales in that percentage. Correct?
A. If there were such examples, that's the way it would have come out, yes.
Q. Did you calculate what this percentage would be using your same method if you just exclude SmartRent from the numbers? I'm not asking for the percentage, but I'm asking if you did it.
A. So as I indicated in my direct testimony, SmartRent is a very large percentage of --

THE COURT: Can you just answer yes or no to his question?

THE WITNESS: Oh, I'm sorry. Did I calculate it? Is that the question?

BY MR. BERNICK:
Q. That's what I asked. Did you calculate it?
A. Well, I could, because I --

THE COURT: Did you or did you not?
THE WITNESS: I'm sorry. I think I did. Yes.
BY MR. BERNICK:
Q. And you know that number sitting here today?
A. With a little bit of math, I could call out that number,
yes.
Q. So your testimony is you could do the calculation but you haven't?
A. It's a subtraction of two numbers that $I$ don't remember exactly what it is, but I did do the -- I mean, it would be a straightforward calculation.
Q. It's not in your report?
A. No.
Q. You believe that losing a customer like SmartRent would be a significant loss to Yale. Correct?
A. Yes.
Q. But you don't even know how many interconnect locks SmartRent intends to purchase in the coming year, do you?
A. I do not.
Q. And you don't know what quantity of nexTouch locks SmartRent plans to purchase from Yale in the coming year, do you?
A. I do not.
Q. Are you aware of any company, sir, that Assa Abloy has failed to supply with interconnects and nexTouch locks to date?
A. No.
Q. You talked in your testimony about Assa Abloy being a competitor with Fortune Brands is a significant issue with respect to the supply agreement. Is that right?
A. Yes.
Q. But in fact Assa Abloy competes with SmartRent today. Right?
A. I believe that is accurate.
Q. And they compete today through Assa Abloy's Accentra platform that competes directly with SmartRent. Isn't that right?
A. I would assume so, but I haven't seen direct evidence of that.
Q. And Assa Abloy, despite being a competitor, has supplied SmartRent with nexTouch and interconnect locks for years. Right?
A. I don't know for sure, but yes. I'm sorry. Yes, they have.
Q. And they've supplied other multifamily integrators with these products for years as well. Isn't that right?
A. Yes.
Q. At the time you submitted your report -- well, at the time you were deposed in this matter, you did not know what the corporate structure of Assa Abloy is, correct?
A. No.
Q. No, you did not know?
A. I had an awareness of the corporate structure, but not an exact awareness.
Q. You believed in fact at your deposition that there was a
global smart residential business division. Right?
A. I was referring at the time to GSR. Yes.
Q. And you believed that after the transaction was proposed, that smart residential business division was then split into geographic regions. That was your testimony, sir. Right?
A. I believe it was, yes.
Q. And at the time you submitted your report, you didn't know what portion of the U.S. smart residential business was being divested to Fortune Brands, did you?
A. I'm sorry. Can you ask that question again?
Q. Yes. At the time you submitted your report, and when you were deposed, you did not know what portion of the U.S. smart residential business was being divested to Fortune Brands. Correct?
A. I think I did know that.
Q. All right. You can turn back to tab 3. And I'm looking at page 201 of your deposition transcript. Page 201, line 20.
"Question: Do you know what proportion of that business division within the Americas that does smart locks is getting divested to Fortune Brands?"

You said: "Can you say that question again."
"That business within the Americas, that's the U.S. smart residential business, do you know what portion of that business is being divested to Fortune Brands?
"Answer: So I -- I don't."

Did I read that correctly, sir?
A. You did.
Q. At the time you submitted your report in this matter you didn't know whether Assa Abloy had product development teams for particular regions, did you?
A. I think I did know that, and we discussed that in my deposition.
Q. Okay. Well, we can keep your deposition handy. We'll look at page 203, row 1 through 14.
"Question: It's not exactly what I mean that they have different product development teams serving product development for products in particular regions. Do you know whether that's true or not?
"Answer: I don't know one way or another."
Did I read that correctly, sir?
A. Well, there's more to the answer there. Can I just take a minute to read that?
Q. You may. The question is just whether $I$ read that correctly.
(Witness reviewing document.)
A. You read that first couple lines correctly, yes.
Q. At the time you submitted your report, you didn't know how similar or dissimilar Assa Abloy's smart locks were around the world, did you?
A. I did have an understanding of the differences.
Q. I'll move on. You believe joint R\&D shared across the regions is important at Assa Abloy. Correct?
A. Yes.
Q. But at the time you were deposed, you didn't know what portion of total product development costs for smart residential business actually were shared globally. You had no idea, did you, sir?
A. I did not.
Q. And at the time you submitted your report, you didn't know whether each Assa business in each region had its own sales and marketing team, did you?
A. I do recall discussing that, and I thought that I replied that they probably did. But maybe you're going to point me to my deposition.
Q. I could, but I think we get the point here.

At the time you submitted your report, you didn't know whether each business leader was responsible for his or her own P\&L, did you, sir?
A. Again, we discussed that. I think it's a question of -well --
Q. Yes or no, sir.
A. I mean, I'm getting hung up on the word "responsible." So maybe you can tell me what you mean by "responsible."
Q. I'll just ask the question again: At the time of your deposition, you didn't know whether each business leader was
responsible for his or her own P\&L. Correct?
THE COURT: Why don't we do this, because I made Mr. Dahlquist do this. Why don't you ask him a question, and if he testifies contrary to his deposition, you can impeach him. But this isn't a memory test as to what he knew or didn't know at his deposition.

MR. BERNICK: Well, I'll change the time period, then, because I think what's important to understand is what he knew when he submitted his report and formulated his opinions, versus what he might have heard in court from a different witness. And that's what I'm trying to establish.

THE COURT: Well, that's fair. But just -- I guess that's fair and different than what Mr. Dahlquist was doing.

MR. BERNICK: I'll move on from this question. That was the last in that series.

THE COURT: Okay.
BY MR. BERNICK:
Q. You ran several quantitative analyses in your initial report. Correct, Dr. Waehrer?
A. I did.
Q. A diversion ratio analysis, a GUPPI analysis, and a merger simulation. Is that right?
A. Yes.
Q. And you've not updated those analyses from your initial report to account for the divestiture?
A. I have not.
Q. But you agree that assuming Assa Abloy's share in the relevant markets transfers to Fortune, those quantitative analyses do not generate any price effects once the divestiture is included. Isn't that right?
A. It would require additional assumptions besides just holding share constant.
Q. Okay. We can take a look at your deposition testimony on this. Page 156. If you look at row 15.
"Question: You have quantitative analyses, diversion ratios, the GUPPI analysis, the merger simulation. You've not updated those analyses to take into account the divestiture. Is that right?
"I've not updated my analyses to incorporate the divestiture, the -- the analyses of the un-remedied merger to take into account the divestiture.
"Question: Dr. Bailey did so, right? She updated those analyses?
"She reran my analyses assuming that Fortune Brands would have the same share as divested business -- well, as the divested business.
"Question: That's right. With that assumption, rerunning the analyses, those updated analyses do not show any price effects following the divestiture. Right?
"I think I agree with you, but -- but yeah, simply
assuming a transfer of share won't tend to generate any price effects."

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Did I read that correctly, sir?
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A. You did.
Q. But you claim that those analyses are the wrong analyses to run when evaluating a divestiture. Is that right?
A. In this particular case, yes.
Q. You believe a divestiture requires a different set of analyses?
A. In this case, yes.
Q. The ones that you ran in your reply report?
A. It's the analysis in the reply report, yes.
Q. And one of those analyses that you performed in your reply report was whether Fortune would be successful with the divested assets. Is that right?
A. That's certainly discussed in my reply report. Yes.
Q. And you did not conduct any quantitative analysis of Fortune Brands having reduced economies of scale or scope relative to Assa Abloy with respect to the divested assets. Right?
A. I did not quantify that, no.
Q. You believe it is likely that Fortune Brands will have higher costs, and as a result set higher prices. Is that right, sir?
A. Yes.
Q. But you cannot quantify an increase in cost of the divested assets under Fortune Brands. Right?
A. I did not quantify that.
Q. And you did not quantify any price increase. Right?
A. I did not.
Q. And in fact you agree that the smart lock market is a kind of market where you expect to see prices declining over time. Isn't that right?
A. Here again, I'm getting hung up on the language, the generality of the language, and I apologize.
Q. It's a simple question. This is the kind of market where you would expect prices to be declining over time. Yes or no?
A. Yes.
Q. You agree that a substantial lessening of competition from an economics perspective generally requires at least a 5 percent price increase. Right?
A. Yes.
Q. You assume in your analysis that Assa Abloy must benefit from joint procurement. Correct?
A. I don't think that I'm assuming it, no.
Q. You don't know what that benefit is? You haven't quantified it?
A. I have not quantified it.
Q. And you don't know one way or the other whether Assa Abloy's existing supply contracts contain volume discounts.

Right?
A. I do not know.
Q. And you haven't tried to estimate how much supply costs could increase after the divestiture, have you, sir?
A. I have not quantified it.
Q. In fact, you don't know one way or the other whether the U.S. smart residential business costs would be higher after the divestiture, do you, sir?
A. Well, that's the subject of my reply report, and I think I'm suggesting that it would be higher.
Q. You have no idea what any increased costs would actually be, do you, sir, as you sit here today?
A. I have not quantified it, no.
Q. You agree that global scale is not necessary to compete for the sale of smart locks. Correct?
A. Yes, I agree.
Q. Fortune's business plan contains a discussion of revenue and cost synergies. Right?
A. I believe that's true, yes.
Q. A synergy is the same thing as an efficiency, correct?
A. If you mean by efficiency according to the merger guidelines, then I would say no.
Q. So a synergy is not the same thing as an efficiency.
A. No.
Q. And you do not believe that Fortune's claimed synergies
are merger-specific. Right?
A. That was certainly not part of Dr. Galante's analysis from what I read, no.
Q. I'm asking you about your analysis, sir. You do not believe that Fortune's claimed synergies are merger-specific, do you?
A. No, I don't.
Q. And therefore, you do not believe those synergies should be considered in the merger analysis at all. Isn't that right?
A. I don't think that's accurate. No.
Q. Where in your report do you actually take into account the synergies that Fortune Brands expects to obtain?
A. So they're part of the discussion in my reply report.

They are not quantified as the cost to -- neither the synergies nor the economies of scale are quantified.
Q. So you don't calculate the costs of the transaction or the benefits of the transaction and quantify them. Right?
A. They are not quantified.
Q. And you don't know one way or the other as you sit here today whether the U.S. smart residential business subsidizes the global Yale software platform. Correct?
A. So you did ask me about this in my deposition, and I went back and read some of the discussion and heard some of the testimony. So if you're asking me as I sit here today, I
think I have some understanding of the subsidization you're referring to.
Q. So you agree with me, then, that the U.S. smart residential business does subsidize the global Yale software platform today. Right?
A. Depends on what you mean by "subsidize." There's -- I believe the testimony suggested --
Q. This is a simple yes-or-no question, sir.
A. Well, it depends on what you mean by "subsidized," so I don't know how to answer the question.
Q. So you don't know?
A. As I said, I don't know how to answer the question. Q. You agree that if Yale was in fact subsidizing the other smart residential businesses, that removing that subsidy would make Yale more profitable under Fortune Brands. Right?
A. So that depends on a lot of factors, not just the -reversing the subsidy.
Q. Holding all other factors equal, sir, you agree that if Yale was in fact subsidizing the other smart residential businesses, that removing that subsidy would make Yale more profitable, correct?
A. All else equal, yes.
Q. The divestiture retrospective studies you cited are not peer reviewed. Correct?
A. No.

THE COURT: I'm sorry. What was not peer reviewed? MR. BERNICK: The divestiture retrospective studies. THE COURT: Is that the FTC studies? MR. BERNICK: Yes. The FTC studies. BY MR. BERNICK:
Q. And with respect to the 2017 FTC study, you did not independently analyze the divestitures that that study surveys. Correct?
A. The data is not available, no.
Q. And therefore you have no basis to dispute the FTC's finding that a hundred percent of divestitures of ongoing businesses were successful. Correct?
A. I do not dispute that, no.
Q. I want to take a look at that 2017 study. It should be in your binder at tab 10. And we'll look at page 3.
A. Say the page again.
Q. Page 3. And I believe you testified earlier, sir, that divestitures -- that the success rate for divestitures in ongoing business were quite good. Do you recall that testimony, sir?
A. Yes.
Q. And here in footnote 8 on page 3, there's a footnote that describes how the FTC defines an ongoing business. Is that right?
A. Yes.
Q. And I'm going to read part of this.

THE COURT: Just read slowly.
MR. BERNICK: I will.
THE COURT: Otherwise, I'm going to get in trouble. MR. BERNICK: I'm sorry.

BY MR. BERNICK:
Q. "The assets include most typically an established customer base, a fully staffed facility of some sort (a manufacturing facility or retail operation) or an otherwise self-contained business unit that may have product contract packed, a manufacturing and/or sales force, perhaps a research and development team, and other assets that are included in the business, including ancillary agreements and third party contracts."

Do you see that?
A. I do.
Q. And so you'd agree if those factors are satisfied, the business would qualify as an ongoing business. Correct?
A. Properly interpreted, yes.
Q. And in your deposition you couldn't identify any other factors that would be necessary for the definition of an ongoing business. Correct?
A. Correct.
Q. The FTC criteria for divestiture being an ongoing business are satisfied with respect to the Emtek premium
mechanical divestiture. Correct?
A. I have not seen evidence to the contrary. Correct.
Q. In fact, you agree that the only potential competitive concern in the premium mechanical market is the potential for coordinated effects. Correct?
A. Correct.
Q. So shifting gears to coordinated effects. For both the premium mechanical and smart residential markets you believe there could be harm to competition from coordinated effects. Correct?
A. Yes.
Q. But you do not believe that coordination is more likely as a result of the post-transaction markets becoming more concentrated. Right?
A. They don't become more concentrated, so yes, that's correct.
Q. And if Fortune's share in the relevant markets declined after the acquisition, you agree the risk of coordination would decrease. Right?
A. So the risk to coordination that I identified in my report would decrease, but it would be consistent with the mutual forbearance theory.
Q. You talked in your testimony about executives at the companies who previously worked together communicating. Do you recall that testimony?
A. Yes.
Q. And in fact, that's one of your theories of coordinated effects here?
A. That's one of the factors that increases risk, yes.
Q. But you didn't do any analysis to determine whether there already were people today at Assa Abloy who previously worked at competitors other than looking up a few employees on LinkedIn. Right, sir?
A. I did not, no.
Q. And you can't recall which employees you looked up. Right?
A. I don't recall.
Q. And at the time you submitted your report, you didn't know that Jason Williams, the leader of the U.S. smart residential business, previously worked at spectrum HHI. Right?
A. I don't think $I$ knew that, no.
Q. And you couldn't identify any names of individuals who would remain at Assa post-divestiture who were involved in pricing decisions for smart locks other than CEO, Mr. Delvaux. Isn't that right?
A. I believe that was my deposition testimony. Yes.
Q. And you also did not know the names of other individuals involved in pricing decisions for premium mechanical locks either, did you, sir?
A. I did not know the names, no.
Q. You just assumed these people exist because of general corporate structure. Isn't that right, sir?
A. Correct.
Q. You believe in fact there's an increased likelihood of coordination in every case in which the buyer of assets in a transaction is also the seller of the assets being divested. Isn't that right, sir?
A. I don't think that's accurate, no.
Q. All right. Let's flip back to your deposition
transcript, page 277.
A. What tab is that again?
Q. I apologize. It's tab 3. So on page 277, line 3.
"Question: So in any situation where the buyer is the one divesting the assets, you believe there's an increased likelihood of coordinated effects.
"Answer: I think there's an increase in likelihood of coordination in such cases."

Did I read that correctly?
A. Just remind me what line number you're at again?
Q. Page 277, line 3.
A. You read that correctly.
Q. You opine that the transition service agreement with respect to operating the Vietnam facility would make it easier for Assa Abloy and Fortune Brands to enforce an agreement.

Is that right?
A. Yes.
Q. But you agree that if Assa Abloy and Fortune operated in two separate Vietnam facilities following the transaction, without a TSA, your concern about the information exchange would disappear, right, with respect to Vietnam?
A. With respect to the TSA concern, yes.
Q. You'd agree, sir, that entry has taken a large bite out of the market share in the smart lock market. Correct?
A. So I actually don't know what you mean by that. So I can't agree or disagree.
Q. All right. Well, let's look at your testimony, then. These are your words. Page 334 of your deposition, again at tab 3, line 7 .
"Question: There is eight --
"Answer: Yeah, okay.
"-- that went from zero to having market share?"
A. You're moving a little too fast for me. If you could --
Q. I'm sorry.
A. 334,333 ?
Q. I'm sorry. 334, line 7.
"Question: There is eight --
"Answer: Yeah, okay.
"Question: -- that went from zero to having market share.
"I guess the point, though, there's a significant amount
of entry over the course of three years, right? Or not? Is it trivial in your view, or is it significant?
"Answer: I think it depends on -- it certainly has taken a large -- it seems to have taken a large bite out of Schlage's share over the course of this period."

Did I read that correctly sir?
A. Yes. So I was referring to Schlage in particular rather than a general bite, but yes.

THE COURT: I'm sorry. What is the "it"? What has taken a large bite?

THE WITNESS: Are you asking me, Your Honor?
THE COURT: I'm asking you or Mr. Bernick.
THE WITNESS: I'm happy to try to explain --
THE COURT: I don't want you to explain. I just want to know what "it" refers to.

THE WITNESS: I believe "it" refers to entry. MR. BERNICK: That's how I interpret it too, Your Honor.

THE COURT: Entry as in entity?
MR. BERNICK: Entry by the new competitors.
THE COURT: Oh, okay. Thank you. That's what I
needed. Okay.
BY MR. BERNICK:
Q. You agree, sir, that entry barriers are low to begin competing on Amazon. Right?
A. Correct.
Q. But in your opinion, a company can't be a significant competitor if it's only selling online. Right?
A. Unlikely to be a significant competitor, I would agree.
Q. And you do not know which smart lock market participants use contract manufacturing to manufacture their smart locks. Correct? You don't know one way or the other?
A. I do not.
Q. And you were not able to verify the contribution margins that you reported for the smart lock entrants. Right?
A. We discussed this at my deposition, and I think I agreed that as you were defining "verify," that I was not able to verify those numbers. Correct.
Q. So you don't know one way or the other whether those entrance margins were actually higher or lower than companies with larger scale. Correct?
A. Well, I used what was reported, and that's the data.
Q. You don't believe that Assa Abloy retaining Valli \& Valli causes substantial lessening of competition. Correct?
A. Correct.
Q. And in your presentation earlier, you talked about buyers potentially making mistakes in divestitures. Do you recall that testimony?
A. Yes.
Q. But you're not aware of any mistakes that Fortune has
made in assessing this divestiture package. Correct?
A. I could point to some things that $I$ think are probably mistakes, but I have not pointed to -- well, I have pointed to specific issues with various parts of the deal that --

THE COURT: No, no. He's just asking you if they had made mistakes --

MR. BERNICK: Yes or no.
THE COURT: Yeah, with respect to -- well --
MR. BERNICK: I can reask the question if that would be helpful.

THE COURT: Reask the question.
BY MR. BERNICK:
Q. Dr. Waehrer, you're not aware of any mistakes that Fortune has made in assessing the divestiture package, are you, sir?
A. Not specifically, no.
Q. And you did not have access to the entire discovery record in this case, did you, sir?
A. Depends on what you mean by access, but I believe the answer, based on the definition I think you would like to apply, is no.
Q. In fact, you had to request categories of documents from DOJ attorneys, and you relied on those DOJ attorneys to pick the documents for you to review. Isn't that correct, sir?
A. Something along those lines. I requested documents on
topics, and I received the documents from the DOJ on those topics.
Q. And DOJ provided you with about 5,000 documents to review? Is that right?
A. Something along those lines, I think, if not more.
Q. And Assa Abloy alone produced over 1.8 million documents in this case. Isn't that right, sir?
A. I don't know one way or another.
Q. In your initial report you evaluated a combination of Assa Abloy and Spectrum HHI assets that will never occur. Correct?
A. I mean, that depends on contract interpretation that I'm not sure I'm qualified to do.
Q. And those analyses, therefore, are not useful in predicting the future state of competition. Correct?

THE COURT: I'm sorry. What contract interpretation is needed?

THE WITNESS: Just -- I don't know -- so there's in my mind, and the reason why I said I don't know is there seems to me to be a complicated interaction perhaps between what you find in this case and the divestiture in the deal.

THE COURT: Well, I think his question is assuming I'm not just going to allow them to merge without divesting, which would be a solid assumption, then assume that and then answer his question.

THE WITNESS: Okay.
THE COURT: So basically his question is a merger -well, I'm sorry. I shouldn't ask your questions for you. Go ahead.

BY MR. BERNICK:
Q. The analyses in your initial report are not useful in predicting the future state of competition. Isn't that right, sir?
A. Under the interpretation that we were just discussing, I would say that's accurate.
Q. At the time of your deposition, you'd billed the United States 2.5 million for your work in this matter. Correct, sir?
A. That's accurate.

MR. BERNICK: I pass the witness.
THE COURT: Why don't we do this. Why don't we take a break. Why don't we come back at -- why don't we give you 15 minutes -- well, let me ask, Mr. Donaldson, do you anticipate having redirect? MR. DONALDSON: I do. THE COURT: So why don't we come back at 4:05.
(Recess from 3:50 p.m. to 4:05 p.m.)
THE COURT: A couple of announcements before we get started. The right answer was not "scale." The right answer was given by Christopher Demuth, who emailed in and is correct
that the right answer is stile, $S-T-I-L-E$, which is an arrangement of steps that allows people but not animals to climb over a fence or wall. So thank you, Mr. Demuth.

Secondly, I may have to move the start time for tomorrow, so before anyone gets on the phone or leaves their house to come to court, please check the docket to see if there's been a change to the start time. If you don't see anything on the docket, there has been no change, but it's a possibility, and I wouldn't want a bunch of people here at 10 a.m. if the start time is later. So you've been warned, please check.

All right. Mr. Donaldson?
MR. DONALDSON: Thank you, Your Honor.
REDIRECT EXAMINATION
BY MR. DONALDSON:
Q. Dr. Waehrer, a few follow-up questions from Mr. Bernick's testimony. Mr. Bernick asked you if you had evaluated harm to competition for interconnect locks specifically.

Have you assessed the competitive importance of interconnect locks to Yale generally?
A. I have. That's certainly discussed in my reply report.
Q. And in a nutshell, how would you describe that competitive importance?
A. As I indicated in my direct testimony, it's -interconnect and nexTouch locks have been described as critical to Yale's success, especially in the B2B segment or
what I'm taking to mean the multifamily segment. And all indications are that it's a significant competitive advantage for Yale to be able to sell the whole portfolio of locks.
Q. Mr. Bernick asked you if the proposed divestiture would change the number of interconnect lock competitors. Do you remember that testimony?
A. I do.
Q. That was a yes-no question?
A. It was, with a particular assumption, I believe.
Q. Is there anything that you'd like to add to your answer at this time?
A. Well, I believe that Mr. Bernick asked me as of today, and I think it's significant that Spectrum has a interconnect lock that they will be introducing shortly. And so they will have -- be a competitor -- so if the deal does not go through, there will be two competitors, at least between the merging parties. And there are other suppliers that have interconnect smart locks that go into multifamily homes, but the two that we're talking about are really the Kwikset and the Yale brands.

If the deal does go through with the divestiture, and Fortune is not successful either due to issues with the supply agreement or the supply agreement runs out and they are not able to create one of their own, then the number of competitors would go down from two to one.
Q. Thank you. Mr. Bernick asked you about companies that produce a full line of commercial and residential products. Do you recall that?
A. I do.
Q. What impact do you believe it could have on Fortune if Fortune's not able to sell a full line of products?
A. So I think the testimony that I've heard in court and the evidence that I've read indicates that the effect on Fortune or the Yale brand sales is broader than -- would necessarily have to be broader than just the loss of sales for the interconnect and nexTouch locks, because the sales of those particular locks are not very large. Otherwise, it couldn't -- it wouldn't be critical.

And the testimony was that it was a competitive advantage, which means that a more general advantage, not just an advantage of having that lock in particular.
Q. You were asked if you had heard of any testimony where a customer said they would stop purchasing their entire supply of interconnect locks from Yale.

Are you aware of testimony suggesting that a company would not purchase something less than their entire supply of interconnect locks from Yale?
A. So the testimony from Mr. Haldeman and the GoKeyless deposition testimony that $I$ presented in my direct to me indicates that the end customers see putting like -- filling
in all of their apartment buildings with a consistent brand is a benefit to them and they like to do it, it's a preference of theirs, and if the Yale brand didn't have that as a possibility, then they would -- then it seems likely to me, given the testimony on the preference, and given the general economics of such a situation, that Yale would lose sales of locks more than just the nexTouch and the interconnect, but the non -- I guess what's referred to as the ordinary residential smart locks.
Q. You were asked about companies that don't sell a complete portfolio of products and still are able to sell some products to smart lock. Do you recall that testimony?
A. I do.
Q. Have you formed an opinion whether customers have a preference for a full portfolio of products or otherwise? A. Well, Mr. Haldeman's testimony on SmartRent was that there was -- this was in closed session so I will try not to reveal anything, but there was a relatively -- a very large proportion of his purchases were of Yale, and there was a relatively small proportion of another brand.
Q. You were asked whether you had quantified how much sales would be lost if Yale couldn't sell interconnect or nexTouch products. There was some discussion about your slides. Did you quantify a percentage of potential sales that could be at risk?
A. So I did. That was the number that was -- the number that shall not be named that was listed on the slide.
Q. And just to be clear, the customers who did purchase interconnect or nexTouch products that are referenced in that number, for how many years did they purchase those products? There's a time range. I believe it's 2018 --
A. 2019 through 2022 .
Q. And how many of those years did the customers purchase those products?
A. So in the calculation we did, they would need to purchase interconnect and/or nexTouch lock in all of those years. Q. All of the years. Thank you.

You testified you didn't know what the quantity of interconnect and nexTouch locks SmartRent intended to purchase in the coming year. Do you recall that testimony?
A. I do.
Q. Do you recall whether Mr. Haldeman, the CEO of SmartRent, knew what quantity of interconnect and nexTouch locks SmartRent intended to purchase in the coming year?
A. I do remember him being asked that question and not knowing the answer.
Q. Dr. Waehrer, you were asked about Assa Abloy supplying interconnect locks to multifamily integrators. Do you recall that testimony?
A. Yes.
Q. Do you have an understanding whether Assa Abloy charges profits on those sales to the multifamily integrators? A. So I do have profit margin calculations for those sales, and -- yes, so they do earn a profit on those sales.
Q. Dr. Waehrer, you were asked about your understanding of Assa Abloy's R\&D costs. Do you recall that testimony?
A. I do.
Q. What are some of the sources that you used in assessing R\&D costs for Assa Abloy?
A. So I read Ms. Hammer's report and the deposition -various deposition testimony documents about sharing of $R \& D$ resources.
Q. Okay. You were asked if business owners are responsible for their own $P \& L$ at Assa Abloy. Do you recall that testimony?
A. I think the question related to divisional heads or something along those lines, or at least that's how I interpreted it.
Q. I was a little unclear on the question myself. I guess my question to you is, is there anything you wanted to add to your response with respect to that question, which I believe was a yes-or-no question.
A. Yeah, so in the analysis -- in the antitrust analysis, my experience is companies will often have divisional P\&Ls, but just because a division calculates a P\&L does not necessarily
mean that that's what the division is trying to do. You know, companies need to create incentives for individuals, and so perhaps measuring performance based on a divisional $P \& L$ is important for that, but it's also important to, especially if there's connections between the divisions, make sure that they're working towards the greater good, and that's the role of the more senior executives of a company. And that's how I interpreted the email exchange that we talked about during my direct between Mr. Delvaux and Huddart.
Q. Dr. Waehrer, would it be your understanding that the CEO and the board of directors manages companies to increase the bottom line of the company in total or individual divisions?
A. I would -- I think it's pretty clear that their interest is in maximizing the overall profitability of the firm, not just a collection of divisions.
Q. Is that a duty to shareholders, to maximize profits for the corporation?
A. I understand that to be a fiduciary duty of a public company, yes.
Q. Dr. Waehrer, you were asked about economies of scale and scope. Can you tell us a little bit about the sources that you used in making that assessment?
A. Again, these were -- this was deposition testimony and documents that related to this, and then $I$ was also informed by the reports of Professor Collis and Ms. Hammer.
Q. Dr. Waehrer, you were asked about smart lock market prices and whether you would expect those prices to be going down over time. Do you recall that testimony?
A. I do.
Q. Can you tell us your thinking behind that answer?
A. So it's a technology market. And in these kinds of markets, especially a newer technology like smart locks, as it becomes more mass market, the average price is going to go down in an attempt to expand the number of customers, and so just for that purpose, holding everything else constant, I would expect prices to be falling in this market.

But that's really not the relevant question for our analysis here; it's really given that sectoral decline in prices that we would be expecting, does the transaction with the divestiture cause prices to decline less fast or even perhaps increase. So that was the answer I was wanting to give when I was being forced to say yes or no.
Q. Dr. Waehrer, do you have an opinion whether prices would likely decrease more with or without the divestiture? A. So my testimony is that $I$ believe that there's a significant risk of anticompetitive effects here from the divestiture, which would suggest that prices would decline less fast with this deal going through and the divestiture. Q. Dr. Waehrer, you were asked about global scale and whether it was necessary to compete for sale of smart locks.

Do you recall that testimony?
A. I do.
Q. Can you tell us a little bit more behind your thinking behind that answer?
A. Sure. So for Yale it does seem -- the evidence does suggest that Yale -- the Yale business does benefit from global scale in terms of procurement and then R\&D sharing, but other companies in this space enjoy economies of scale and scope in different ways, not necessarily global scale.

So, the notable example of that would be Kwikset, which has a very significant mechanical hardware business, the non-premium hardware business, something that, while Yale has a mechanical hardware business, it is not even close to the size and scale of Kwikset's.

And so Kwikset enjoys other advantages separate from global scale. So that was what was in the back of my mind in answering that.
Q. Thank you. Are there any other companies that operate primarily in the U.S. or U.S. and Canada with respect to smart locks?
A. I believe Schlage is mostly in the U.S., and there would be -- they would have a similar situation as Kwikset, with a very substantial mechanical hardware business that Yale does not have.
Q. To your knowledge, where does August operate?
A. I believe mostly in the U.S., but I'm not positive.
Q. Do you recall if August has been profitable in recent years?
A. I believe that the division that's --

MR. BERNICK: Objection.
THE COURT: This is way beyond his exam. Where are we in August and profitability? Was that going to be your objection?

MR. BERNICK: I was going to let it go. I was making an objection on confidentiality grounds. The profit and losses of August are not publicly disclosed. MR. DONALDSON: We'll move on. THE COURT: Okay.

BY MR. DONALDSON:
Q. Dr. Waehrer, you were asked if the U.S. smart residential business subsidizes the global smart locks business. Do you recall that testimony?
A. Yes, I do.

THE COURT: That wasn't -- no. The question I think was specific on the software application, not in general. MR. DONALDSON: Okay.

BY MR. DONALDSON:
Q. With respect to software application -THE COURT: That was your question, right, Mr. Bernick? MR. BERNICK: It was, Your Honor.

THE COURT: Okay.
BY MR. DONALDSON:
Q. My only question was did you have anything additional you wanted to add. That was a yes-or-no question. I was wondering if there was anything else you wanted to add to your response.
A. Yes. So if the only effect was to undo a subsidy, then yes, that would make the Yale division look more profitable on paper, although, when you're talking about the profitability of a division, as an economist I'm not sure how to think about that because really it's the profitability of the company overall that matters, and I think -- and my reading of Ms. Hammer's report -- and she or someone will be testifying to answer this question -- but I believe she took that subsidy into account and still found issues with the profitability. So whatever reversal of the subsidy was, it was not enough to make Yale overall look better under Fortune than Assa.
Q. Dr. Waehrer, you were asked if the FTC studies were peer reviewed. Do you recall that testimony?
A. I do.
Q. Did the fact that the FTC studies are not peer reviewed play an important role in your analysis of those studies with respect to this transaction?
A. It did not.
Q. Why not?
A. Well, as I indicated, when I read the description of how the sample was collected, how the information was collected, and then the fact that the FTC relies on the study for its own policymaking, and there were really no papers that I found that were really critical of the methodology, the fact that it wasn't peer reviewed didn't really impact my opinion.
Q. Dr. Waehrer, you were asked about the role of entry in the smart locks market. Do you recall that?
A. Yes.
Q. The smart lock market has a few different parts to it, multifamily, retail, online. I'm wondering if you can share your thoughts with respect to the effective entry on each of those segments.
A. So in my discussion of entry in my initial report $I$ discuss significant barriers to entry in the retail channel or the DIY channel, so that would be Home Depot and Lowes and some other large big-box stores, and then also significant entry in the multifamily or integrator segment, a segment that Spectrum refers to as RAS. And there are significant barriers to entry in those. And we -- the data doesn't appear to bear out that the small entrants have made much penetration into either of those segments.
Q. I think we've discussed the multifamily segment enough today. With respect to retail and DIY, is there any
particular evidence or testimony that you found particularly informative with respect to entry in that segment?
A. So I think the testimony from the witness from Wyze was informative, and then the witness from Home Depot also was pretty informative on that topic.
Q. With respect to smart lock sales online, has that entry had a significant effect on the shares of Assa Abloy and Spectrum in the past few years?
A. So if you look at my -- the data for that would be in my reply report, which is tab 2 of the binder, "Plaintiff Examination, Keith Waehrer, Ph.D." And that appears in Appendix B, on B-1. And if you look at -- if we would just look at the quantity shares -- I don't know if -- are you in the right place or...
Q. I don't think those are public so if you could just allude to where --
A. I wasn't going to call out the -THE COURT: So where are you? THE WITNESS: So in my reply report, it's Appendix B, and the page is $B-1$. THE COURT: Okay. I'm there. THE WITNESS: So you can see there's two panels, revenue shares and quantity shares. And I'll be looking at the quantity shares, but we can talk about the revenue shares if you'd like. So you can see that from 2019 to 2020, if you
look at Assa Abloy's share, there was a change there that I won't call out, but a change there.

But then, if you look at 2020 to 2022, relatively not much of a share change. If you dig down into that a little bit by looking at the individual brands listed there, so in particular Yale and August, you can see that Yale is going in a different direction than August.

THE COURT: Yep.
THE WITNESS: And then if you look at Spectrum's share over this period, there's not much of a change. And so this -- just looking at the dynamics of this market indicated to me, except for that one year which I discuss in my initial report and reply report, the entry that was happening was not having a significant impact on the shares of the two merging parties.

BY MR. DONALDSON:
Q. Dr. Waehrer, which competitor in particular was it having an effect on?
A. That would be Schlage or the Allegion brand.
Q. Thank you. And offhand, do you recall where you discuss this trend in your reply report?
A. So this is discussed in Section VIII.A of my reply report.
Q. Thank you. Dr. Waehrer, you were asked about contract manufacturing. Do you recall that?
A. I do.
Q. To your knowledge, do contract manufacturers charge a profit margin on the products that they supply to their purchasers?
A. That's my understanding, yes.
Q. You were asked about contribution margins, Dr. Waehrer.

Do you recall that testimony?
A. I do.
Q. Okay. Where did you get your contribution margin information from?
A. So this was data that was requested by the Department of Justice of third parties.
Q. Okay. And did you compare that contribution margin information from third parties against the margins for Assa Abloy and Spectrum?
A. I did. There's a table of those in my reply report. Probably in the same section we were just talking about. Q. Is it perhaps page 42?
A. Yes. Thank you.

So if you look at -- the point of this table was to compare the contribution margins of the two larger players in the market. So those would be Assa and Schlage. And compare them to the smaller competitors. And I won't call out any numbers, but $I$ think the difference there is somewhat obvious. Q. Dr. Waehrer, you were asked about your access to the
production record in this case. Do you recall that testimony? A. I do.
Q. Did you request particularly good or particularly bad documents from the DOJ?
A. Of course not. As an expert, I need to see what the record is in an accurate way. Otherwise, I would be in trouble sitting here, I'm sure.
Q. Okay. But you did request categories of documents from the DOJ?
A. I did.
Q. And do you have any reason to believe you didn't receive the requested information from the --
A. I have no reason to believe that, no.
Q. Dr. Waehrer, do you understand whether SmartRent intends to continue purchasing Yale products from both Assa and Fortune if the divestiture is completed?
A. I'm sorry. Can you ask the question again?
Q. Yes. I'm curious if you have an understanding, if the divestiture were to go forward, whether it would be SmartRent's intention to continue purchasing Yale products from both Fortune and Assa Abloy.
A. So I'm confused by the question, because if the transaction goes through with the divestiture --
Q. With the divestiture, without the interconnect locks. I should have been clear on that. Without the divestiture
of the interconnect locks.
A. But you were asking about Yale-branded locks from Assa and Fortune, and I believe that if the deal goes through, the Yale-branded locks would only be available through Fortune. Q. Okay, yes. Sorry. Poorly worded question.

Do you understand whether SmartRent would intend to purchase Yale products from Fortune and interconnect locks from Assa Abloy?

MR. BERNICK: Objection.
THE COURT: Can't I just rely on the SmartRent person's testimony on this? That's relevant to his opinion somehow? MR. DONALDSON: Yes, Your Honor.

BY MR. DONALDSON:
Q. Dr. Waehrer, do you believe that the proposed divestiture in this case is a stand-alone business?
A. I do not.

MR. BERNICK: Object to scope.
BY MR. DONALDSON:
Q. Briefly, why?

THE COURT: You did ask him about -- I guess you only asked him about Emtek. Yeah, you're right.

MR. DONALDSON: No, he quoted from this.
THE COURT: He quoted from it, but then he only asked specifically about Emtek, as I recall. I was expecting him to ask -- the reason I remember is I was expecting the question
about smart locks, and it didn't come.
MR. DONALDSON: Okay. I believe it's in Dr. Waehrer's report anyway.

THE COURT: Okay.
BY MR. DONALDSON:
Q. Dr. Waehrer, you were asked some questions about the horizontal merger guidelines and the definition of product markets under the merger guidelines, what's known as the narrowest market principle. Do you recall that testimony?
A. I don't remember --

MR. BERNICK: I don't believe I asked about the narrowest market principle, Your Honor.

THE COURT: I don't recall that either.
BY MR. DONALDSON:
Q. Well, it's -- are you familiar with the narrowest market principle?

THE COURT: Let's see where this goes, just one moment. But get ready to stand up.

BY MR. DONALDSON:
Q. Mr. Bernick asked you questions about whether interconnect locks constitute a separate relevant market under the merger guidelines. Do you recall that testimony?
A. Yes, I do.
Q. That question? Okay. Is it ever appropriate to define a market more broadly than a single product?
A. So by "single product," I'm assuming you mean like a -for example, a particular lock?
Q. Yes.
A. So in a market that involves a lot of differentiation, it's usually the case that a market would not be defined based on a single product as I think you're referring to, Mr. Donaldson.
Q. Okay.

MR. DONALDSON: Thank you, Dr. Waehrer. I have nothing further.

THE COURT: Any re-cross?
MR. BERNICK: If I could, just a couple of quick questions.

RECROSS-EXAMINATION
BY MR. BERNICK:
Q. Dr. Waehrer, Spectrum Brands offers a residential smart lock today. Right?
A. Yes.
Q. And you also testified just a moment ago that they're planning to introduce an interconnected smart lock. Is that right?
A. Yes.
Q. But Spectrum does not offer a commercial smart lock. Right?
A. By commercial, do you mean mortise, like a nexTouch-type
lock?
Q. Correct.
A. Just to be clear?
Q. Correct. Let me rephrase the question so the record's clear. Spectrum does not offer a commercial grade mortise smart lock. Correct?
A. Not that $I$ know of, no.
Q. And so Spectrum does not offer a full portfolio of all three types of products we're talking about, residential smart lock, interconnect, and commercial mortise. Right?
A. Correct.
Q. You also mentioned Mr. Haldeman's testimony. He never testified that he would stop buying Yale residential smart locks if the interconnects were unavailable, did he, sir?
A. I don't recall him saying that, no.
Q. In fact, Mr. Haldeman testified that he couldn't find a company other than Yale that offered a complete portfolio of products today. Isn't that correct?
A. For his purposes, I believe that's correct.
Q. So if Mr. Haldeman lost access to the interconnect and nexTouch locks, he couldn't switch his portfolio away from Yale to a single supplier of an alternative portfolio. Isn't that correct, sir?
A. He did not seem to have an option for a single supplier for all three types of locks that we've been talking about.

THE COURT: So the answer is yes.
THE WITNESS: Okay. Sorry. I'm getting mixed up with the yeses and noes.

MR. BERNICK: That's all I have.
THE COURT: Dr. Waehrer, thank you for your testimony and all of your good work, which is very helpful. You work at Secretariat Economists?

THE WITNESS: Yes.
THE COURT: You've only been there for two years so you may not know, but do you know a Jonathan Walker?

THE WITNESS: Yes.
THE COURT: Jonathan and I worked together when I was a baby tyke associate on a very complicated international arbitration and I got to know him quite well. Could you please pass along my well wishes and that I say hello? THE WITNESS: I will.

THE COURT: Okay. Thank you.
Anything else? All right. You can step down, sir. Thank you.

THE WITNESS: Thank you.
(Witness steps down.)
MR. DAHLQUIST: Your Honor, we have our next witness, another expert witness, Professor David Collis.

THE COURT: Does it make sense to -- given the lateness of the hour, to just move Mr. Collis to tomorrow?

MR. DAHLQUIST: I think that would probably be preferred by Mr. Collis.

THE COURT: All right. Is that okay with you, Mr. Bernick?

MR. BERNICK: Yes, Your Honor.
THE COURT: Okay. Why don't we do that. Anything else we should discuss today?

MR. DAHLQUIST: Nothing else, Your Honor.
THE COURT: So just as a reminder to everyone, please check the docket before you make arrangements to be in court tomorrow because the time might change. If there's no docket entry, then we will meet again at 10 a.m. tomorrow. Thank you.
(Proceedings adjourned at 4:40 p.m.)

CERTIFICATE
I, BRYAN A. WAYNE, Official Court Reporter, certify that the foregoing pages are a correct transcript from the record of proceedings in the above-entitled matter.
/s/ Bryan A. Wayne
Bryan A. Wayne



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