

NORTH CAROLINA DEPARTMENT OF INSURANCE
RALEIGH, NORTH CAROLINA

IN THE MATTER OF THE FILING)
DATED JANUARY 3, 2024, BY THE)
NORTH CAROLINA RATE BUREAU)
FOR REVISED HOMEOWNERS)
INSURANCE RATES)

BEFORE THE
COMMISSIONER OF
INSURANCE

COPY

DOCKET NO. 2157

BEFORE: AMY FUNDERBURK, HEARING OFFICER

TRANSCRIPT
OF
HEARING

VOLUME XV - P. M. SESSION

Raleigh, North Carolina
Monday, December 2, 2024
1:30 p.m.

A P P E A R A N C E S

On behalf of the North Carolina Rate Bureau:

MICKEY SPIVEY, ESQ.
LISA LEEAPHORN, ESQ.
BRIAN BEVERLY, ESQ.
Young, Moore & Henderson, P.A.
3101 Glenwood Avenue, Suite 200
Raleigh, North Carolina 27612

On behalf of the North Carolina Department of Insurance:

TERENCE FRIEDMAN, ESQ.
SHANNON WHARRY, ESQ.
North Carolina Department of Insurance
3200 Beechleaf Court
Raleigh, North Carolina 27604

Hearing in the matter of the filing dated January 3, 2024, by the North Carolina Rate Bureau for revised homeowners' insurance rates, at North Carolina Department of Insurance, 3200 Beechleaf Court, Raleigh, North Carolina, on the 2nd day of December, 2024, at 1:30 p.m., before Wendy Sawyer, Court Reporter and Notary Public.

I N D E X O F E X A M I N A T I O N S

THE WITNESS: LAURA CAVANAUGH EXAMINATION

Continued Cross, by Mr. Spivey..... 2222

I N D E X O F E X H I B I T S

(No exhibits offered.)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

P R O C E E D I N G S

* * * * *

HEARING OFFICER FUNDERBURK: All right. Welcome back. Thank you. Before we resume the witness testimony, is there anything we need to address?

MR. SPIVEY: No, Your Honor.

HEARING OFFICER FUNDERBURK: Okay. All right. Ms. Cavanaugh, as a reminder, you do remain under oath. Please resume, Mr. Spivey.

MR. SPIVEY: Thank you.

CONTINUED CROSS EXAMINATION

BY MR. SPIVEY:

Q. Ms. Cavanaugh, would you please turn to page 33 of your pre-filed testimony? There at line 5, you asked the question, is the NCRB analysis of model losses adequately supported? And then you go on, and your answer is, no, while the NCRB provides documentation on the validation of the model by region --

HEARING OFFICER FUNDERBURK: Mr. Spivey, let me just make sure we can hear you okay.

MR. SPIVEY: Not close enough.

HEARING OFFICER FUNDERBURK: Little closer. Thank you.

1 Q, And I'll start again with -- with the
2 answer to your question starting at line 6. And you
3 say no. While the NCRB provides documentation on the
4 validation of the model by region, it did not provide
5 an analysis specific to North Carolina that shows a
6 comparison of prior hurricane loss experienced to the
7 model output. Also, the documentation provided lacks
8 sufficient detail to assess certain assumptions and
9 methodologies underlying the catastrophe models. Did I
10 read that correctly?

11 A. Yes.

12 Q. What specific assumptions and
13 methodologies underlying the catastrophe models were
14 you trying to assess?

15 A. So one such assumption is the demand surge
16 formula that's applied to the model output or within
17 the model, I should say.

18 Q. What else?

19 A. So the -- I would relate the -- the first
20 sentence regarding, or the, I guess, the second
21 sentence of this answer regarding validation of the
22 model specific to North Carolina, did not -- it did not
23 provide an explanation for differences between the
24 historical losses in North Carolina to the model
25 output.

1 Included in that rationale could have been a
2 discussion of the methodology and assumptions to
3 discuss that rat- -- that re- -- the reason for
4 differences between the output and the historical data.

5 And I should just clarify that that could be,
6 you know, any number of assumptions or methodologies,
7 but without that, you know, I can't really pinpoint
8 what it is that -- that could be causing that.

9 Q. So we went through your credentials
10 earlier today, and you've not had any training in any
11 of the fields such as engineering or wind fields or
12 things like that. What credentials do you have that
13 would allow you to assess the underlying assumptions or
14 methodologies built into the catastrophe models?

15 A. So my credentials, we had discussed those
16 earlier today and there are -- they are in my pre-filed
17 testimony. I am an actuary, and I have provided -- I
18 have -- I have provided reviews of catastrophe models
19 as it relates to rate filings.

20 And so, in those reviews, and -- and in the
21 education that I have acquired through the actuarial
22 exams and through continuing ed, I have determined
23 and -- and understood catastrophe models and how they
24 are used in the context of rate making.

25 And so with all of that, with my credentials,

1 with my experience, with the knowledge that I've
2 gained, I can then understand the -- the outputs of
3 catastrophe models and the methods and assumptions that
4 are used in catastrophe models and how those compare to
5 historical catastrophe losses.

6 Q. So which of the actuarial exams addresses
7 catastrophe modeling?

8 MR. FRIEDMAN: Your Honor, objection,
9 assumes a fact not in evidence. He hasn't just
10 simply asked whether or not there are any. He's
11 asked already assuming that there are some.

12 MR. SPIVEY: Your Honor, I believe she
13 just described the actuarial exams as part of the
14 basis for her credentials that allow her to assess
15 catastrophe modeling. I'm asking which of those
16 exams she's referring to.

17 HEARING OFFICER FUNDERBURK: Overruled.

18 THE WITNESS: So catastrophe modeling
19 is include -- so I should explain that actuarial
20 exams change over time, but it is included. A
21 discussion of catastrophe models are included in
22 the portion of the actuarial exams related to
23 developing rates.

24 BY MR. SPIVEY:

25 Q. I'm sorry. Developing --

1 A. Developing rates. Pricing for insurance
2 and reinsurance.

3 Q. And was that the way the exam was
4 structured when you took it?

5 A. Yes.

6 Q. You testified before lunch that in a
7 number of the rate filings you reviewed in other
8 states, there is not any type of ASOP 38 report
9 included in those filings. Did you not?

10 A. I believe what I testified was that in the
11 filings, often there is a consideration of all of the
12 relevant actuarial standards of practice, and it is
13 sometimes the case that there isn't a separate document
14 that discusses the attestation of the actuarial
15 standard of practice 38 in the format that, you know,
16 Ms. Mao had provided.

17 Q. So where in these rate filings in other
18 states do you find specifically in these filings in
19 other states where there's not an ASOP 38 report, where
20 do you find documentation of the assumptions and
21 methodologies underlying catastrophe models that you
22 reference in your answer at lines 9 and 10 on page 33?

23 A. Your question is where in the filings --

24 Q. Yes.

25 A. -- those are? So I think it depends on

1 the filings. There are some filings that relate to
2 catastrophe losses, specifically, and that is, you
3 know, filings by a particular vendor of a catastrophe
4 model. So there -- there would -- there would be, you
5 know, quite a bit of documentation related to the
6 models. And then, also, insurers will use models to
7 support their catastrophe provision or net cost of
8 reinsurance provisions.

9 And in those instances, you know, oftentimes in
10 the original filing, there is, you know, not, you know,
11 there's, like, insufficient documentation. Honestly, I
12 can't remember of a time where I didn't have at least
13 or my -- my team or I haven't had at least one
14 objection. Right?

15 So there -- there is, you know, an objection
16 process where we can obtain additional information, and
17 that is typically when we would request additional
18 rationale or discussion. Like I said, if there was a
19 difference between the historical losses we're
20 reviewing and the results of the models to discuss what
21 might be driving -- what methods and assumptions might
22 be driving that.

23 Q. So you described filings in Georgia that
24 you reviewed that included provisions from running
25 hurricane catastrophe models this morning; did you not?

1 A. Yes.

2 Q. Can you give us an example of a specific
3 filing in Georgia that included the running -- the
4 output from running a hurricane catastrophe model?

5 A. Can you repeat the question?

6 Q. Can you give us a specific filing as an
7 example of -- let me start again.

8 Can you give us an example -- let me -- again --
9 let me start again.

10 You said that you reviewed filings in Georgia
11 where output from hurricane catastrophe model was
12 included. I'd like you to cite for me a specific
13 filing that included output from a hurricane
14 catastrophe model.

15 A. I don't have the specific filing numbers
16 memorized.

17 Q. What about a company name for a filing in
18 Georgia that included output from a hurricane
19 catastrophe model?

20 A. Again, I -- I don't have that type of
21 memory to be able to be sure that -- I mean, I could
22 think of different companies that I've reviewed in
23 Georgia, but some of them use historical catastrophe
24 data to support their catastrophe provision, and some
25 use, you know, model results.

1 So I -- I don't feel comfortable, trying to
2 speculate on -- on which companies are -- were provided
3 in the context of Georgia, given all the different
4 filings I've reviewed.

5 Q. So give us a ballpark idea of how many
6 rate filings in Georgia you reviewed that included
7 output from a hurricane catastrophe model?

8 A. Yeah. I would say between my review and
9 peer reviews, maybe five to ten. And I should mention
10 that, you know, sometimes we'll get on calls and just
11 discuss a number of different filings. And so, you
12 know, in -- in some of those where I haven't done the
13 actual peer review, there might have been some
14 discussed as well.

15 Q. When you reference peer review, describe
16 for us what you mean in the context of reviewing a rate
17 filing on behalf of the regulator in Georgia.

18 A. Yeah. So my team has a process. Anytime
19 that we review a rate filing, typically, one person is
20 assigned to the -- to be the primary reviewer. They
21 review the initial filing and prepare objections and --
22 and then ultimately prepare a memo that would be
23 provided to the Department of Insurance.

24 But we also, with each of those, make sure that
25 there's another credentialed actuary that's looking at

1 the -- that memo and reviewing the filing, as well, to
2 provide any additional comments and to review the --
3 the -- the conclusions of the memo, and so that's what
4 I mean by peer review.

5 Q. All right. So and you said that between
6 reviewing and peer reviewing, that you think there may
7 have been between five and ten rate filings in Georgia
8 that included output from hurricane catastrophe model.
9 Am I understanding?

10 A. The ones that I reviewed or peer reviewed.
11 Yes.

12 Q. And are you saying that you can't remember
13 any specific companies that might be included in that
14 five to ten number?

15 A. Correct.

16 Q. Now, I believe you also said this morning
17 that you had reviewed filings in the State of New
18 Jersey that included provisions from the running of
19 hurricane catastrophe models. Correct?

20 A. That's correct. I'll just clarify as I'm
21 listening to your question. You said -- the way I
22 would state it is, that model results were included in
23 support of a catastrophe provision in those rate
24 filings.

25 Q. And so in those filings in New Jersey,

1 what documentation was provided in those filings that
2 provided the detail you think was needed for you to
3 assess certain assumptions and methodologies underlying
4 the catastrophe models?

5 A. So as I testified earlier today, what I
6 would typically do with -- I would look at whether or
7 not the filing included historical losses in addition
8 to any modeled results. If they didn't, I would
9 request that information from the company.

10 And then I would review the -- the -- the
11 historical results and -- and the model results. And
12 if there were any large differences, then I would ask
13 questions related to, you know, what might be driving
14 that. And that's when, you know, different methods and
15 assumptions might come up in the -- in the response.

16 So I, you know, in -- in the role of the
17 reviewer, I am reviewing how it's presented to me by
18 the filer. And so then in those contexts, they might
19 bring up, you know, various methods and assumptions
20 that are used underlying the models in order to provide
21 additional understanding of what the results -- the
22 historical results might differ from the model results.

23 Q. So that sounds like there wouldn't have
24 been documentation in the filing, but rather there's
25 something that you request in your objection.

1 A. Typically, yes. I'll just add, you know,
2 as I'm remembering, you know, all these different
3 filings that, you know, at times, the company will
4 provide quite a bit of documentation from the models
5 that provide additional, you know, discussion of
6 assumptions and methodologies. Those, again, are
7 usually provided through objections rather than in
8 the -- in the original filing.

9 Q. And do the -- first of all, these filings
10 are for individual companies, are they not?

11 A. Yes.

12 Q. We were talking --

13 A. Typically, yes. I mean, I did -- I did
14 mention that, you know, I have reviewed filings related
15 to groups of affiliated companies and also for ISO and
16 NCCI and other type organizations that would file them
17 on behalf of multiple insurers.

18 Q. Right. Well, we were talking about the
19 filings in New Jersey that used output from catastrophe
20 hurricane models. Am I correct in understanding that
21 those were filings by individual companies?

22 A. I'm trying to remember because my
23 testimony earlier when you were asking me about this
24 was related to the net cost of reinsurance, not to the
25 catastrophe provision.

1 And so in New Jersey, there may have been some
2 ISO filings that include a catastrophe provision while
3 not including a net cost of reinsurance provision.
4 But -- but most of the filings are either an individual
5 company or a group of affiliated companies.

6 Q. So most of the filings are by individual
7 companies. Right? So do the individual companies
8 provide you information regarding the assumptions and
9 methodologies underlying the catastrophe models after
10 you have posted an objection regarding their filings?

11 A. Yes. As I testified earlier, you know,
12 companies will provide, you know, in response to
13 objections, will -- will provide additional
14 documentation from their catastrophe model or that
15 they're using or -- or multiple, so that -- so we would
16 at times receive additional documentation from those
17 underlying catastrophe models. And in that
18 documentation would include some discussion of
19 assumptions and methodologies.

20 Q. And that would be publicly available
21 information from the model vendor. Correct?

22 A. Not typically. I would say that it --
23 it -- it -- if that was provided that, usually, it
24 would be provided under confidential --
25 confidentiality. So it would be provided and served,

1 but it would be under confidential. So -- so it would
2 not be publicly available.

3 Q. Now, we were talking just then about New
4 Jersey. Immediately prior to that, we were talking
5 about Georgia, and you made a comment a moment ago
6 about just now remembering all these filings. Do you
7 remember when you reviewed the five to ten filings in
8 Georgia that you described as including output from
9 hurricane models?

10 A. Could you restate your question? I -- I
11 didn't quite understand it.

12 Q. Do you recall when you would have reviewed
13 what you've told us previously were five to ten filings
14 in Georgia that utilized the output from hurricane
15 catastrophe models?

16 A. In -- in the past couple years when I've
17 been reviewing Georgia filings. So 2022 through 2024.

18 Q. Do you recall, specifically, whether
19 there's been a filing in Georgia that you reviewed
20 earlier this year? This is 2024.

21 A. Yes.

22 Q. What company made that filing?

23 A. I've reviewed a couple of different
24 filings in Georgia this year, and I don't -- I don't
25 recall which ones specifically included catastrophe

1 model results. I would have to go back to my records
2 and look at that.

3 Q. So you viewed a couple of different
4 filings in Georgia earlier this year?

5 A. Some of which may have included
6 catastrophe model results, some of which may not have.

7 Q. Well, is a couple two, or is it more than
8 two?

9 A. So let me just think. And -- and you're
10 referring to any rate filings, not just ones that
11 include catastrophe model results or just the
12 catastrophe model results?

13 Q. You just testified a moment ago that you
14 had reviewed a couple of filings earlier this year,
15 2024, in Georgia, and I'm asking you who were the
16 companies that made those filings?

17 A. And I have stated that I would need to go
18 back and look at which -- a -- a list of companies, and
19 it might have been more than two -- so just -- just to
20 answer that question -- which companies those would
21 have been and what lines of business and whether or not
22 catastrophe model results were included in those
23 filings. I just -- I look at a lot of things, and I
24 just don't recall.

25 Q. So I guess my question is simply, do you

1 not recall the names of the companies that made the two
2 filings that you're referring to?

3 MR. FRIEDMAN: Objection, Your Honor.
4 Asked and answered multiple times.

5 HEARING OFFICER FUNDERBURK: Do you
6 have any response, Mr. Spivey?

7 MR. SPIVEY: I'm not sure that the
8 witness has answered that question in any fashion
9 yet.

10 HEARING OFFICER FUNDERBURK: I'm going
11 to allow you to rephrase it, state it again,
12 because I -- I am concerned that you're asking the
13 same question again and that she has responded.
14 But I'm going to let you rephrase it, state it
15 again, and let's -- let's go from there.

16 BY MR. SPIVEY:

17 Q. Ms. Cavanaugh, your testimony has been
18 that you recall a couple of filings made in Georgia
19 earlier this year in 2024 that you reviewed.

20 MR. FRIEDMAN: Objection, Your Honor.
21 This is mischaracterizing her testimony. She just
22 clarified it could have been more than two.

23 HEARING OFFICER FUNDERBURK: And I'm
24 letting him rephrase and restate it. If that's her
25 position, she can -- she can state that as her

1 posi ti on.

2 Please proceed, Mr. Spi vey.

3 BY MR. SPIVEY:

4 Q. Did you remember the name of the company
5 making -- each of the companies that made those
6 fil ings?

7 A. So I'm going to clarify my response from
8 earlier. So I review and I -- and when I say review,
9 I'm including peer review, you know, a number of
10 different fil ings in a lot of different states, and I'm
11 having di ffi cul ty sitting here remembering the names of
12 the companies and exactly when they have -- you know,
13 when I reviewed them that I -- especially since
14 sometimes they'll, you know, fall over, you know,
15 mul ti ple years and -- and especially those fil ings that
16 related to including catastrophe model results.

17 I really would feel more comfortable looking
18 back at my notes to -- to determine which fil ings those
19 were that I reviewed in a particular state under a
20 particular setting in order to be sure that I wasn't,
21 you know, kind of thinking about a different state
22 or -- or a different time frame.

23 So it might not have been two. It might have
24 been more than two. And also, you know, I know that
25 we're talking about rate fil ings and also fil ings that

1 specifically include catastrophe model results.

2 So I don't want to -- to guess at which ones,
3 you know, answer your specific question regarding --
4 regarding 2024 filings in Georgia.

5 Q. All right. May I ask you at your next
6 opportunity to review your notes so that you can answer
7 that question later during your testimony?

8 A. Okay. So I just want to make sure that I
9 understand the question. Is it related to only filings
10 that include model -- catastrophe model results or all
11 rate filings that I reviewed in 2024 in Georgia?

12 Q. I specifically would like information
13 regarding filings that included output from hurricane
14 catastrophe models.

15 A. Okay. In Georgia in 2024?

16 Q. Yes. Given that that's what your
17 testimony has been to this point, that you reviewed
18 filings in 2024 in Georgia that you believed included
19 output from hurricane models.

20 A. I don't believe that's --

21 Q. That's what I'm asking you to refresh your
22 recollection from your notes.

23 A. So I don't believe that's what I stated.
24 I stated that I did review rate filings in Georgia in
25 2024. I don't recall if they included model results in

1 the support, but I will certainly check my notes. And
2 if there are any filings for which I reviewed in
3 Georgia in 2024, there were catastrophe model results
4 included in that filing, I -- I then can provide that
5 list.

6 Q. All right. I was trying to help pare it
7 down.

8 A. Okay.

9 Q. Your testimony was earlier that you had --

10 MR. FRIEDMAN: Your Honor, I'm going to
11 object at this point. His -- this -- he has made
12 this question clear. She has clarified as she
13 understands it. And, I mean, this has been 20
14 minutes.

15 MR. SPIVEY: Your Honor, I'm simply
16 trying to get answers to a question, and I want to
17 make sure that the witness and I are on the same
18 page about what it is I'm asking her to look for.

19 HEARING OFFICER FUNDERBURK: And I
20 think as with many things, we're -- where we are is
21 somewhere in the middle of where you're both saying
22 we are. I think she has answered it a couple times
23 and given you information, but I think there's also
24 some additional information that may be provided
25 from your notes upon -- upon review of her notes.

1 So I think that's where we are right
2 now. She has answered -- she has answered your
3 question to the best of her ability, subject to
4 review of the notes is -- is my perspective on
5 this. And what we need to do now is narrow down
6 what -- what specifically are you asking her to
7 look for in her notes to get information to you?

8 MR. SPIVEY: Your Honor, I was -- my
9 goal here was I was trying to ascertain the names
10 of specific companies, specific filings in Georgia,
11 which had utilized output from catastrophe
12 hurricane models.

13 The witness' testimony was she believed
14 there had been five to ten such filings, and then
15 she said she believed that had occurred between
16 2022 and 2024. And I'm simply wanting to -- to
17 know specific filings by specific companies that
18 used hurricane modeling. The output from
19 catastrophe hurricane models.

20 THE WITNESS: Okay.

21 BY MR. SPIVEY:

22 Q. If you were to find that there weren't any
23 in 2024, then I'd like to know some prior to that.

24 A. Understood. Thank you.

25 HEARING OFFICER FUNDERBURK: Are you

1 clear what the request is, Ms. Cavanaugh?

2 THE WITNESS: Yes.

3 HEARING OFFICER FUNDERBURK: Mr.
4 Friedman, are you clear what the request is?

5 MR. FRIEDMAN: Um-hum.

6 HEARING OFFICER FUNDERBURK: Okay.

7 Thank you.

8 BY MR. SPIVEY:

9 Q. Ms. Cavanaugh, was it your testimony
10 earlier in this proceeding that you have prepared rate
11 filings for insurance companies which utilize
12 catastrophe models?

13 A. I don't believe I stated that. I -- but I
14 can answer that I have prepared rate indications for
15 commercial lines of business on behalf of insurance
16 companies, and from what I recall, they -- they
17 included some model -- catastrophe model results.

18 Q. Have you ever prepared a rate filing for
19 an insurance company for homeowners' insurance?

20 A. I recall being involved in a rate
21 indication for homeowners' insurance. Well, actually,
22 let me -- let me clarify. So while at Chubb, there
23 were rate filings prepared, and I would provide some
24 actuarial, you know, support for some of those rate
25 filings and for homeowners, specifically.

1 Q. And when you were at Chubb, that was, as I
2 recall, your first employment after college, and that
3 was before you'd received your actuarial credentials.
4 Was it not?

5 A. That's correct.

6 Q. So have you prepared -- let me start
7 again. Strike that.

8 You indicated you'd prepared a commercial lines
9 filing for a client that included catastrophe model
10 output. Am I summarizing that correctly?

11 A. Yes. And I just want to clarify. I think
12 that was about ten years ago. So if you ask me
13 specific questions about the -- those filings, I --
14 I -- I might be fuzzy in my -- my answers.

15 Q. So what was your role? What -- you know,
16 where were you employed at that point in time?

17 A. I was at FTI Consulting.

18 Q. Now, again, on page 33 of your testimony
19 at line 18, you posed a question, have any of the NCRB
20 experts performed validation analysis -- analyses of
21 catastrophe modeling in other research that they have
22 done? Do you see that question?

23 A. Yes.

24 Q. In your answer there at line -- beginning
25 at line 20, you say, yes, Ms. Mao coauthored a paper

1 that demonstrates the actual total industry catastrophe
2 historical loss experience is lower than that projected
3 by catastrophe models in North Carolina. Is that the
4 first two sentences of that answer?

5 A. Yes.

6 Q. Is it your testimony that Ms. Mao
7 performed a validation analysis of catastrophe modeling
8 and reported on it in the document you referred to
9 there in your testimony?

10 A. So this analysis is comparing the -- the
11 loss experience for North Carolina compared to the
12 modeled loss, which is something that was not provided
13 as a validation step in this -- in this filing. And
14 so -- so the way that it's worded, I -- I suppose I
15 could clarify and say that -- that, what I just said --
16 said that, you know, what this analysis is, is a review
17 of historical losses for North Carolina and modeled
18 results.

19 We don't know what catastrophe model is provided
20 in this public document but that there is a -- a
21 comparison between North Carolina and countrywide. So
22 maybe calling it a validation of -- a complete
23 validation analysis isn't appropriate, but it -- it
24 would be a component that would have been helpful in
25 this -- in the context of this filing.

1 Q. So the title of the report that you
2 referenced there is Homeowners Return on Equity
3 Outlook. Is it not?

4 A. Yes.

5 Q. And it was published by Aon in -- in
6 November 2023. Correct?

7 A. That's my understanding. Yes.

8 Q. How did you obtain the report entitled
9 Homeowners Return on Equity Outlook?

10 A. So I had gone on to the Aon page and --
11 and was able to retrieve it from there. I think I had
12 to -- I think one of my team members put in an email
13 address, and I think we got it that way, if memory
14 serves.

15 Q. So you were provided by one of your team
16 members?

17 A. Yes.

18 Q. Did your team member tell you that that
19 report included a validation analysis of catastrophe
20 modeling by Ms. Mao?

21 A. No. Like I said, what I -- you know, to
22 clarify the -- the -- the testimony here, what I would
23 say -- how I would -- how I would characterize the --
24 the -- this analysis that some of which is included on
25 Table 11 is rather just a comparison of North Carolina

1 loss experience to modeled results.

2 So I'm clarifying that, you know, that question
3 and the answer just being yes, period, to this
4 additional classification of this paper.

5 Q. So you're clarifying it. Does your answer
6 still begin, yes, period?

7 MR. FRIEDMAN: Objection, Your Honor.
8 She's clearly testified to what her clarification
9 is two times over now. And otherwise, the document
10 speaks for itself.

11 HEARING OFFICER FUNDERBURK: Mr.
12 Spivey, any response?

13 MR. SPIVEY: I'll just move on

14 HEARING OFFICER FUNDERBURK: Thank you.

15 THE WITNESS: Can -- can I clarify,
16 though, just what I -- what I mean here?

17 HEARING OFFICER FUNDERBURK: Okay.

18 THE WITNESS: Okay. Just the question
19 is have any of the NCRB experts performed
20 validation analyses? So what I am -- what I'm
21 stating is, you know, I -- that can be clarified to
22 the have any of the NCRB experts performed analyses
23 that compare historical losses to actual -- I'm
24 sorry -- historical actual losses to modeled losses
25 in North Carolina.

1 BY MR. SPIVEY:

2 Q. So, essentially, you would change the
3 question in the clarification that you're making?

4 A. Yes.

5 Q. And it will no longer include the word
6 "validation"?

7 A. Yes. And I would restate that, you know,
8 the reason -- so the reason why it's relevant to a
9 validation analysis is that what I would expect to see
10 in a validation analysis for this filing would be a
11 comparison of historical losses to modeled losses.

12 Q. Have you read the entire report titled
13 Homeowners Return on Equity Outlook?

14 A. Yes.

15 Q. Did you read the entire report prior to
16 preparing your pre-filed testimony?

17 A. Yes.

18 Q. Ms. Cavanaugh, do you happen to have
19 Exhibit DOI 14 there at the witness stand?

20 A. Let me see. Yes.

21 Q. Could you turn to page 14 in that
22 document? Are you there?

23 A. Yes.

24 Q. And do you see the exhibit there near the
25 top of the page on -- labeled Exhibit 13? You see

1 exhibit --

2 A. Referring to Exhibit 13?

3 Q. Exhibit 13 on that page.

4 A. Yes. Yes.

5 Q. And you see a map on the left side of the
6 page and a paragraph on the right side of that page
7 under the heading Exhibit 13.

8 A. Yes.

9 Q. Would you read that paragraph starts, you
10 know, the maps left and below. Would you read that
11 aloud for us? Sure.

12 A. The maps left and below show in loss ratio
13 points the amount the catastrophe experience varies
14 from model average annual loss. Adjusting combined
15 ratios for expected versus historical catastrophe loss
16 is an important step to distinguish weather-related
17 randomness from inadequately priced business.

18 Historical catastrophes can distort measures of
19 results at a state level, causing the noise to
20 overwhelm the signal. While state level adjustments
21 can be significant, the ten-year nationwide experience
22 catastrophe loss ratio of 24 points is meaningfully
23 lower than the model expected catastrophe loss ratio of
24 30 points.

25 Q. After reading that paragraph from this

1 report, is it still your opinion that Ms. Mao was
2 performing an analysis here as some type of validation
3 test of the catastrophe models?

4 MR. FRIEDMAN: Objection, Your Honor.

5 She has clarified over and over and over that were
6 she to rewrite her -- her expert testimony, she
7 would strike the word "validation" and simply call
8 it a comparison. He thinks he has the -- opposing
9 counsel thinks he has some sort of gotcha because
10 she used the word "validation" in her report. She
11 has clarified over and over that what she really
12 meant was a comparison. This is just continuing to
13 try to box her into something that she has
14 clarified over and over.

15 HEARING OFFICER FUNDERBURK: Any
16 response, Mr. Spivey?

17 MR. SPIVEY: I guess perhaps I'd like
18 to hear Ms. Cavanaugh clarify as pointed as Mr.
19 Friedman just did that this portion of her
20 testimony is not about performing a validation
21 analysis of catastrophe modeling.

22 MR. FRIEDMAN: She literally said that
23 about four minutes ago in response to his prior
24 question. She said she would -- he asked her,
25 would she use the word "validation"? And she said,

1 no. I would strike that word.

2 HEARING OFFICER FUNDERBURK: And I
3 believe we are reviewing additional exhibits at
4 this point. I mean, I'm mindful of Mr. Friedman's
5 concern. I'm going to allow the questioning at
6 this -- at this point, but I am mindful of what his
7 concerns are. Please proceed with your
8 questioning, Mr. Spivey.

9 BY MR. SPIVEY:

10 Q. Now, on page 34 of your testimony, you
11 discuss what you believe to be a lack of documentation
12 of the catastrophe model assumptions and methodology.
13 Correct?

14 MR. FRIEDMAN: Can we get an indication
15 of what line Mr. --

16 BY MR. SPIVEY:

17 Q. This is the question you posed at line 3
18 and 4, page 34.

19 A. Yes. That's -- I'm -- I'm -- I'm here at
20 line 3 through 7.

21 Q. I'm sorry?

22 A. I -- I -- I'm just -- I'm not answering
23 question yes to what you had asked, but rather that
24 I'm -- I see where what you're referring to. Page 34,
25 line 3 through 7. Can you ask the question again?

1 Q. So -- so there on that page, you're
2 beginning your discussion of what you believe to be
3 lack of documentation of the catastrophe model
4 assumptions and methodology.

5 A. Yes. That -- that is one place where I
6 have that in my pre-filed testimony, and I would just
7 note that I'm just realizing this now, but page 33 and
8 34 are marked confidential.

9 MR. FRIEDMAN: And we -- we marked
10 those as confidential because they are derived from
11 Ms. Mao's or at least what had been evidenced
12 originally, discovery responses marked as
13 confidential by the Rate Bureau. This is --

14 HEARING OFFICER FUNDERBURK: The -- my
15 reference copy is the original one you provided
16 that has everything marked confidential.

17 MR. FRIEDMAN: The later version, at
18 least the -- the one I've got in my exhibit
19 notebook 2 has only certain --

20 HEARING OFFICER FUNDERBURK: Right. I
21 know that you updated it, our pages 33 and 34.

22 MR. FRIEDMAN: Yes, Your Honor. They
23 are still marked confidential.

24 HEARING OFFICER FUNDERBURK: They're
25 still marked confidential. Okay. Do we need to

1 take any steps at this point regarding closure and
2 regarding noting the transcript of these particular
3 passages?

4 MR. SPIVEY: Your Honor, I'm looking --
5 it is my understanding that there is not any
6 confidential information disclosed on page 33 or
7 page 34. I'm not exactly sure about page 35 or 36
8 yet, but my understanding is that Ms. Cavanaugh
9 footnotes as a source a document on page 33 that
10 may have been marked confidential, but that she
11 hasn't provided on this page any confidential
12 information. That's my understanding.

13 MR. FRIEDMAN: Your Honor, we were
14 trying to, out an abundance of caution, to indicate
15 where Ms. Cavanaugh's analysis reflected her review
16 of a confidential document.

17 HEARING OFFICER FUNDERBURK: And that
18 confidential document was something produced by the
19 Rate Bureau. Correct?

20 MR. FRIEDMAN: And it's in -- it's
21 noted in, let's see, footnote 101 on page 33.

22 HEARING OFFICER FUNDERBURK: So am I
23 correct in thinking that the -- the source material
24 was Rate Bureau information, you base the
25 confidentiality marking on that source material.

1 Mr. Spivey, as counsel for the Rate Bureau. You're
2 not raising a concern.

3 MR. SPIVEY: I'm trying to be mindful
4 of not having to close the room, seal the
5 transcript, but I don't believe there's actual
6 confidential information being presented on this
7 page. It's just being sources being cited, but the
8 actual confidential information is not being
9 provided here.

10 HEARING OFFICER FUNDERBURK: It's not
11 there. Okay. Then let's continue.

12 Thank you for pointing that out. I
13 appreciate it, helping keep us straight. It's very
14 helpful, but please proceed.

15 BY MR. SPIVEY:

16 Q. So continuing on your testimony on page
17 34, at line 15, your answer indicates that you
18 conducted your own analysis of North Carolina actual
19 experience with the outputs from the AIR and RMS
20 models; do you not?

21 A. That's what it says.

22 Q. And much of the information, if not all of
23 the information on the next -- on that page and the --
24 the following three or four pages is devoted to your
25 discussion of the analysis that you performed.

1 Correct?

2 A. Yes.

3 Q. Now, the AIR model simulates 100,000 years
4 of experience; does it not?

5 A. That's my understanding. You're -- you're
6 referring to the standard model, the AIR standard
7 model?

8 Q. Yes.

9 A. That's my understanding.

10 Q. And that output is presented in the rate
11 filing. Is it not?

12 A. Yes.

13 Q. And it reflects 100,000 years of
14 experience of the AIR model?

15 A. No. And if I -- if that's what you said
16 earlier, then I would need to clarify my response that
17 it's not -- it's not reflecting 100,000 years of
18 experience, but it is providing 100,000 simulated
19 events.

20 Q. Okay. It's simulating the experience over
21 a period of 100,000 years.

22 A. Simulating 100,000 events. 100,000 -- go
23 ahead.

24 Q. Is it simulating 100,000 events, or is it
25 simulating the experience over a period of 100,000

1 years?

2 A. I would have to look because I know RMS
3 and AIR does it a little differently, so I'd have to
4 look at data. It could be 100m000 years for AIR,
5 and -- and I just wanted to clarify that it's a
6 simulation, not a -- not based on 100,000 years of
7 data.

8 Q. No. My question was the AIR model
9 simulates 100,000 years of hurricane experience; does
10 it not?

11 MR. FRIEDMAN: Your Honor, asked and
12 answered. She just said that she would have to
13 check what between AIR and RMS.

14 THE WITNESS: Also, I want to clarify
15 that AIR, the standard model -- oh, go ahead.
16 Sorry.

17 HEARING OFFICER FUNDERBURK: Normally,
18 what I'll need you to do is we'll let them argue
19 about whether or not you're going to answer and
20 then -- and then answer.

21 THE WITNESS: Sorry.

22 HEARING OFFICER FUNDERBURK: I'm going
23 to have you answer the question and -- and proceed
24 at this point. So Mr. Friedman, overruled,
25 please -- please respond.

1 THE WITNESS: Can you restate the
2 question then?

3 BY MR. SPIVEY:

4 Q. Is it correct that the AIR model simulates
5 100,000 years of hurricane experience?

6 A. My recollection is that it is the AIR
7 standard model that represents 100,000 years or, yeah,
8 100,000 simulated years.

9 Q. And the AIR standard model is what you
10 were comparing or looking at in the analyses that you
11 described beginning at page 34 and continuing over to
12 page 35. Is it not?

13 A. That and the RMS historical model with --
14 and then -- and then, you know, with demand surge and
15 without demand surge.

16 Q. Again, it's the -- it is the AIR standard
17 model that you're referring to there.

18 A. Yes. I was just clarifying that there
19 was -- there was another model as well.

20 Q. Now, you discussed five different analyses
21 that you performed, the first of which was to compare
22 modeled losses with a 20-year average of trended
23 average annual losses. Correct?

24 A. It's years 2001 to 2021 historical losses.
25 So I believe that's 21 years.

1 Q. Okay. And you observe there in your
2 testimony that the historical losses were lower than
3 the model losses. Do you not?

4 MR. FRIEDMAN: Your Honor, if I could
5 get a citation to what Mr. Spivey is referring to
6 in these pages.

7 HEARING OFFICER FUNDERBURK: Do you
8 have the citation reference?

9 MR. SPIVEY: The question is at the
10 bottom of page 34. Moving over to the Table 12 at
11 the top of page 35.

12 HEARING OFFICER FUNDERBURK: Thank you.

13 BY MR. SPIVEY:

14 Q. And you observed there that the historical
15 losses were lower than the model losses. Correct?

16 A. Yes. And I just want to clarify that I
17 used 2001 to 2021 because that's the data that was
18 provided.

19 Q. Ms. Cavanaugh, are -- are you aware that
20 the -- the date -- the historical data for that period
21 of time are specifically request -- required in the
22 statute that governs this rate filing?

23 A. Can you restate the question?

24 Q. Are you aware that -- that historical data
25 for the period 2001 through 2021 are specifically

1 called for in the statutes that govern this rate
2 filing?

3 A. And -- and you mean that the -- that the
4 time period is called for in the statute, 2001 to 2021?

5 Q. Yes.

6 A. I was not aware of that.

7 Q. In your opinion, does a comparison of
8 model results with 21 years of actual historical
9 results constitute a reasonable test of the validity of
10 the catastrophe models?

11 A. So I want to clarify that, as I recall,
12 we -- the -- the Department did request additional
13 years of experience, and we did not receive that. I --
14 I forget exactly what the answer was regarding that
15 request. 21 years is, you know, a certain, you know,
16 it it's not an extensive history of hurricane data, but
17 it does provide -- you know, I -- I used every single,
18 you know, year that I had available.

19 So I -- I think it's more relevant than no years
20 of experience. And I -- I -- one more thing I would
21 say is just that -- that I -- I also did other analyses
22 as is discussed in my pre-filed testimony and discussed
23 earlier today, because especially because, you know, it
24 is a -- it is a limited time frame that -- of data that
25 was available to me.

1 Q. Is it your testimony that the Department
2 requested additional years of actual historical
3 hurricane results and that the Rate Bureau did not
4 provide that information?

5 A. Yeah. That's my recollection.

6 Q. Do you recall what the response was to
7 that request?

8 A. Like I just stated, I don't recall the
9 exact response, but I know that we did not receive
10 additional data prior to 2001.

11 Q. Is it your understanding that the Rate
12 Bureau has data that it didn't provide to the
13 Department?

14 A. I'm not in a position to know what data
15 the Rate Bureau has available to it. We did request it
16 as I recall. And, like I said, I don't recall the
17 exact response, but -- but I did not have access to
18 that data.

19 Q. In your Table 12, you have the line
20 labeled trended AAL 2001 through 2021. And I believe
21 your footnote 106 at the bottom of page 34 indicates
22 that you utilized a 3 percent average loss trend. Is
23 that correct?

24 A. Yes.

25 Q. And is that what you mean by the term

1 trended AAL, that you've trended actual loss history
2 they're using on 3 percent historical?

3 A. Yeah. I'll just read the full footnote.
4 I did not have access to data to estimate a more
5 precise loss trend. So these figures assume a long
6 term 3 percent average loss trend. And just for
7 clarity, if I had not applied that adjustment, the
8 average annual loss would be even lower than what's
9 stated in that table.

10 Q. Now, there on page 35, you then go next to
11 your second analysis, which has been presented in, or
12 the -- there are certain data or numbers shown in Table
13 13. Correct?

14 A. There is a Table 13. Yes. And it -- it
15 is still part of my analysis.

16 Q. Now, you provided a revised Table 15,
17 which you labeled Table 15-B earlier in this
18 proceeding, and then you discussed it on your direct
19 examination with Mr. Friedman this morning. Correct?

20 A. Yes.

21 Q. Do any of the changes that you made to
22 your Table 15 require any changes to Table 13?

23 A. I considered that, but I did not update
24 that. I mean, like I said earlier, Table 15 has
25 accurate data in it, as does Table 13. I wanted to

1 update Table 15 just because there was a comparison
2 between the actual and the model. So I wanted to get
3 as -- as close of a comparison as I could get. Table
4 13 is counting the category -- the Saffir-Simpson
5 category -- based on North Carolina rather than based
6 on when the hurricane made landfall.

7 And I think that's, you know, fairly clearly
8 stated in my report, so I did not feel the need to
9 update Table 13.

10 Q. Do the numbers of storms that you display
11 in Table 13 match up with your revised Table 15-B?

12 A. I believe the only change is to the
13 category, those two storms that I mentioned prior,
14 earlier today.

15 Q. So is there a reason that you did not
16 submit a revised Table 13 to correspond with Table 15-
17 B?

18 A. I believe I just -- I explained my
19 rationale a couple minutes ago, so could -- could you
20 just restate so I understand what additional
21 information you're -- you're seeking?

22 Q. So your testimony at page 35, lines 3 and
23 4, indicates that during the historical period provided
24 by NCRB (2001-2021) there have been no storms of 3 or
25 higher. Is it your testimony that -- that that's

1 correct?

2 A. So I would include the sentence before
3 that. As shown in the table below, most storms
4 experienced in North Carolina are an SS in intensity of
5 2 or lower. And so in that sentence, I am stating
6 experienced in North Carolina.

7 Table 13, as I stated, relates to the category
8 of the storm when it is in North Carolina, and that's
9 what that sentence is intending to discuss, not when
10 the -- the category of the storm when it's in Florida
11 or South Carolina, but rather -- rather the category of
12 the storm in North Carolina. So I -- I don't -- so
13 everything there is accurate.

14 Q. Ms. Cavanaugh, is it surprising to you, as
15 an actuary with training in statistics, that in a 44-
16 year period, it would be unlikely to observe a Category
17 5 storm in North Carolina?

18 A. Can you state the question again?

19 Q. Sure. Is it surprising to you, as an
20 actuary with training in statistics, that in a 44-year
21 period, it would be unlikely to observe a Category 5
22 storm in North Carolina?

23 A. I think the fact that there were no
24 hurricanes of Category 5 in North Carolina is
25 consistent with the RMS projection of fairly low

1 frequency of Category 5 storms.

2 I mean, there -- there is a -- a -- always a
3 possibility, but -- but it would be fairly low and that
4 is in line with what the RMS projected frequency is.

5 Q. Is it in line with the frequency projected
6 by the AIR model?

7 A. The AIR -- the AIR model is double the
8 frequency of the RMS model, but they're both very
9 small. So it's really difficult to kind of, you know,
10 focus just on Category 5s when -- when you're looking
11 at the, you know, frequencies of that magnitude, but it
12 could be in line with what the results of the AIR model
13 is.

14 Q. Did I understand you to just say that
15 the -- that the AIR model has double the frequency of
16 the RMS model for Category 5 storms in North Carolina?

17 A. I'm -- I'm referring to Table 15, and
18 these numbers have not been changed. So you can look
19 at 15-B as well. Why don't we look at 15-B since
20 it's -- it's the updated one, which looks at frequency,
21 for the AIR projected, and this is the AIR standard
22 model and the RMS historical model. And the frequency
23 is 0.006 for AIR, 0.003. So approximately, you know,
24 within rounding, approximately double for AIR versus
25 RMS.

1 Q. Well, you'd obviously, you would agree
2 that Category 5 hurricanes are expected to occur on a
3 very infrequent basis. Right?

4 A. I would say that the -- the models do
5 indicate that it would be infrequent.

6 Q. Did you determine, in this case, the
7 number of Category 5 storms that are expected by the
8 AIR model to make landfall in North Carolina over the
9 100,000-year simulation period?

10 A. I was not provided with that data.

11 Q. Those data are available to you in the
12 filing; are they not?

13 A. So your question was the category as it
14 makes landfall in North Carolina or the category when
15 it makes landfall, period? Can you restate the
16 question so I can answer.

17 Q. My question was in landfall in North
18 Carolina.

19 A. Can you say the whole question again then?

20 Q. Did you determine in this case the number
21 of Category 5 storms that are expected by the AIR model
22 to make landfall in North Carolina over the 100,000-
23 year simulation period?

24 A. I have that data, but I don't have that
25 number in front of me.

1 Q. Did you make that calculation? Or -- or
2 may --

3 A. I believe I did. It's -- I don't -- but
4 it's not in my report as I can recall right now. Could
5 be --

6 Q. So you were able to make that
7 determination from the information provided in the
8 filing. Correct?

9 A. I believe so. Yes.

10 Q. And if I were to tell you that I
11 understand that the AIR model expects a Category 5
12 storm once in every 1,408 years, would that be
13 consistent with what you recall your determination to
14 have been?

15 A. I really don't feel comfortable. I recall
16 making the calculation, but I don't know if that's the
17 exact number.

18 Q. Okay. Did you make a similar
19 determination for what the expectation is in the RMS
20 model about Category 5 storms making landfall in North
21 Carolina?

22 A. Yes.

23 Q. And if I were to say to you that that
24 number is 1 in every 1,527 years, would that be
25 consistent with your recollection of what you

1 determined?

2 A. Again, I -- I would have to go back and
3 look at the number.

4 Q. If -- something that occurs once in 1,400
5 and 8 years or once in 5 -- I'm sorry, once in 1,527
6 years is even less frequent than something that occurs
7 1 in 1,000 years. Is it not?

8 A. Yes.

9 Q. So just for the ease of calculations,
10 let's assume that a Category 5 hurricane making
11 landfall in North Carolina is a 1 in 1,000-year event.
12 Okay? I'm just asking you to make that assumption.

13 A. Okay.

14 Q. Okay? All right. Saying that something
15 is a 1 in 1,000-year event is the same thing as saying
16 it has a one-tenth of 1 percent probability of
17 occurring in any given year. Isn't that right?

18 A. Yes. That's the math.

19 Q. If something has a one-tenth of 1 percent
20 probability of occurring in a single year, the
21 probability that it will not occur that year is 99.9
22 percent. Correct?

23 A. Correct.

24 Q. And the probability that that event will
25 not occur in two consecutive years would be 99.9

1 percent times 99.9 percent or 0.999 times 0.999.

2 Correct?

3 A. Yes.

4 Q. And similarly, the probability that that
5 event would not occur in three consecutive years would
6 simply be 0.999 times 0.999 times 0.999. Correct?

7 A. Correct.

8 Q. And another way to express that
9 mathematically or statistically would be 0.999 to the
10 power of 3. Correct?

11 A. Yes.

12 Q. So if something has a probability of
13 occurring -- I'm sorry, if something has a 99.9 percent
14 probability of not occurring in a single year, what is
15 the probability that it will not occur in 44
16 consecutive years?

17 A. So if it's just a straight probability as
18 you've -- you know, this hypothetical, then you would
19 do the same math, 99.9 percent to the 44.

20 Q. So just to re-say what I think you just
21 said, that would simply be 0.999 to the power of 44.

22 A. Um-hum.

23 Q. Right? I mean, that's pretty simple
24 calculation. You could perform that on your
25 calculator. Right?

1 A. Yes.

2 Q. Do you have your calculator handy?

3 A. No.

4 Q. Would you take my word for it that 0.999
5 to the 44th power is 95.7 percent?

6 A. Sure.

7 Q. I mean, you're welcome to check.

8 A. I -- I -- I -- I will -- I will take your
9 word for it. And if it's incorrect, I could clarify
10 that later. I just want to add that I did not just
11 look at Category 5 hurricanes. I did a whole analysis,
12 and it was not all based on, you know, looking at
13 Category 5 hurricanes. I think it is relevant to look
14 at all hurricanes that have -- that have occurred, and
15 that is included in my analysis.

16 I would also state -- restate that, I found that
17 the -- that the filing was not appropriately
18 documented. So I did an analysis with the very limited
19 data that I had available to me.

20 Q. Are you finished?

21 A. Yes.

22 Q. And if the numbers that I gave you a few
23 moments ago about how frequently the AIR model and the
24 RMS models expect a Category 5 hurricane to make
25 landfall in North Carolina are more in the range of 1

1 in 1,400 years or 1,500 years, that's even less
2 frequently than 1 in 1,000 years. Correct?

3 A. That's correct.

4 Q. And if you took 0.999 or if you change the
5 0.999 from which is what you get with 1 in a 1,000, it
6 would be 0.999 plus some more digits for something
7 that's 1 in 1,400 or 1 in 1,500, would it not?

8 A. I don't have the exact number, but it
9 would be a higher number than 99.9 percent.

10 Q. And the probability that you would not
11 observe a Category 5 hurricane in 44 consecutive years
12 would be even higher than the 95.7 percent that I gave
13 you from my own calculations a few moments ago. Right?

14 A. I mean, if you know, I just want to
15 clarify that catastrophe models are -- they are using
16 an expected annual loss, oops, sorry, for -- for that
17 particular set of risks for one year, not for 44 years.
18 But -- and then this is why I clarified this earlier.

19 But if it was indeed just a 1 in 1,000, then you
20 could do that simple math. I think if you ask the
21 catastrophe modelers for the actual frequency expected
22 for the -- over the -- over the last 44 years or for
23 the next 44 years, they wouldn't necessarily make such
24 a simplistic calculation.

25 Q. But statistically, given that the

1 expectation in the AIR and RMS models is that Category
2 5 hurricanes occur somewhere in the vicinity of once
3 every 14- or 1,500 years, then the probability that you
4 would not observe a Category 5 hurricane in 44
5 consecutive years would be even higher than 95.7
6 percent. Correct?

7 A. Subject to the caveats that I just stated,
8 yes.

9 Q. So it really is not at all surprising that
10 we've not had a Category 5 storm make landfall in North
11 Carolina over the 44-year period that are reflected in
12 the analyses that you show in your Table 15 and some of
13 the other tables? Is it?

14 A. It's -- it's not surprising that -- that
15 that hasn't been experienced yet based on the modeled
16 results.

17 Q. And you wouldn't rely on the fact that
18 they haven't occurred in the past 44 years as the basis
19 for excluding them from the model output, would you?

20 A. So as I've stated earlier, I did an
21 analysis of much more than just the frequency of
22 hurricanes -- of Category 5 hurricanes making landfall
23 in North Carolina. I do not believe that just using
24 that one piece of data, just the Category 5, the number
25 of Category 5 hurricanes making landfall in North

1 Carolina would be a sufficient analysis because there
2 is other data available.

3 Q. And you didn't remove Category 5 storms
4 from your analysis; did you?

5 A. I'm sorry?

6 Q. You did not remove them in your analysis?

7 A. Correct. As I think about your question
8 on Category 5 hurricanes, I think there is just a very,
9 very limited amount of information to make a conclusion
10 on that specific Category 5 hurricanes and whether or
11 not that modeled output is -- is reasonable because
12 there hasn't been any hurricanes that have made
13 landfall in North Carolina.

14 So I just want to just clarify, you know, that's
15 a difficult thing to just focus on that one piece.

16 Q. Now, the next analysis that you present is
17 shown in your Table 14 at the top of page 36 of your
18 testimony; is it not?

19 A. Table 14 is on page 36.

20 Q. And there you note that in the AIR model,
21 the average annual loss is dominated by large events.
22 Do you not?

23 A. Yes.

24 Q. Does it surprise you that the loss
25 distributions for catastrophic events would be

1 dominated by large, individual events?

2 A. Could you restate the question?

3 Q. Does it surprise you that the loss
4 distributions for catastrophic events would be
5 dominated by large, individual events?

6 A. Well, it wouldn't surprise me that large,
7 individual events would have an important aspect to the
8 average annual loss. But given in North Carolina that
9 the majority of hurricanes are smaller in size, the
10 fact that the average annual loss is actually dominated
11 by hurricanes that don't occur as frequently, I think
12 you have to consider both the severity and the
13 frequency.

14 And so, you know, when you look at the RMS
15 results, those are more dominated by the Category 1 and
16 2, which is which is more in line with what we see
17 actually occurring in North Carolina.

18 Q. So when you compared the distribution of
19 losses by category between the AIR and the RMS models,
20 did you have any preconceived notion of what that
21 distribution would look like?

22 A. Now, when I -- I'm just trying to remember
23 about going back to the initial review. I -- I
24 remember, taking a look at the output between RMS and
25 AIR and being a little surprised that it was, you know,

1 that it was coming up with such different results
2 because, you know, a lot of times we see, you know, the
3 results from AIR and RMS to be, you know, a little bit
4 more close -- closely aligned. So that was a little
5 surprising. Your specific question was related to the
6 Table 14. Was that surprising? Is that your question?

7 Q. My question was did you have any
8 preconceived notion of what it should look like?

9 A. No. No.

10 Q. Why, then, did you think that the AIR
11 distribution was unusual and that the RMS distribution
12 should be something that you should rely on?

13 A. For the reasons I lay out in my report.
14 It was, you know, a -- a review and -- and -- and for
15 the reasons that I discussed previously today, it was a
16 review of all the data that I had available to me.

17 And based on all of that, I concluded that RMS
18 looked more aligned in, especially for frequencies,
19 when you look at the Saffir-Simpson categories and when
20 you just look at the overall average annual loss.

21 And in addition, you know, like I was describing
22 earlier, the AIR model, you know, RMS model, and
23 CoreLogic model results in the document that we are
24 discussing earlier today show that RMS is -- is in the
25 middle.

1 So all of those -- for all of those reasons, I
2 determined, you know, just based on all that data to
3 put 100 percent weight to the RMS model and -- and any
4 other, you know, I'm just trying to remember.

5 Oh, I also have -- I just don't want to exclude
6 any -- any part of my testimony, but, you know, there's
7 a whole discussion in here about all of the different
8 reasons why I -- I ultimately landed on the 100 percent
9 RMS. There's a figure that's shown on page 37
10 discussing, you know, a little bit of a focus by region
11 that I considered.

12 And then the other thing I would just say is
13 that I considered the fact that, you know, we didn't
14 have additional historical data to -- to test against.
15 And in my report, I discussed that, you know, with
16 additional data, I might come up to different
17 conclusions.

18 Q. In your Table 15, that's where you compare
19 the actual number of storms with the AIR and RMS
20 projected numbers of storms. Right?

21 A. Yes. And then I updated that to 15-B

22 Q. I'm sorry? My question is, is your Table
23 15, you were comparing the actual number of storms with
24 the number of storms projected by the AIR and the RMS
25 model s. Right?

1 A. The -- the average number of storms per
2 year. I -- I compared the actual to the AIR projected
3 and RMS projected, and that's for the standard -- AIR
4 standard and RMS historical model.

5 MR. FRIEDMAN: Just to be clear, are we
6 speaking about the original Table 15 or DOI Exhibit
7 51, the updated one?

8 BY MR. SPIVEY:

9 Q. So this is the table that you -- you made
10 a correction to that you discussed in your testimony
11 earlier today. Right?

12 A. That's correct.

13 Q. Did the changes that you made to that
14 table cause you to change any of your conclusions
15 regarding the -- the -- the comparison of the
16 frequencies of the models as compared to the actual
17 numbers of storms?

18 A. Well, it -- it caused me to change the
19 table. So, so I say, in lines 2 and 3 of page 36,
20 fourth, I reviewed the frequencies, average number of
21 storms per year over a longer -- longer term period,
22 1980 to 2023, and compared to AIR and RMS output and
23 then what it affected was that Table 15. I thought
24 that a better comparison would be what I show in 15-B,
25 but it doesn't change my overall conclusions.

1 Q. But does it change your conclusion as you
2 described it in lines 10, 11, and 12, where you say the
3 RMS model more closely reflects the historical
4 frequencies by storm intensity and that the AIR results
5 are not aligned with the historical observations?

6 A. It does not change that conclusion.

7 Q. So your revised Table 15-B is where you
8 corrected the numbers of actual storms; is it not?

9 A. I corrected the categories that the storms
10 were assigned to.

11 Q. And so the -- the -- the data shown in
12 your new Table 15-B, your testimony is that that
13 reflects that the AIR results are not aligned with
14 historical frequencies of storm intensity. Is that
15 your testimony?

16 A. Yes.

17 Q. And that, further, your testimony is the
18 RMS model more closely reflects the historical
19 frequencies than does the AIR model?

20 A. That's my view and, you know, like I say
21 in my pre-filed testimony, it's, you know, based on
22 limited data, information.

23 Q. And you're making that statement looking
24 at the numbers that appear in Table 15-B.

25 A. 15-B. Yes. To just provide a little bit

1 more color, you know, it's hard to look at each
2 category by itself just because there is, you know, a
3 limited amount of information historically available.
4 But -- but if you look at, like, the smaller Categories
5 1 and 2, you see, you know, higher frequencies for RMS,
6 higher frequencies for -- for the actual. And when you
7 look at Categories 3 through 5, you see lower
8 frequencies.

9 For actual NRMS, a little bit more closely
10 aligned than -- than when you look at the AIR
11 projected.

12 Q. So for the actual storms that you chose to
13 include in your analysis here during the period 1980 to
14 2023, the RMS projections show a -- a lower number of
15 Category 4 storms; does it not?

16 A. For Category 4? Yes. RMS is lower than
17 the actual and AIR is higher than the actual.

18 Q. So the RMS is lower than actual for
19 Category 4 storms. It's also lower than actual for the
20 Category 3 storms; is it not?

21 A. That's true. Yes. Like I said, I, you
22 know, I kind of looked at Category 1 and 2 together and
23 Category 3 through 5 together when making this, you
24 know, overall judgment. And I would also add that I
25 looked at, if you go to page 37 of my report, that

1 discusses another piece of data that I used to make my
2 determination, which is to look at the AIR model
3 documentation. And what that showed is for the higher
4 intensity storms, there actually are less actual storms
5 than the -- than what is modeled. And that's looking
6 just at the southeast.

7 So not just North Carolina, but all -- all the
8 southeast not including Florida. So that also, you
9 know, kind of pointed to the same thing that maybe the
10 AIR model comes up with higher frequencies for those
11 more severe storms.

12 Q. Did you any -- did you do any specific
13 tests other than just eyeball the numbers as you just
14 described?

15 A. I reviewed the data and information that
16 was provided to me. So I could reiterate it, but I,
17 you know, I am, you know, as reviewing this filing, I
18 reviewed what was provided, and then I did perform some
19 additional calculations to -- to come to my -- my -- my
20 analysis, my conclusion, and there weren't -- and so
21 then your question is, were there any additional tests
22 not -- not provided in my pre-filed testimony related
23 to this?

24 Q. And I'm specifically referring to Table 15
25 and Table 15-B.

1 A. Um-hum. Yeah. I mean, I looked at a -- a
2 number of different, you know, splits and cuts of the
3 data, and I -- and I arrived at, you know, the tables
4 that are shown in the report to be helpful at
5 demonstrating why I came to the conclusion that I did.

6 Q. Did you calculate the correlation of the
7 AIR model results with the actual results and compare
8 that to a correlation of the RMS model results and the
9 actual results?

10 A. I did not.

11 Q. And Ms. Cavanaugh, the next test or the
12 fifth test that you did is described on your page 36,
13 beginning at line 5 and encompassing Table 16; is it
14 not?

15 A. That's correct.

16 Q. And your conclusion, as I understand it,
17 from that is stated down at beginning at line 12, near
18 the bottom of page 36 and carrying over to the top of
19 page 37. And is that the severities using the RMS
20 model, while higher, are reasonably aligned with
21 historical losses sustained, given the inherent
22 volatility in the severity of those events. Is that
23 correct? I mean, that's what you're -- you stated your
24 conclusion to be.

25 A. Yes.

1 Q. So looking at your Table 16, am I correct
2 in understanding that the actual trended losses there
3 are \$428 million?

4 A. The actual historical losses, 420 million.
5 Yes.

6 Q. So what is the AIR standard with demand
7 surge model losses shown there?

8 A. For Categories 1 and 2, it's 392 million.

9 Q. 392 million?

10 A. Yes.

11 Q. And is it correct that that \$392 million
12 is lower than the actual trended loss amount that you
13 showed there by \$36 million?

14 A. Approximately, yes.

15 Q. And what is the RMS historical with demand
16 surge loss amount for Categories 1 and 2?

17 A. 579 million.

18 Q. And how much higher than the actual
19 trended loss amount is that RMS dollar amount?

20 A. About 150 million higher. So what I did
21 was I reviewed those severities for Category 1 and 2,
22 but I recognize there's a lot of volatility in the
23 results of just a few -- a few storms in -- in the
24 history.

25 So even though RMS was coming up with a higher

1 average severity, I did not make an adjustment in my
2 analysis, but rather I concluded that, you know, it was
3 reasonably aligned with the historical losses, given --
4 given that we're looking at severity versus frequency.

5 Q. So if you were making this comparison
6 based on that metric alone, which model performs
7 better?

8 A. I think they both, you know, for just
9 looking at severities Category 1 and 2, they both are
10 reasonably aligned with the historical average.

11 Q. So the AIR model is lower by 36 million,
12 and the RMS model is higher by 151 million, and your
13 characterization is that -- that they're both
14 performing reasonably. Did I understand you correctly?

15 A. No. That's -- that's -- that's not what I
16 stated. This is one metric, so I wouldn't say that
17 they performed -- I forget exactly how you put it, but
18 rather that, when we look at just this one metric,
19 severity is Category 1 and 2, I would expect that there
20 is, you know, quite a bit of volatility in the
21 historical just because, you know, any given storm
22 is -- is going to be, you know, subject to -- to
23 particulars of that storm. We only have, I think, ten
24 that we're -- that we're looking -- looking at for the
25 historical data. So I'd expect, you know, you know,

1 some -- some range around that.

2 And -- and what I'm saying is that the AIR
3 model, you know, comes out with a severity of 392
4 million. It's very close to the historical 428
5 million. The RMS comes out higher, and you know, I
6 was, you know, for other reasons, you know, looking at
7 the frequency, concluding that the frequencies were
8 more in line with RMS.

9 I could have adjusted the RMS down to reflect
10 this difference between severities, but I didn't
11 because I thought that it was, you know, still within
12 some range. Right?

13 Because -- because, you know, just recognizing
14 that it was, you know, only -- only the -- the damages
15 on ten storms.

16 Q. And then immediately following your
17 statement there at the bottom of page 36 and the top of
18 page 37 regarding the fact that, using your words,
19 while higher, the RMS model severities are reasonably
20 aligned with historical losses given inherent
21 volatility and the severity of those events.
22 Therefore, in my alternative calculations, I placed 100
23 percent weight to the RMS historical model and 0
24 percent weight to the AIR standard model. Correct?

25 A. I just want to clarify that that

1 "therefore" is referencing this entire analysis up
2 until not just that one sentence related to the
3 severities. But that is what it says. Yes.

4 Q. Yes. The part that precedes that begins
5 at line 8 with question, what were your conclusions?
6 Correct?

7 A. I -- I -- all of these sentences from page
8 36, line 9 to page 37, line 2, are answering the
9 question, what were your conclusions?

10 Q. Right. And the first part of that was
11 that you find that the RMS model more closely reflects
12 the historical frequencies by storm intensity and that
13 the AIR results are not aligned with the historical
14 observations. That was the other conclusion. Was it
15 not?

16 A. That's correct.

17 Q. Ms. Cavanaugh, would you please turn to
18 page 47 of your testimony? Now, do I understand
19 correctly that you agree that the net cost of
20 reinsurance is an expense that is properly included in
21 homeowners' rates as we -- that we're setting in this
22 proceeding?

23 A. Net cost of reinsurance is an expense
24 that's included in the -- is an appropriate expense.
25 It should be included in the rates.

1 Q. And -- and at a high level, your testimony
2 is simply that you believe the Rate Bureau has not
3 adequately supported its net cost of reinsurance
4 provision, and you developed an alternative provision
5 that you recommend. Correct?

6 A. That's -- that's correct subject to the,
7 you know, discussion in my report that it's based on
8 the limited data available.

9 Q. I'm sorry? It's just that sort of a
10 general overview.

11 A. I just wanted to clarify that it's subject
12 to the limitations.

13 Q. And in your testimony, you indicate that
14 you have reviewed support for net cost of reinsurance
15 in dozens of filings submitted to New Jersey, Georgia,
16 Alaska, Idaho, and Minnesota; do you not?

17 A. That's what it says. Yes.

18 Q. And I mean, I'm sorry. That's at page 47,
19 lines 16 through 18.

20 A. Yes.

21 Q. And are those dozens of filings the same
22 filings that we discussed earlier today in my cross
23 examination about where you reviewed rate filings in
24 New Jersey, Georgia, Alaska, Idaho, and Minnesota?

25 A. Well, some of the questions are related to

1 the use of modeled catastrophe losses, but, yeah, we
2 did discuss review of filings in support of the net
3 cost of reinsurance.

4 Q. It's the same -- it's the same global set
5 of filings that you've reviewed in those states.

6 Correct?

7 A. Yes. Some subset of those rate filing
8 reviews included a review of net cost of reinsurance.

9 Q. Now, I believe your testimony this morning
10 was that a filing in Alaska was a filing by NCCI for
11 workers' comp insurance. Correct?

12 A. Yes. It was. I'm just trying to remember
13 about other file -- I mean, there are other filings
14 that we've performed in Alaska, though.

15 Q. Aside from the one in -- in Alaska that
16 was a workers' comp filing by NCCI, were all of those
17 filings made by individual companies rather than a
18 rating bureau or some type of entity on behalf of all
19 the companies in the state?

20 A. And you're referring to these dozens of
21 filings that have support for net cost of reinsurance.
22 Correct?

23 Q. I'm referring to the, yeah, the dozens of
24 filings you mentioned in line 17.

25 A. Yes. So then, yes, it's just either

1 individual companies or a group of affiliated companies
2 or NCCI in Alaska.

3 Q. Okay. And -- and my question was, aside
4 from the one that was made by NCCI, the rest are for
5 individual companies or company groups that were --
6 they're all affiliated under one company.

7 A. That's my recollection.

8 Q. In -- in those filings that you have
9 reviewed, is it typically the case that when a company
10 supports its net cost of reinsurance provision, it
11 starts with its current cost of reinsurance and then
12 allocates that to state in line?

13 A. Yeah. Typically, it starts with the --
14 the current reinsurance costs or if -- if there's a
15 projection of the next year's reinsurance costs, you
16 know, that might be included as well. And then, you
17 know, that would be the total reinsurance costs that
18 are then allocated by the program and state under
19 review.

20 Q. And in those situations, a company doesn't
21 simply use what its countrywide homeowners' net cost of
22 reinsurance is as the basis for what it includes for
23 its net cost of reinsurance provision in each
24 individual state?

25 A. Well, I see a lot of different filings,

1 but what we would expect to see, and if we don't see
2 it, we will request additional information is, not to
3 be based on countrywide, but rather to be based on the
4 allocation to that particular state and program.

5 Q. And do those filings start with or show
6 what the company's average reinsurance costs have been
7 over the last 5, 10, or 20 years and use that as an
8 amount that it requests in the individual state filing
9 you're looking at?

10 A. Sometimes. Sometimes, yes. Sometimes,
11 no.

12 Q. Can you identify a specific filing where a
13 company requests a net cost of reinsurance provision
14 based on its average reinsurance cost over the last 5,
15 10, or 20 years?

16 A. What I'm recalling is seeing at least one
17 filing where there was a history of reinsurance costs,
18 not -- not just the -- the current reinsurance costs.
19 I -- I can't recall if it was three years or five years
20 that it was looking at, but it was looking at a
21 historical average.

22 Q. So what company was that?

23 A. I don't recall the company name.

24 Q. What state was that?

25 A. I believe that was New -- I -- I -- I

1 better not speculate. I -- I thought -- I think it's
2 New Jersey, but I'm not 100 percent sure.

3 Q. Was that something that occurred in the
4 last two to three years?

5 A. Yeah. That that occurred recently in the
6 in the last six months. Yes. The answer is yes.
7 Within the last one to two years.

8 Q. And you're indicating you don't remember
9 what company -- I mean, yeah, what company that is.
10 Correct?

11 A. No.

12 Q. So earlier, we talked about the fact that
13 you were going to review your notes about what you had
14 seen in the last number of years and provide us, after
15 you've had a chance to do that, identifying what
16 company filings you were talking about. Correct?

17 A. That was specific to Georgia, reviewing
18 catastrophe model results. Correct.

19 Q. And is your testimony this is it? The one
20 you're talking about now is something in New Jersey,
21 not in Georgia?

22 A. I believe so. I'm going to have to check.

23 Q. All right. If you're going to check that,
24 would you also check to see what company it is and when
25 that filing was made?

1 A. Yes.

2 Q. Thank you. And when -- or in that
3 particular filing that you're referring to, did you
4 request any additional documentation from the company?

5 A. I'm sure we did.

6 Q. Did you request additional documentation
7 regarding its net cost of reinsurance provision?

8 A. I believe so, but I can't recall.

9 Q. And when you're checking to see what
10 company that was, can you also check to see whether you
11 asked them for additional information and whether they
12 provided it?

13 A. Yes.

14 Q. Thank you. You would agree, would you
15 not, that North Carolina is somewhat unique in that the
16 homeowners' insurance rates here are filed by the Rate
17 Bureau on behalf of all of companies in the state?

18 A. Yes.

19 Q. And is it similarly somewhat unique in
20 your experience that when rates are being made in that
21 type of environment, one is to assume that the rate is
22 being set for a hypothetical single aggregate company
23 with a combined loss and expense experience of all of
24 the individual companies in the state?

25 A. I'm not sure I understand the question

1 because I -- I agree that it is unique in North
2 Carolina and this next question appears to be asking,
3 well, when this occurs, you know, in other states,
4 what's typical, which it's very unique in North
5 Carolina. So I -- I probably misunderstood your
6 question.

7 Q. Do you understand that here in North
8 Carolina, as part of the process we're engaged in here,
9 that we are to assume that the rate is being set for a
10 hypothetical single aggregate company that has the
11 combined loss and expense experience of all of the
12 individual companies in the state?

13 A. That's my general understanding.

14 Q. And is that somewhat unique in your
15 experience in reviewing rate filings?

16 A. Yes.

17 Q. Would you agree that that construct is
18 fictitious, that there is, in fact, no single aggregate
19 company that writes all of the business in North
20 Carolina?

21 A. I agree there's no single aggregate
22 company. Yes.

23 MR. FRIEDMAN: And Your Honor, I'm not
24 trying to interrupt Mr. Spivey's flow, but we have
25 been on, she has been on the stand for two hours

1 now. I think it might be an appropriate time for a
2 break. At least we could use one.

3 HEARING OFFICER FUNDERBURK: Well,
4 first, I'll ask, as far as when we're going to cut
5 off, how long do you anticipate the rest of your
6 cross taking? It's 3:30. Normally, we've cut out
7 at 4:00. I think we put in the schedule to
8 potentially 4:30 today. How -- how much more time
9 do you think we're looking at for cross?

10 MR. SPIVEY: That's -- that's somewhat
11 difficult to say, Your Honor. I certainly don't
12 anticipate being able to finish today, if that's --
13 if that's part of what you're --

14 HEARING OFFICER FUNDERBURK: If --
15 well, what I'm looking at is if we don't take a
16 break, do you think you'll finish by 4:00?

17 MR. SPIVEY: I don't think so. No.

18 HEARING OFFICER FUNDERBURK: Okay. Do
19 you need a break, Ms. Cavanaugh?

20 THE WITNESS: Yeah. Sometime soon.
21 Yes.

22 HEARING OFFICER FUNDERBURK: Let's go
23 ahead and take a ten-minute break, like ten minutes
24 sharp. It's 3:35. To have everybody back at 3:45
25 sharp to resume.

1 Ms. Cavanaugh, just a reminder, when
2 you resume your testimony, you do continue to be
3 under oath. We're in recess. Thank you.

4 (Recess was taken from 3:35 p.m. to 3:45 p.m.)

5 HEARING OFFICER FUNDERBURK: Thank you.

6 We are back in session at 3:45. Ms. Cavanaugh,
7 again, you remain under oath. Oh, let me try to
8 put that down. We're having a little issue with
9 the blinds. You're welcome.

10 Mr. Spivey, are you ready to resume?

11 MR. SPIVEY: Yes. Thank you, Your
12 Honor.

13 BY MR. SPIVEY:

14 Q. Ms. Cavanaugh, when we took our break, we
15 were just talking about the relatively unique
16 situation here in North Carolina, where making
17 rates on the assumption that a single aggregate
18 company with the combined loss and expense
19 experience of all of the individual companies in
20 the state is effectively writing the business. Do
21 you recall that -- those questions?

22 A. I do.

23 Q. When you say -- when you say in
24 determining the net cost of reinsurance that the Rate
25 Bureau started by designing a fictitious reinsurance

1 program, this is on your testimony on page 48 at line
2 15, is it correct that what you mean is that a
3 reinsurance program is -- is not one that can be tied
4 to any specific company. Is that correct?

5 A. So I meant that this -- yeah. This
6 reinsurance program isn't associated with any one
7 company, or group of companies, but rather it is
8 designed -- and I go on later in that answer to
9 describe that it is determined based on an analysis of
10 reinsurance programs placed by Aon.

11 Q. Now, in making your own estimates of the
12 net cost of reinsurance, I understand that you relied
13 on insurance-linked securities to estimate that cost.
14 Is that correct?

15 A. Yeah. I relied on data that relates to
16 pricing from insurance-linked securities.

17 Q. And you did that primarily because you did
18 not have access to actual reinsurance data. Is that
19 right?

20 A. So I made a determination based on the
21 information available. I would normally rely on what
22 was provided in the filing, and we did request
23 additional information regarding the data that was used
24 and did not receive that. Also requested information
25 related to reinsurance premiums from each of the member

1 companies and didn't receive it.

2 So, you know, based on all of that and the
3 information that was provided, you know, I decided to
4 use something that is publicly available, something
5 that I could validate. I'd also mention that this was
6 used, this was provided as part of the filing in
7 support of the Bureau's compensation of assessment
8 risk.

9 Q. And -- and you make that statement in your
10 testimony, do you not, that you were you relied on Ms.
11 Mao's statement that, quote, insurance-linked
12 securities are securities such as catastrophe bonds,
13 which have conditional payoffs that are very similar to
14 reinsurance? That was --

15 A. Could you just refer to --

16 Q. -- part of the basis for your use of
17 insurance-linked securities data in estimating your
18 cost of reinsurance; was it not?

19 A. So I believe you were referring to my
20 testimony, but I -- and it sounds correct, but I
21 don't -- could you just refer to the page and the line
22 number?

23 Q. Yes. I was referring to a quote in your
24 testimony on page 50, and there in the middle of the
25 page, around lines 14 through 16.

1 A. Okay. Yeah. So that's -- you know, I'm
2 reading it now. I -- I believe that's what you quoted.

3 Q. Well and my question was that you, in
4 essence, relied on Ms. Mao's statement that you quoted
5 there as at least a part of the basis for your use of
6 the insurance-linked securities data in estimating your
7 cost of reinsurance. Is that correct?

8 A. In part. You know, like I say, in my --
9 in the next sentence, it's based on this testimony and
10 my experience with catastrophe reinsurance.

11 Q. And Ms. Mao used insurance-linked
12 securities to estimate the cost of the -- the
13 compensation for assessment risk provision. Did she
14 not?

15 A. She did.

16 Q. Did she use insurance-linked securities
17 data to estimate the net cost of reinsurance?

18 A. She did not. And I state that in my
19 testimony, in my pre-filed testimony.

20 Q. Is it your opinion that catastrophe bonds
21 are a good substitute for reinsurance or that insurers
22 generally believe that to be the case?

23 A. I wouldn't characterize it quite like
24 that. I think that there's -- catastrophe reinsurance
25 is used as well as catastrophe bonds, or ILS. Market

1 is used for similar reasons to protect against
2 catastrophe risk, and they are similar products but not
3 the same. So a superior dataset would have been the
4 actual reinsurance data that was -- that -- that the
5 member companies have. I did not have access to that.

6 Another set of data would be the -- the data
7 that would -- that Ms. Mao used, which I also did not
8 have access to. So, you know, similar to Ms. Mao's
9 testimony that it -- that it quantifies the market
10 price of catastrophe risk, I agree with that statement,
11 and it was what was available to me.

12 So rather than saying that I couldn't come up
13 with any net cost of reinsurance, I -- I opted to use
14 this as -- as an alternative estimate.

15 Q. Do you know how much catastrophe risk is
16 covered by insurance linked securities compared to the
17 amount that's covered by traditional reinsurance?

18 A. Do you mean in total for hurricane
19 catastrophes or --

20 Q. Well, we can start there, that's fine.

21 A. Okay. You know, it's going to be, I don't
22 know exactly the -- the percentage that is covered by
23 catastrophe bonds versus reinsurance.

24 Q. Do you have any -- any estimate? Any
25 idea?

1 A. Yeah. I would estimate that. I would --
2 my -- I believe that more of the hurricane catastrophe
3 risk is covered by reinsurance rather than catastrophe
4 bonds.

5 Q. So more than 50 percent?

6 A. More than 50 percent. Yes.

7 Q. Now, if I understand it correctly, you
8 used data on insurance-linked securities from 2011
9 through 2022 to fit a curve that was the basis for your
10 net cost of reinsurance estimate. Is that right?

11 A. That's right. I'd also add that, you
12 know, I used a very similar approach, and I even used
13 some of the same code that was used by -- by Ms. Mao in
14 her -- when she used it for the compensation assessment
15 risk.

16 And I consider the number of years to be used,
17 and I selected 2011 and 2012 because the rates were
18 elevated back then, and I thought it was a better
19 approximation of reinsurance prices today. So hers
20 was -- you know, it would have produced a lower
21 estimate.

22 I just thought it would be more -- it would be
23 more appropriate to include a few more years, and so I
24 used those 2011 and 2012 years.

25 Q. So the compensation for assessment risk

1 and the net cost of reinsurance are two different
2 provisions in the rate filing; are they not?

3 A. They are. And so I think it's probably
4 helpful to explain why -- why the methodology used for
5 the assessment for compensation, the compensation for
6 assessment risk would be relevant here.

7 So that provision was also estimating the -- the
8 cost of holding that additional assessment, the
9 assessments. So it's not for the expected value of
10 these assessments but rather the additional cost for
11 holding that.

12 So in other words, you could -- you could
13 purchase reinsurance or you could -- you could hold it
14 yourself, but in some way, you would -- you would want
15 to be compensated for that, and that's the purpose of
16 the -- of the provision as I understand it, as the NCRB
17 is putting forth. So it's a similar type of provision
18 for, you know, a reinsurance type cost.

19 Q. So when you fit those data to a curve, you
20 were doing that using what statisticians call a log-
21 linear regression. Were you not?

22 A. Yes.

23 Q. And by using that kind of regression
24 model, you're essentially producing results that
25 incorporate the data over the entire time period used

1 in your estimate. Isn't that correct?

2 A. Yes.

3 Q. You did not weight the more recent
4 observations any more heavily than the older
5 observations; did you?

6 A. That's correct. And I would just add
7 that, you know, this is, again, limited, you know,
8 based on what I had available. But I did consider the
9 more recent reinsurance market trends. And I include
10 in my report on page 52, the -- I'm sorry.

11 That's -- maybe it's not on page 52, but I do --
12 I do -- I do include in the report just a consideration
13 of the -- of the overall market right now, and -- and
14 there was some research that I did that, that stated
15 that a longer term view would be appropriate, even
16 though there was an increase in reinsurance market
17 prices that has fallen in the most recent quarters.

18 So, you know, when I'm looking at the -- the
19 overall trends, you know, it looks like maybe, you
20 know, getting that longer term average would make
21 sense. I didn't just take the last point because
22 that's, you know, not a lot of data to work with.

23 So it looked like it was, you know, about at
24 average, and so that's why I selected, you know, rather
25 than the 2013 to -- to 2012 -- 2022 numbers, which is

1 what Ms. Mao used, I included some -- some years that
2 had some higher reinsurance prices.

3 Had I not done that, I would have come up with a
4 lower net cost of reinsurance and a lower overall rate
5 indication.

6 Q. And each time you're referring to what Ms.
7 Mao used, you're referring to what she used for the
8 compensation for assessment risk analysis.

9 A. That's correct.

10 Q. Your testimony about the -- the fact that
11 the prices have come down or have fallen back to a more
12 normal level, that's in relation to catastrophe bonds,
13 is it not? That's what you're referring to when you
14 say Lane Financial information. Correct?

15 A. No. What I am referring to is at the
16 bottom of page 51 and goes to page 52. And I quote
17 Lane Financial, which says, it seems to us that in the
18 ILS market and particularly its big brother, the
19 traditional reinsurance market, still spent too much
20 time looking at the past and not enough time looking at
21 the future as expressed by secondary markets. The
22 market is no longer hard. Indeed, against the
23 background of the past, they are now back at the
24 average of experience.

25 So they, being the ILS market and the

1 traditional reinsurance market, is back at the average
2 of experience. I'm sorry. I'm adding that just to
3 explain.

4 So then it goes on to say, the ILS market is
5 neither hard nor soft. It is decidedly average or
6 neutral. And in my experience, the cat bond market
7 goes the way of the reinsurance market.

8 Q. So it's your testimony here that what Lane
9 Financial is stating here is that, at least as you're
10 interpreting it, is that the traditional reinsurance
11 market prices are back at a long term average now? Is
12 that your understanding?

13 A. So it's headed towards a, yeah, longer
14 term average. That's my understanding of what Lane
15 Financial is saying. And that's what it looks like,
16 you know, given the catastrophe bond experience.

17 MR. FRIEDMAN: Your Honor, if I can
18 interrupt just to say we're also again on a page
19 that we at least marked as confidential and does
20 have a citation on that page 51 to a
21 confidential -- some confidential materials
22 supplied by the Rate Bureau, and that's in footnote
23 158.

24 HEARING OFFICER FUNDERBURK: Was -- is
25 this another instance where it was just marked

1 confidential due to the citation or is it marked
2 confidential due to the -- the content that is
3 actually written?

4 MR. FRIEDMAN: I don't know that I
5 understand it well enough. I'd have to rely on Ms.
6 Cavanaugh to explain what that -- what she's
7 deriving from that footnote 158.

8 HEARING OFFICER FUNDERBURK: Okay. Mr.
9 Spivey, it's your client's material. Do you have
10 any concerns that we're getting into the territory
11 of revealing confidential information?

12 MR. SPIVEY: Again, Your Honor, my
13 understanding is the things that I am asking Ms.
14 Cavanaugh about right now are pertaining to the
15 Lane Financial quote at the bottom of the page,
16 going over to the top of page 52, and do not relate
17 to the materials that she's cited in the footnotes
18 that are from confidential materials.

19 So I don't think there is anything,
20 from our perspective, that we are not -- no one
21 here is disclosing any confidential information as
22 far as I am aware.

23 HEARING OFFICER FUNDERBURK: Thank you.

24 MR. FRIEDMAN: My only concern, again,
25 this is literally out of concern for their clients'

1 proprietary interests, but he did ask her questions
2 about the NCRB curve and how she had recreated or
3 created her own curve with a modification.

4 And that was a little bit ago, but I
5 just want to make sure -- and that was what cited
6 specifically to 158, just want to make sure we
7 don't need to do any cleanup there.

8 MR. SPIVEY: Again, I think that my
9 questions and her answers have been general in
10 nature and don't implicate confidential information
11 in what we've put on the record here this
12 afternoon.

13 HEARING OFFICER FUNDERBURK: Okay. It
14 sounds like we're on -- we're on safe ground, but
15 thank you for pointing that out to make sure that
16 we stay on safe ground.

17 Please proceed, Mr. Spivey.

18 MR. SPIVEY: Yes. Just for the record,
19 Your Honor, if we were putting into evidence here
20 the code that's being cited to in these footnotes,
21 then I would have a different response for you.
22 We're not talking about that here.

23 Could I have just a moment, Your Honor?

24 HEARING OFFICER FUNDERBURK: Yes.

25 MR. SPIVEY: Thank you.

1 BY MR. SPIVEY:

2 Q. Ms. Cavanaugh, did you look at any
3 reinsurance market data to test the validity of the
4 Lane Financial quote that you cited there at your
5 testimony at page 51 and 52?

6 A. So I didn't have access to the data that
7 we discussed -- was not provided. So I didn't have the
8 reinsurance premiums from the member companies or the
9 reinsurance premiums from the Aon clients. So I
10 couldn't check that validity.

11 I did review, you know, the catastrophe bond
12 experience that's shown on Figure 4. I also reviewed
13 an article quoting reinsurance brokers, Aon and Guy
14 Carpenter, regarding the property casualty rates, and
15 that is on page 52.

16 So those are, you know, the publicly available
17 information that I did research on and -- and -- and
18 determined our conclusions off of.

19 Q. So I believe you -- your point just now
20 was that you didn't have access to actual reinsurance
21 data for the companies writing in North Carolina, but
22 you did -- you are pointing in your testimony to recent
23 articles in Reuters about how property casualty rates
24 are decreasing. And it -- am I understanding that
25 those are referring to reinsurance market rates?

1 A. Reinsurance property cat rates. Yes.

2 Q. Did you actually look at the article at
3 the internet site/website that you've cited to in
4 footnote 161?

5 A. Yes.

6 Q. Did it give any information about the
7 overall level of reinsurance rates in the market in
8 July of 2024?

9 A. So I'd have to look at it again. My --
10 what -- what I recall and what I state in my pre-filed
11 testimony is that it -- it stated that rates appear to
12 be falling as of July of 2024. But, you know, it
13 doesn't -- it's not going to include specific
14 reinsurance premiums in that public document.

15 Q. In your testimony there in lines 6 and 7
16 simply says rates are decreasing or falling is what you
17 just stated in your testimony. That didn't tell us
18 from what level they are falling or where they are now,
19 does it?

20 A. That particular sentence? No.

21 Q. Where they are in July of 2024? When I
22 say now, I don't mean November or December. I guess
23 it's December now. So --

24 A. That's correct. It's talking about
25 decreasing from the prior, from, you know, prior

1 months, in 2024 and 2023. You know, I -- I do state
2 somewhere in my pre-filed testimony, you know, it has
3 been -- the last couple years has been a reinsurance, a
4 hard reinsurance market, in other words, higher
5 reinsurance prices, but that has been turning according
6 to that article and according to Lane Financial
7 research.

8 Q. So in any event, am I correct in
9 understanding that, at least part of the basis for your
10 use of insurance-linked securities or catastrophe bonds
11 and using the regression analysis over the period 2011
12 through 2022, is that the reinsurance prices are
13 roughly at an average of what they have been over that
14 period of time? They are there now.

15 A. I -- I want to be really clear here. I am
16 not -- so I -- I discussed earlier today that what I
17 would want to do first and foremost is to look at the
18 reinsurance premiums by the member companies. I didn't
19 have that. At least if -- if I'm going to kind of
20 assess the model that comes up with reinsurance
21 premiums, I need to at least be able to validate that
22 model.

23 So I could have used maybe the top ten
24 reinsurers. That's what I testified to earlier today.
25 I didn't have that. If that had shown -- that

1 validation had shown, you know, that things were
2 relatively in line, I would -- I would use that, as
3 part of my process, but I didn't have that.

4 So I'm left with, you know, fairly little
5 information because a lot of this is proprietary data.
6 You know, I even thought about, you know, some of the
7 information that I have available from some of my other
8 rate filing reviews but almost all of the reinsurance
9 information is proprietary, and so I can't -- I can't
10 rely on that.

11 So I relied on the cat bond market because it
12 is, but generally goes with the -- the reinsurance
13 market. And then I had to think hard about, you know,
14 what years to include and -- and what would be
15 appropriate, and I ultimately landed here. But I do
16 want to just, you know, emphasize this is a limited
17 analysis because I was really limited by the data that
18 was available to me.

19 Q. And if, in fact, reinsurance rates had not
20 decreased or fallen back to some longer term average,
21 then the pricing estimate that you've come up with
22 using your analysis underestimates what those costs
23 are; does it not?

24 A. It would be more likely that it would
25 underestimate than overestimate. Like I said, I'm --

1 I'm approximating the reinsurance market using the
2 catastrophe bond market, and that market does seem to
3 be falling, you know, given the data that I have
4 available.

5 But let's say, you know, it spiked back up,
6 then -- then, yeah, it's likely that the net cost of
7 reinsurance would be higher, ultimately, than what I
8 estimate, and if it went down, it would be, you know,
9 lower than what I estimate.

10 Q. And if, in fact -- I mean, you've noted in
11 your testimony that prices have been higher in recent
12 years, right, than they were, say, ten years ago?

13 A. That's correct.

14 Q. And if, in fact, prices have not come down
15 from those higher levels, but just flattened out at
16 those higher levels, then your analysis underestimates
17 what the pricing of reinsurance is in the market today.
18 Does it not?

19 A. Well, what we're trying to do here is --
20 is project prospective costs. So what's really
21 relevant is what happens next year in reinsurance
22 pricing.

23 Q. Now, in addition to using cat bonds or
24 insurance-linked securities for pricing your
25 reinsurance provision, you relied solely on the RMS

1 model in coming up with your reinsurance provision; did
2 you not?

3 A. Yeah. My -- my calculations use the
4 results of the RMS model.

5 Q. And further, you utilized the RMS
6 historical model rather than the RMS medium term rate
7 model; did you not?

8 A. That's true. I considered, you know,
9 whether or not to use the -- the medium term or the
10 long term, and I ultimately used the long term to be,
11 you know, internally consistent with my -- with my
12 estimates. I do include that estimate of if I had used
13 the -- the medium term and it would have produced a
14 lower net cost of reinsurance had I done that because
15 the way that the cat bond data was fit to would have
16 been changed too. So I -- I could point to that number
17 in my exhibit if it's helpful.

18 Q. Reinsurance is purchased by homeowners
19 insurance companies from reinsurance companies through
20 a negotiation process in the reinsurance market. Is it
21 not?

22 A. Yes.

23 Q. And we're not setting the price that
24 happens through that negotiation process here; are we?

25 A. No.

1 Q. We're simply trying to estimate what the
2 net cost of reinsurance will be as a result of all
3 those transactions that occur around in the market --
4 in the actual marketplace. Correct?

5 A. Yeah. We're trying to make a projection
6 of the costs related to reinsurance in the prospective
7 period that is a result of a number of different
8 negotiations.

9 I just would also add that, yeah, I mean, it's
10 not just the negotiations among reinsurers, but, you
11 know, many insurers use these cat bonds as well, so --
12 so it would be it would be a mixture of, you know,
13 whatever the reinsurance structure is for all these
14 member companies.

15 Q. Right. Some portion of companies or some
16 portion of the risk -- the catastrophe risk they obtain
17 cover for is obtained through catastrophe bonds and
18 some portion through traditional reinsurance. And your
19 earlier testimony is that you don't know what that
20 relative percentage is, other than you think it's
21 probably more than half of traditional reinsurance.
22 Correct?

23 A. It's going to be more traditional
24 reinsurance, and I would expect that would be true of
25 the member companies writing business in North

1 Carol i na.

2 Q. Do you agree that the AIR model --
3 model s -- and RMS model s are the two most widely used
4 catastrophe model s for hurricane exposure in the United
5 States?

6 A. Yes.

7 Q. Do you have any basis for believing that
8 the reinsurance companies rely solely on the RMS model s
9 when they negotiate reinsurance prices with companies
10 that write homeowners' insurance in North Carolina?

11 A. Yeah. I thought about this a lot, you
12 know, whether or not to use a blend of AIR and RMS
13 because oftentimes that is what's used by reinsurers.
14 And, ultimately, I thought about the negotiation
15 process between insurers and reinsurers.

16 And if there was this fictitious -- you know,
17 this hypothetical one, right, that was negotiating the
18 reinsurance, I would expect that, you know, the -- that
19 hypothetical one to come to the reinsurers and say, you
20 know, basically, the -- the analysis -- some -- some
21 similar analysis probably way more involved, but some
22 similar analysis that I had done, which shows that, you
23 know, RMS is -- is kind of in the middle of the
24 different model s and that -- that it more closely is
25 aligned with the historical losses.

1 And so and this is what I've seen in my
2 experience of being on the reinsurer side. Insurers
3 will, you know, really try to state their case to why
4 their, you know, the expected losses are lower than
5 what the reinsurer might come up with.

6 So in this case, you know, I -- I would expect
7 the insurers to do that, you know, if they were this
8 hypothetical one just writing business in North
9 Carolina and -- and that then, you know, they -- they'd
10 be able to, you know, place more reliance on the RMS
11 data.

12 Q. So your testimony earlier is that you've
13 never been involved in that particular process of that
14 negotiation, have you?

15 A. Not for a property cat, but I have, you
16 know, been involved in reinsurance pricing for other
17 treaties.

18 Q. So you've -- you've literally been in the
19 negotiation process between a reinsurance company and a
20 direct writing insurance company?

21 A. So I was part of the team for the
22 reinsurer, determining the estimate of reinsurance
23 premium. I would be, you know, posing questions to the
24 insurance company on their data. And, oftentimes, we
25 would have meetings that would discuss, you know,

1 here's what our estimates are, you know, and -- and --
2 and they would, you know, push back and say, well,
3 you -- you need to understand this and this and this.
4 And so I would be involved in those negotiations.

5 Q. Is it correct that the modeled losses from
6 the RMS historical model, in this case, are lower than
7 the modeled losses from the RMS medium term rate model
8 in this case?

9 A. Yes.

10 Q. And -- and just --

11 A. And I just want to clarify. I said this
12 earlier, but I just want to clarify. I did get to
13 the -- to the exhibit where I show both numbers. When
14 I prepare the net cost of reinsurance on LJC 24, page
15 2, there's a black box around the indicated net cost of
16 reinsurance of 562 million approximately.

17 And when I use the medium term model data only
18 and I use the curve that only uses the medium term
19 data, then the estimate lowers to 470 -- or let's say
20 480 million approximately.

21 So I just want to make that distinction that I
22 actually, you know, I could've -- I could have used
23 the -- the medium term, and it would have come up with
24 a lower estimate and therefore lower indication.

25 You know, it was a judgment call to -- to -- to

1 do it the other way. I just thought it would be more
2 internally consistent with the catastrophe provision
3 that I used in the other part of my analysis.

4 Q. And in the calculations that you're
5 pointing to now, you made other changes as well, did
6 you not? You didn't change just the use of the medium
7 term model and the historical model. You also changed
8 the way the reinsurance structure was set up; did you
9 not?

10 A. So I used -- the only other change for
11 that lower number that I was discussing is that I was
12 using RMS data only, rather than AIR and RMS. So the
13 reinsurance structure change was just basically using
14 the exact same code that was provided in the discovery
15 responses and just changing it to be only relying on
16 the RMS data. So that's -- that's the only change
17 there.

18 Q. But it was a different structure.
19 Correct? I mean, it's a wholly different reinsurance
20 structure when you change --

21 A. Based on our -- because it's based on RMS
22 data. It's using the same model, though, that was
23 provided in discovery. So I mean, so if, you know,
24 using -- making no -- no changes to the structure and
25 only changing the pricing to be based off of the

1 catastrophe bond curve, the net cost of reinsurance is
2 at Column 10 on page 1 of this exhibit, which is 676
3 million. That compares to like about 1.2 billion
4 that's in the net cost of reinsurance bureau.

5 So I -- I bring that up just because, yes, it is
6 higher than what I ultimately landed on, but, you know,
7 the biggest difference is -- is the -- the pricing of
8 the -- using the cat bond data that I had access to
9 rather than relying on the results of using data that I
10 didn't have access to.

11 Q. And just as a point of clarification, in
12 your testimony on page 51, when you state there that
13 lines 11 through 14, you mentioned that you modified
14 one assumption to reflect the fact that you were
15 applying the profit multiple to results from the long
16 term catastrophe model (rather than WSST model). The
17 WSST model is an AIR model; is it not?

18 A. Yeah. In the bond -- in the bond curve
19 data that was provided, it was all just labeled as
20 WSST, but my understanding is it was -- it was
21 referring to that medium term for RMS. So I was
22 referring to the labeling that was used in that data
23 that was provided to me. But -- but, yeah, we're
24 talking about the medium term.

25 Q. Now, it's correct, is it not, that all

1 other things being equal, lower modeled losses will
2 lead to a lower cost of reinsurance?

3 A. Yes. All else being equal.

4 Q. And that one assumption that we just
5 mentioned there at lines 12 through 14 that you've
6 changed, that's a fairly significant change; is it not?

7 A. You know, I just -- I was just saying
8 earlier the -- the difference would be, you know, my
9 indicated net cost of reinsurance of 562 million versus
10 if I hadn't made that change, it would have been 480
11 million.

12 Q. Again, that statement includes the effects
13 of other changes, as well, and not simply changing the
14 model that you're using for the model losses.

15 A. It's the change, the model losses, and
16 then the bond curve using that -- what the bond curve
17 labels as WSST. The only other change, you know, as
18 I'm looking at it now is excluding years 2011 to 2012,
19 because I'm just taking straight from the -- the NCRB
20 bond curve rather than making any adjustments. So it's
21 just adjusting that bond curve and the medium term
22 versus long term data.

23 Q. So do I understand correctly that the
24 reinsurance structure that you priced is not the
25 reinsurance structure that the Rate Bureau proposes in

1 this filing?

2 A. The change is related to the change in
3 using RMS model data only. Everything else is the
4 same. I'm using the same code.

5 Q. Using -- that's not my question. I'm
6 sorry.

7 A. Okay. Sorry.

8 Q. The reinsurance structure that determines
9 how much reinsurance is being purchased is different in
10 what you price from what the Rate Bureau has included
11 in this filing; is it not?

12 A. So when I reviewed the reinsurance
13 structure, again, was limited by the information that
14 was available to me. I took a look at the reinsurance
15 structure and -- and the way that it was determined,
16 and the -- the attachment point limits and, you know,
17 looked at that for reasonability and given very little
18 else, I -- I determined to use the same approach.

19 And the only difference, the only change that I
20 made to the structure was to just update the code to be
21 based on RMS data only rather than AIR and RMS.

22 So in other words, you know, if -- if the NCRB
23 had only used RMS, I believe it would have come up with
24 that same reinsurance structure because I'm just
25 changing that one -- that one component of the code.

1 Q. So the answer to my question is the
2 reinsurance structure that you priced is different from
3 the reinsurance structure that the Rate Bureau included
4 in this filing.

5 A. Yes. I believe I answered that. It's
6 different for the reasons I just stated.

7 Q. And it entails the purchase of less
8 reinsurance than the structure that's set out in the
9 Rate Bureau's filing; isn't that correct?

10 A. Let me just -- let me just check. It
11 attaches at a lower basis, and I believe the limit is
12 also lower. So it's -- it's -- it -- you can't
13 really -- it's just a different -- a different
14 structure. So it's attaching lower, so it's going to
15 be a more coverage there at the bottom and less
16 coverage at the top.

17 Q. And because RMS model has generated lower
18 losses, particularly the historical model that you used
19 generated lower losses than did even RMS medium term
20 rate model, that means you're reinsuring fewer losses;
21 are you not?

22 A. So yes. So if we look at the -- that 480
23 million figure, that's just looking at the RMS medium
24 term model, right, in the bond curve data, then that is
25 lower than what would be determined if using the RMS

1 medium term and AIR WSST, which would be, yeah, which
2 would be higher.

3 And then -- and then I made the adjustment to
4 the long term, which then made it higher, 562.

5 Q. Now, it's also correct, is it not, that
6 ultimate net cost of reinsurance provision that you
7 propose in your alternative calculations is not based
8 on any actual reinsurance premium costs, but rather on
9 your estimations of what those costs are based on these
10 various assumptions you've been describing?

11 A. Yes. As I've discussed, I was really
12 limited by the data that was made available. So I
13 didn't have any reinsurance pricing information, so I
14 couldn't use that.

15 Q. If you would turn to page 53 of your
16 testimony and to the lines 14 through 19. So I'm going
17 to read it into the record here. Your question is,
18 what are your conclusions regarding this methodology?
19 Answer, it is inappropriate to apply dividends, profit,
20 and contingencies to the net cost of reinsurance.
21 Reinsurance reduces risk to the insurer, and thus no
22 risk margin or profit load is appropriate. Any profits
23 for the reinsurance are already embedded in the net
24 cost of reinsurance. As discussed earlier in Sections
25 XIV and XV, no contingency provision or dividend

1 provi si on i s ju sti fi ed.

2 So di d I re ad your que sti on and an swer
3 cor rect ly?

4 A. Yes.

5 Q. So when you -- I want to make sure I'm
6 un der stand ing your tes ti mony there. When you state
7 that po li cy hold er di vi dends should not be ap plied to
8 the net cost of re in surance, why are you stating that
9 there in the context of lines 15 through 19 of your
10 tes ti mony? Why is that here?

11 A. So I'd have to look at the NCRB ex hi bit,
12 and I can even maybe look at my ex hi bit. I think I
13 re peat it there, but from what I re call, di vi dends,
14 pro fit, and con ting en cies was added to as a pro vi si on
15 on top of that number of the net cost of re in surance.

16 Q. So but -- but is it your tes ti mony that
17 di vi dends, for in stance, should not be ap plied be cause
18 you've de ter mined some where else in your tes ti mony here
19 that -- that no di vi dend pro vi si on is ju sti fi ed in this
20 case? Or are you tes ti fying that a di vi dend pro vi si on
21 should not ever be ap plied to the net cost of
22 re in surance?

23 A. So for di vi dends and con ting en cies, I'm
24 re fer ring to the other sec ti ons of my re port that
25 ba si cally -- if there's a pro vi si on, it's zero be cause

1 of the reasons I state in those sections on dividends
2 and contingencies. And then I state something
3 different for the profit load.

4 Q. Now, when you state there at lines 17 and
5 18 that any profits for the reinsurance are already
6 embedded in the net cost of reinsurance, what profits
7 for the reinsurance are you referring to?

8 A. So, and I discussed this in my profit
9 provision section. When I estimate the profit
10 provision, I'm looking at direct profits, so profits
11 on, you know, if there's a split between the -- the net
12 losses and the -- or the net premium and the -- and the
13 ceded premium, it's the profits on everything, right,
14 so it's all going to be included in there.

15 So what I'm saying here is that any profits
16 related to the reinsurer is going to be embedded in
17 that -- the reinsurance premiums that are included in
18 the net cost of reinsurance.

19 Q. So are you referring to the profits for
20 the reinsurance company?

21 A. Right. This is so the profits that are
22 being applied is a profit provision over and above the
23 profits to the reinsurance company. Yeah. What I'm
24 saying is based on the way that I came up with the
25 profit provision, the profit provision is -- would need

1 to, like, would need to be shared between the --
2 between the reinsurer and the -- and the -- and the
3 ceding insurer. So, so yeah.

4 So any -- so it's my opinion that there
5 shouldn't be additional profits added on to the net
6 cost of reinsurance for the benefit of the insurer.

7 HEARING OFFICER FUNDERBURK: And Mr.
8 Spivey, we had originally talked about a hard stop
9 at 4:30. Do you -- with a few more minutes, will
10 you get to a natural stopping point so we can
11 resume tomorrow? Do you need a couple more
12 minutes? I'm trying not to break your flow, but we
13 also close the building at 5:00.

14 MR. SPIVEY: I think this is as good a
15 place as any.

16 HEARING OFFICER FUNDERBURK: Okay. All
17 right. Ms. Cavanaugh, again, you'll be under oath
18 when you resume testimony tomorrow. And Madam
19 Clerk, did we say 1:30 tomorrow? Or we said 1:00?
20 Okay. So we're resuming at 1 o'clock tomorrow. Is
21 there anything we need to address before we recess
22 today? All right. Thank you.

23 MR. SPIVEY: I'm not aware of anything.
24 I think -- I think -- and I think the 1 o'clock
25 start tomorrow works fine for the meeting we have

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

tomorrow morning.

HEARING OFFICER FUNDERBURK: Okay. All right. Then we are in recess until 1:00 p.m. tomorrow afternoon. Thank you all.

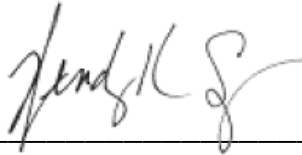
* * * * *

(Hearing adjourned at 4:41 p.m.)

CERTIFICATE OF REPORTER
STATE OF NORTH CAROLINA
COUNTY OF WAKE

I, Wendy Sawyer, court reporter, do hereby certify that the witnesses whose testimony appears in the foregoing hearing were duly sworn; that the testimony of said witnesses was taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this hearing was taken, and further that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

This, the 2nd day of December, 2024.



WENDY SAWYER, Court Reporter

Notary Public #202411500157

Commission Expires April 23, 2029

